Medworth Energy from Waste
Combined Heat and Power Facility

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Medworth Energy from Waste Combined Heat and Power Facility Funding Statement

Regulation reference: The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009
Regulation 5(2)(h)

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Contents

1. Introduction

1.1 Background

1.1.1 Medworth CHP Limited (the Applicant) is applying to the Secretary of State (SoS) for a Development Consent Order (DCO) to construct operate and maintain an Energy from Waste (EfW) Combined Heat and Power (CHP) Facility on the industrial estate, Algores Way, Wisbech, Cambridgeshire. Together with associated Grid Connection, CHP Connection, Access Improvements, Water Connections, and Temporary Construction Compound (TCC), these works are the Proposed Development.

1.1.2 The Proposed Development would recover useful energy in the form of electricity and steam from over half a million tonnes of non-recyclable (residual), non-hazardous municipal, commercial and industrial waste each year. The Proposed Development has a generating capacity of over 50 megawatts and the electricity would be exported to the grid. The Proposed Development would also have the capability to export steam and electricity to users on the surrounding industrial estate. Further information is provided in **Chapter 3: Description of the Proposed Development (Volume 6.2)**.

1.1.3 The Proposed Development is a Nationally Significant Infrastructure Project (NSIP) under Part 3 Section 14 of the Planning Act 2008 (2008 Act) by virtue of the fact that the generating station is located in England and has a generating capacity of over 50 megawatts (section 15(2) of the 2008 Act). It, therefore, requires an application for a DCO to be submitted to the Planning Inspectorate (PINS) under the 2008 Act.

1.1.4 The DCO application would authorise the compulsory acquisition of certain land interests required for, or to facilitate or incidental to, the delivery of the Proposed Development.

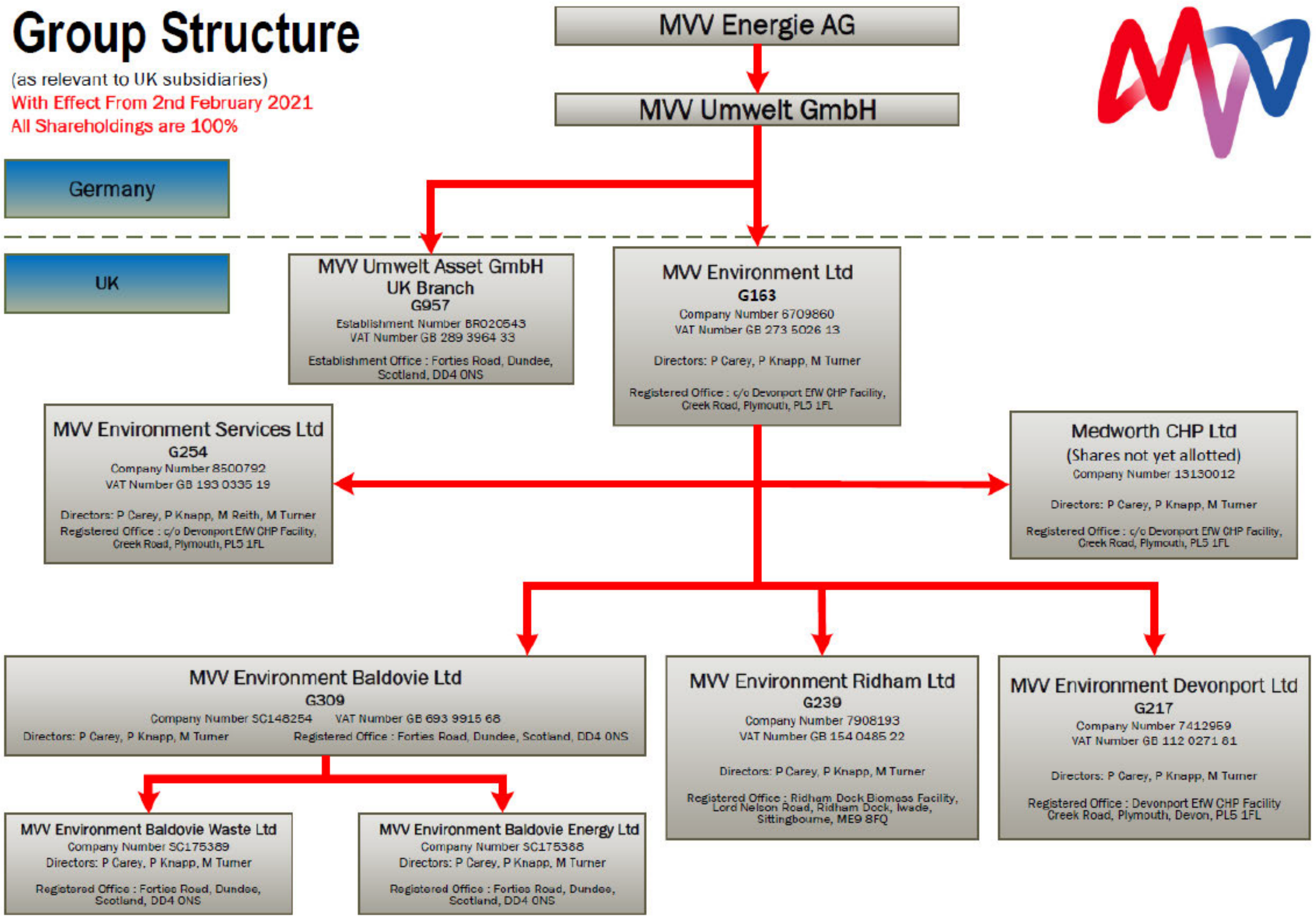
1.1.5 This Statement has therefore been produced pursuant to regulation 5(2)(h) of 'The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009' and the Department of Communities and Local Government guidance, 'Planning Act 2008: Guidance related to procedures for the compulsory acquisition of land (September 2013)'.

1.1.6 This Statement sets out how the proposed development and the necessary land acquisition will be funded at Section 4 below.

1.2 The Applicant and the project team

1.2.1 The Applicant is a Special Purpose Vehicle (SPV) created to deliver the Proposed Development and is a wholly owned subsidiary of MVV Environment Limited (Company Registration Number 06709860 ('MVV'). MVV is a wholly owned subsidiary of MVV Umwelt GmbH whose ultimate parent company is MVV Energie AG (AG is the German equivalent of PLC). MVV Energie AG has its headquarters in Mannheim, Germany and is listed on the Frankfurt stock exchange. **Graphic 1** presents the group structure.

Graphic 1: MVV Energie group structure.



1.2.2 MVV's UK business retains the overall group ethos of 'belonging' to the communities it serves whilst benefitting from over 50 years' experience gained by its German sister companies.

1.2.3 In the UK, MVV currently consists of six separate companies (see **Table 1.1 MVV Environment UK Group of Companies**). The MVV Energie group of companies provide sustainable and efficient solutions for waste-fired energy generation to publicly and privately-owned waste disposal companies as well as to Local Authorities. MVV Energie's growth strategy is to be carbon neutral by 2040 and thereafter carbon negative. MVV Group's climate protection targets are in line with the 1.5-degree trajectory provided for by the Paris Climate Agreement and will help meet this objective. That was confirmed once again by the Science Based Targets initiative (SBTi), a partnership of international nongovernment organisations (NGOs), in November 2021 following an extensive scientific review. That makes MVV Energie AG the first energy company in Germany to hold SBTi certification for the 1.5-degree target. In an ESG-rating performed in June 2021 by ISS ESG, a rating agency well established in the market for sustainable investments for more than 20 years, MVV Energie AG was again awarded Prime Status and received a "B" rating for the first time. This places MVV Energie AG among the leading companies when it comes to accounting for ecological and social criteria in its corporate management.

1.2.4 MVV Umwelt GmbH's largest thermal treatment facility is located in Mannheim, Germany. The facility treats approx. 700,000 tpa of municipal, commercial and industrial waste arising from the Rhine-Neckar region and the city and district of Karlsruhe.

1.2.5 MVV's largest project in the UK is the Devonport EfW CHP Facility in Plymouth. Since 2015, this modern and efficient facility has been using around 265,000 tonnes of municipal, commercial and industrial residual waste per year to generate electricity and heat, notably for Her Majesty's Naval Base Devonport in Plymouth, and exporting electricity to the grid.

1.2.6 In Dundee, MVV has taken over the existing Baldovie EfW Facility and has developed a new, modern facility alongside the existing facility. Operating from 2021, it uses up to 220,000 tonnes of municipal, commercial and industrial waste each year as fuel for the generation of usable energy.

1.2.7 Biomass is another key focus of MVV's activities in the UK market. The biomass power plant at Ridham Dock, Kent, uses up to 195,000 tonnes of waste and non-recyclable wood per year to generate green electricity and is capable of exporting heat.

1.2.8 Biomass is another key focus of MVV's activities in the UK market. The biomass power plant at Ridham Dock, Kent, uses up to 195,000 tonnes of waste and non-recyclable wood per year to generate green electricity and is also capable of exporting heat.

Table 1.1 MVV Environment UK Group of Companies

Company	Detail
Medworth CHP Limited	The wholly owned subsidiary of MVV Environment Limited proposing to submit the application for the DCO (the Applicant).
MVV Environment Limited	The company developing and funding the Proposed Development.
MVV Environment Baldovie Limited	Energy from Waste CHP Facility, diverting up to 220,000 tonnes per annum of residual waste from landfill for Dundee and Angus Councils and for private waste disposal companies.
MVV Environment Devonport Limited	Energy from Waste CHP Facility, diverting 265,000 tonnes per annum of residual waste from landfill for the South West Devon Waste Partnership and for private waste disposal companies.
MVV Environment Ridham Limited	Merchant biomass facility generating energy up to 195,000 tonnes per annum of waste wood.
MVV Environment Services Limited	The UK electricity trading subsidiary of MVV.

2. Project Costs

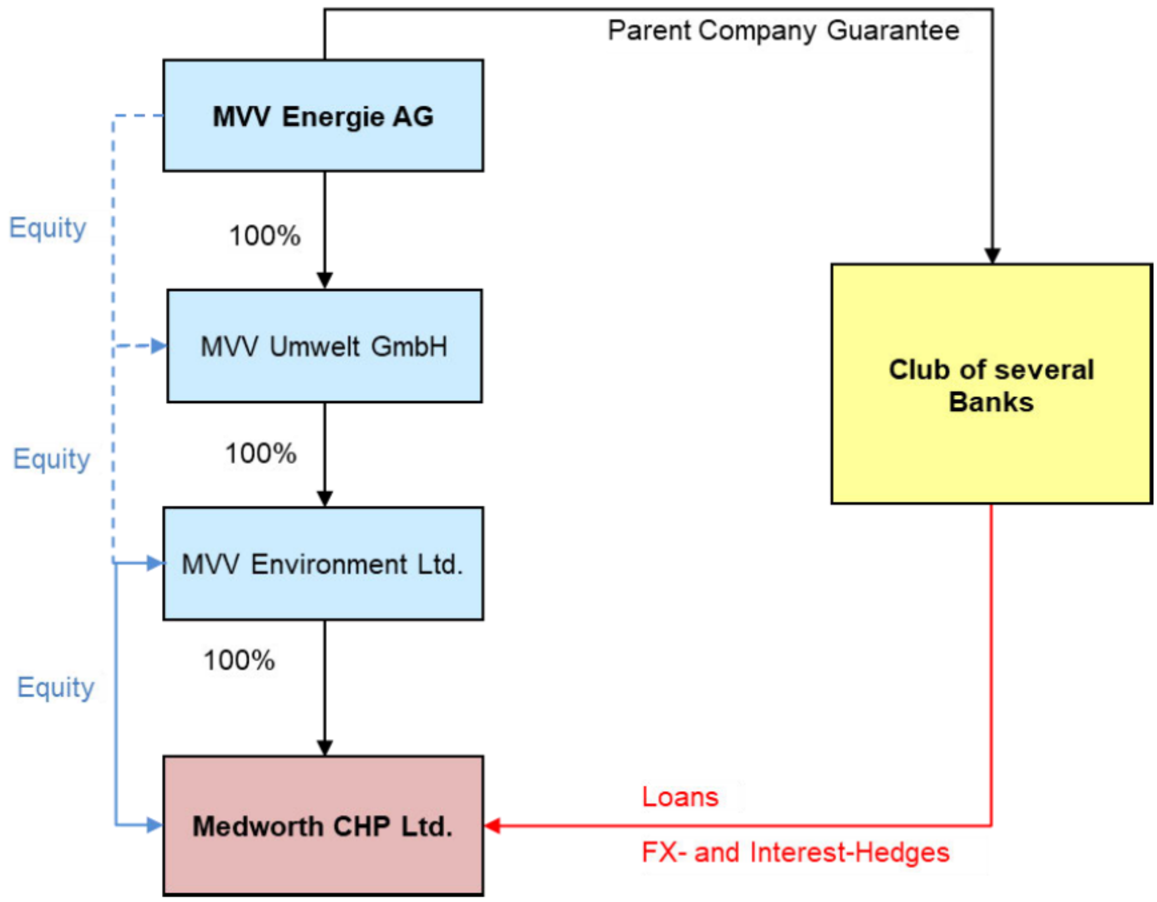
2.1.1 The total investment is in the range of £450 million, depending on price developments over the next few years. This cost estimate was prepared by MVV's in-house engineering and finance teams based on experience of its previous projects in the UK and Germany.

2.1.2 This estimate covers all elements of the Proposed Development including the engineering, procurement and construction contract costs, construction contingency, the steam pipeline and grid connections, land acquisition (including compensation payable for compulsory acquisition), insurance and project administration.

3. Funding Proposal

3.1.1 As with MVV's previous UK facilities, the Proposed Development would be corporately funded. MVV Energie AG is very experienced in securing funding for major projects such as the Proposed Development. Following the grant of development consent, the Applicant would draw down funds in the form of equity from its parent company and debt provided via a bank loan direct to the Applicant from selected banks chosen by MVV Energie AG. The bank loan will be supported by a parent company guarantee provided by MVV Energie AG. This will enable the banks to base the rating of the loan on the financial strength of the ultimate parent company. MVV would provide equity from its own cash reserves and, to the extent these are insufficient, would raise further equity from its parent company MVV Umwelt GmbH. The proposed corporate finance solution is shown in **Graphic 2 Corporate finance solution** below.

Graphic 2: Corporate finance solution



4. Financial Standing

4.1.1 The MVV Group consisting of MVV Energie AG, and its subsidiaries is one of Germany's leading energy providers with 6,470 employees, adjusted total assets of c.€5 billion and sales of €4.1 billion in the fiscal year to September 2021. MVV Group is not assessed by any credit rating agencies. In the rating talks held with the core banks of MVV Group, 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. At 30 September 2021, the MVV Group had undrawn committed credit lines (cash and guarantees) of €1.2 billion (previous year: €1.1 billion). MVV Energie's Annual Report for the year ending September 2021 is included at **Appendix A**.

4.1.2 The group has over 50 years' experience of building, operating, and maintaining EfW CHP facilities and has a proven track record of delivering corporately funded projects in the UK, investing a total of c.£500 million in its facilities at Plymouth, Dundee, and Ridham.

5. Land Acquisition

5.1.1 The majority of the land required for the EfW CHP Facility has already been secured with an Option to Lease. However, the delivery of the Proposed Development also requires the acquisition of additional land and rights on, under and over land, and the temporary possession of land for construction purposes. The land and rights will be required to enable the delivery of the Proposed Development including the remainder of the land required for the EfW CHP facility, access, grid connection, drainage, mitigation measures, access improvements and the CHP connection. The land required, together with land ownership details, are set out in the **Book of Reference (Volume 4.1)** and shown on the **Land Plans (Volume 2.2)**.

5.1.2 The Applicant's preferred option would be to secure the necessary land and rights through voluntary agreement with the affected parties, and discussions have been commenced to facilitate this. However, should it not be possible to reach voluntary agreement, then compulsory acquisition powers are required to ensure the unimpeded delivery of the Proposed Development. Further details of the status of negotiations are set out in the **Statement of Reasons (Volume 4.3)**.

6. Funding for Land Acquisition and Blight

6.1.1 The Applicant has sought advice from expert chartered surveyors, Carter Jonas LLP in relation to possible heads of liability for: compulsory acquisition of land and rights in land and imposition of restrictions; blight; severance; injurious affectation; Part 1 Claims and all other potential claims.

6.1.2 The current estimated capital cost of the Proposed Development is approximately £450m and this includes an allowance of £6.4m for compensation payable in respect of any compulsory acquisition included in the DCO and required for Proposed Development based on the advice received from Carter Jonas.

6.1.3 Blight notices may be served on the Applicant by those with a qualifying interest in affected land. To date no blight notices have been served in respect of the Proposed Development.

6.1.4 Should any future claims for blight arise as a consequence of the proposed compulsory acquisition of land, or rights in land, affected by the Proposed Development, the costs of meeting any valid claim will be met by the Applicant.

6.1.5 The Applicant has included Article 9 in the DCO which provides that compulsory acquisition powers contained in the DCO must not be exercised unless a guarantee in respect of the liabilities of the undertaker to pay compensation in respect of the exercise of the relevant powers or an alternative form of security for that purpose is in place. The form of the guarantee or other form of security must be approved by the Secretary of State. It will be for the Secretary of State to satisfy himself in relation to the adequacy of the guarantee or other form of security provided at the relevant time. The Applicants obligations to make payments or service debt will be underwritten by parent company guarantees at the appropriate level in the MVV group

6.1.6 A typical alternative form of security would be a bond or a letter of credit from a bank or other financial institution. The amount of the security and the bank or financial institution would be approved by the Secretary of State. Another option would be to set up an escrow account. An escrow account is an independently held account into which the Applicant would pay a sum of money approved by the Secretary of State to meet the anticipated compensation requirements. The Applicant would then draw on the account to finance any compensation claims.

6.1.7 Article 9 of the DCO ensures that the guaranteed funding will be held by a means that is directly accessible to persons entitled to compensation. The ability for funding to be directly accessible to persons entitled to compensation will be included as a term of the guarantee or alternative form of security. A copy of the approved guarantee (or alternative form of security) will be made available to persons entitled to compensation by placing it on deposit with the DCO and the documents certified in accordance with Article 41 of the DCO.

6.1.8 Article 9 of the DCO therefore ensures that adequate funding is in place before any compulsory acquisition compensation liability arises.

7. Conclusion

7.1.1 The explanation set out in this Statement provides a robust basis for concluding that the compensation arising from the exercise of compulsory acquisition powers under the DCO will be met, and that the necessary funding for the Proposed Development will be secured.

Appendix A
MVV Energie's Annual Report 2021

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Annual Report 2021

MVV at a Glance

ADJUSTED SALES

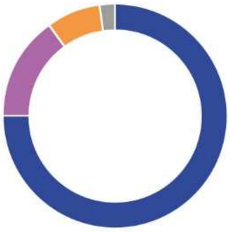
4.1 Euro billion

ADJUSTED EBIT

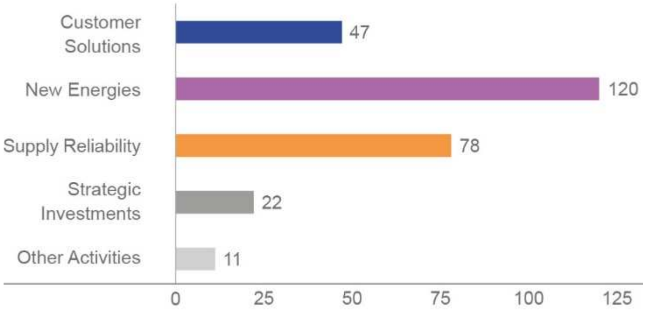
278 Euro million

ADJUSTED SALES EXCLUDING ENERGY TAXES BY REPORTING SEGMENT
Shares %

Customer Solutions	75
New Energies	15
Supply Reliability	8
Strategic Investments	2



ADJUSTED EBIT BY REPORTING SEGMENT
Euro million



INVESTMENTS

306 Euro million

2021

MVV in Figures

	FY 2021	FY 2020	% change
Financial key figures			
Sales and earnings			
Adjusted sales excluding energy taxes (Euro million)	4,131	3,515	+ 18
Adjusted EBITDA [1] (Euro million)	482	449	+ 7
Adjusted EBIT [1] (Euro million)	278	233	+ 19
Adjusted annual net income [1] (Euro million)	177	128	+ 38
Adjusted annual net income after minority interests [1] (Euro million)	150	104	+ 44
Capital structure			
Adjusted total assets at 30 September [2] (Euro million)	5,815	4,582	+ 27
Adjusted total assets excluding margins at 30 September [2, 3] (Euro million)	4,994	4,582	+ 9
Adjusted equity at 30 September [2] (Euro million)	1,662	1,571	+ 6
Adjusted equity ratio at 30 September [2] (%)	28.6	34.3	– 17
Adjusted equity ratio excluding margins at 30 September [2, 3] (%)	33.3	34.3	– 3
Net financial debt at 30 September (Euro million)	628	1,374	– 54
Net financial debt excluding margins at 30 September [3] (Euro million)	1,450	1,352	+ 7
Cash flow and investments			
Cash flow from operating activities (Euro million)	1,203	383	>+ 100
Cash flow from operating activities excluding margins [3] (Euro million)	360	391	– 8
Investments (Euro million)	306	322	– 5
Value performance			
ROCE (%)	10.2	7.7	+ 32
ROCE excluding margins [3] (%)	8.9	7.8	+ 14
WACC (%)	5.9	6.0	– 2
Value spread (%)	4.3	1.7	>+ 100
Value spread excluding margins [3] (%)	3.0	1.8	+ 67
Capital employed (Euro million)	2,715	3,018	– 10
Capital employed excluding margins [3] (Euro million)	3,115	3,001	+ 4
Share			
Dividend per share [4] (Euro)	1.05	0.95	+ 11
Adjusted earnings per share [1] (Euro)	2.28	1.57	+ 45

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

2 Excluding non-operating measurement items for financial derivatives

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

4 Subject to approval by Annual General Meeting on 11 March 2022

	FY 2021	FY 2020	% change
Non-financial key figures			
Direct CO_2 emissions (Scope 1) [1] (tonnes 000s)	3,440	3,315	+ 4
Indirect CO_2 emissions (Scopes 2 and 3) [1, 2] (tonnes 000s)	5,432	4,586	+ 18
Net CO_2 savings [1] (tonnes 000s)	1,002	766	+ 31
Electricity generation capacity from renewable energies [1] (MW_e)	564	531	+ 6
Renewable energies as share of proprietary electricity generation [1] (%)	32	34	– 6
Electricity generation volumes from renewable energies [1, 2] (kWh million)	1,217	1,274	– 4
Green heat generation capacity [1] (MW_t)	793	752	+ 5
Green heat as share of proprietary heat generation [1, 2, 3] (%)	36	31	+ 16
Green heat generation volumes [1, 2, 3] (kWh million)	2,541	1,990	+ 28
Completed development of new renewable energies plants (MW_e)	610	262	>+ 100
Operations management for renewable energies plants (MW_e)	3,811	3,729	+ 2
Number of employees at 30 September (headcount)	6,470	6,260	+ 3
of which women	1,825	1,760	+ 4
of which men	4,645	4,500	+ 3
of which full-time employees	5,513	5,324	+ 4
of which part-time employees	957	936	+ 2
Number of trainees at 30 September (headcount)	340	341	0
Share of female managers at 30 September (%)	14	15	– 7
Accident frequency rate (LTIF) [4] (number of accidents per 1,000,000 hours of work)	4.1	6.7	– 39

1 Fully consolidated and at-equity companies

2 Previous year's figure adjusted

3 Heat from biomass and biogas plants and from energy from waste/refuse-derived fuels (RDF)

4 Figures for 2020 and 2019 calendar years

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To Our Shareholders

Letter from the CEO

Dr. Georg Müller
CEO of
MVV Energie AG

DEAR LADIES AND GENTLEMEN,

To protect the climate, we need consistent action and greater tempo with the energy turnaround. Only this way will we be able to reach the targets set out in the Paris Climate Agreement and limit global warming to 1.5 degrees. As a pioneer of the energy turnaround, in the past financial year we further significantly stepped up our contribution towards making a success of this global challenge. By 2030, MVV will already reduce its CO_2 emissions by at least 80 % compared with 2018. By 2040, we will be climate neutral. From 2040 onwards, MVV will even become climate positive, meaning we will actually remove greenhouse gases from the atmosphere.

CO_2 savings of one million tonnes achieved five years earlier than planned

This intensification in MVV's reduction trajectory is backed up by political objectives. In the European Union, climate neutrality is to be achieved by 2050, while Germany aims to reach this milestone by 2045 already, as is provided for in the German Climate Protection Act adopted in 2021. To this end, the national greenhouse gas reduction targets have been raised: Emissions should fall by 65 % by 2030 and by 88 % by 2040, in each case compared with 2019 levels. Whether the new coalition government now emerging on federal level will increase these reference points even further will become apparent once the coalition agreement is published.

To achieve climate neutrality on its own part as one of the major sources of emissions, the energy industry will have to reduce its direct emissions to zero. For MVV, climate protection and the energy turnaround have long been the principles guiding our actions. Upon the conclusion of our 2021 financial year, we already met the first of the sustainability targets we set ourselves in 2016, and that ahead of schedule. Thanks to MVV's investment and efficiency initiatives, CO_2 emissions in the energy system have been reduced by one million tonnes a year. That clearly documents the willingness and ability of the entire MVV Group to put its plans into action.

MVV to be one of the first climate-positive energy companies with the "Mannheim Model"

We will also be maintaining a high pace in terms of our decarbonisation. After all, we aim to be one of the first climate-positive energy companies in Germany. To succeed, we are building on three foundations: the heat turnaround, the electricity turnaround and green products and solutions for our customers.

The heat turnaround is possibly the most important key. MVV is Germany's third-largest district heating supplier. We therefore have a particular responsibility to decarbonise our heat sector. Our goal is green heat, i.e. heat generated from renewable sources and in climate-friendly ways. By 2030, we will gradually convert the whole of the district heating supply in Mannheim and the Rhine-Neckar metropolitan region to green energy sources and thus move from 100 % fossil-based to 100 % green heat. Here, we are building on a broad portfolio of green technologies that ideally complement each other in terms of their mix and ensure a high degree of supply reliability. We have already come around one third of the way. We will achieve the next third by 2024 and complete the conversion at the latest by the end of the 2020s.

By accelerating our expansion of renewable energies, we are also pressing ahead with the electricity turnaround. After all, we can only decarbonise by working with green electricity. Without green electricity generation, exiting from fossil fuels will be unattainable. That is why we are stepping up the pace at which solar and wind power are used as energy sources and are investing in expanding our own renewable energies generation portfolio, and here especially onshore wind power and photovoltaics. Political decision-makers are called on to remedy those factors that are still holding back this development.

And we are supporting our customers as they themselves head for climate neutrality, whether they be private households, commercial and business customers or industrial players. In both our B2C and our B2B businesses, we are promoting energy efficiency, supplying data centres with green energy and offering comprehensive solution concepts to reduce greenhouse gas emissions at companies of all sizes. We provide private customers with combined products and services enabling them to implement their own personal energy turnarounds at home.

All these activities have one objective: From 2040, MVV will be climate positive. This means we are going beyond the climate neutrality requirements of the German Climate Protection Act. As well as deploying forward-looking green technologies and drawing on new technological options, we will therefore capture CO_2 from our biomass power plants and energy from waste plants and turn these plants into CO_2 sinks. We refer to our course towards a climate-positive future as the "Mannheim Model".

Investments form the basis for sustainable and profitable growth

Our investment programme is broad based and has a long-term perspective. It is an integral component of our strategy and thus also of our climate protection activities. In the 2021 financial year, we again invested more than Euro 300 million. Let us start with Scotland, where operations were launched at our new energy from waste plant in Dundee. This highly efficient plant is a prime example of a modern circular economy. In Germany, we connected our energy from waste plant in Leuna to the district heat grid at Stadtwerke Merseburg. This enables the municipal utility company to cover up to 50 % of its district heating requirements with climate-neutral energy. In Mannheim and Offenbach, we are building new phosphorous recycling plants which will enable us to recover the phosphorous contained in sewage sludge. Moreover, we expanded our own green generation capacity with further windfarms and, for the first time, photovoltaics systems as well from Juwi and Windwärts. We are also extending our capacities when it comes to fermenting and generating energy from organic waste: Our second plant of this kind is currently being built in Saxony-Anhalt. We will feed the bio-natural gas generated at this plant into the regional gas grid. All our investments have one thing in common: They help us to move gradually but consistently closer to our climate-positive future. And we will be maintaining this course just as decisively in future as well.

Financial success and business stability go hand in hand with climate neutrality

We began "Heading for the Energy Turnaround" in 2009 already and have not allowed ourselves to be deterred from this course. Since then, we have consistently implemented and continuously enhanced our strategy. A glance at our performance in the 2021 financial year shows we are on the right course. Despite the ongoing coronavirus pandemic and challenging conditions in the energy industry and markets, we were able to increase our adjusted EBIT to Euro 278 million. All operating reporting segments contributed to this growth. This way, we generated the best earnings in our company's history. We simultaneously managed to increase our value spread, which stood at 3.0 % compared with 1.8 % in the previous year. Business success is not just reflected in key financials. At the end of the 2021 financial year, MVV had 6,470 employees, 210 women and men more than one year earlier. Their commitment and expertise form the foundation for MVV's successful further development and the achievement of our climate protection targets. I would therefore like to thank them all on behalf of the entire Executive Board.

Profitable growth expected for 2022

One thing is certain: The environment in which we operate will again be challenging in the 2022 financial year. Despite all differences of opinion, the national and international efforts to protect the climate are becoming increasingly coherent. They affirm us in our strategic alignment. We will continue to seize the resultant opportunities for our long-term profitable growth. For our 2022 financial year, we expect to be able to notably exceed the superb earnings reported for 2021. We will also maintain a high level of investment and plan to significantly increase our investments compared with the previous year.

Reliable dividend policy

We would like to pay our shareholders a dividend guided by MVV's earnings performance in future as well. Given the earnings growth generated in the 2021 financial year, we will therefore propose the distribution of a dividend of Euro 1.05 per share for approval by the 2022 Annual General Meeting. This corresponds to an increase of Euro 0.10, or just over 10 %, per share.

On behalf of the entire Executive Board and all our employees, I would like to thank you, our shareholders, for the trust you have placed in MVV. We will make every effort to do justice to the claims formulated in this Annual Report. As one of Germany's leading energy companies, and one with a strong strategy, we are well positioned for the years ahead as well. We would be delighted if you were to accompany us as we head towards a climate-positive future.

Yours faithfully,

[redacted]

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

Dr. Peter Kurz
Supervisory Board Chairman
of MVV Energie AG

DEAR LADIES AND GENTLEMEN,

Great tasks lie ahead of us: Sustainability, cutting CO_2 emissions and climate neutrality are topics that will have to be tackled with great commitment and rapidly implemented on all levels of society. Far-reaching decisions have to be taken so that climate targets can be reached as soon as possible. MVV is tackling the associated challenges with extraordinary commitment, strategic farsightedness and economic success. In the 2021 financial year, MVV was able to significantly increase its adjusted EBIT compared with the previous year's figure, and that against the backdrop of the coronavirus pandemic. The success of its strategic alignment is apparent not only in economic terms; MVV is also making substantial progress with its target of achieving CO_2 savings. This documents that MVV has taken the right decisions in recent years and made targeted investments in forward-looking business fields. It also means that MVV is in a position to continue drawing extensively on the opportunities presented by the energy system of the future. All this gives us reason to begin the 2022 financial year with a positive outlook, even if the environment in which we operate remains challenging.

Key focuses of Supervisory Board activities

We fulfilled all aspects our duty to advise the Executive Board in its management of the company and to supervise its business activities once again in the 2021 financial year. We were in dialogue with the Executive Board throughout the period under report and were provided with regular, prompt and comprehensive information both about the latest developments in the energy industry and energy policy, as well as about the Group's strategic alignment, business performance and situation, including its risk management and risk situation. The Executive Board dealt in particular with any variances between the business performance and the original planning and substantiated these in detail. The Supervisory Board held extensive discussions concerning the company's investment decisions. As Supervisory Board Chairman, I was in close contact with the CEO outside the meeting framework as well. We regularly exchanged views on current topics and events at the company. During the period under report, these particularly involved the direct and indirect impact of the coronavirus pandemic on the company.

In meetings of the full Supervisory Board and our committees, we reviewed, questioned and openly discussed all reports and other information provided by the Executive Board. We convinced ourselves of the legality, expediency and correctness of the business management. The Executive Board provided us with the necessary information in good time so that we always had sufficient time to prepare the meetings. Due to the pandemic, we held our training and development measures in an online format in June 2021. Key focuses here were the European “Green Deal”, German climate protection legislation, MVV’s climate targets and its course towards climate neutrality, as well as current developments in the topics of compliance, governance and confidentiality.

Supervisory Board meetings and attendance

In the 2021 financial year, the Supervisory Board held four regular meetings and one constitutive meeting. The Audit and Personnel Committees held five and three meetings respectively in the year under report. The Nomination Committee met once. Consistent with the recommendation made by the German Corporate Governance Code, we disclose the attendance of members at the respective meetings.

Attendance at committee meetings FY 2021

	Supervisory Board	Audit Committee	Personnel Committee	Nomination Committee
Dr. Peter Kurz, Chairman	5/5	–	3/3	1/1
Johannes Böttcher	5/5	–	–	–
Angelo Bonelli (since 12 March 2021)	3/3	3/3	2/2	–
Timo Carstensen	5/5	–	–	–
Sabine U. Dietrich	4/5	–	–	–
Ralf Eisenhauer (until 12 March 2021)	2/2	–	1/1	–
Peter Erni (until 12 March 2021)	0/2	0/2	0/1	–
Detlef Falk	5/5	5/5	–	–
Gabriele Gröschl-Bahr (until 12 March 2021)	2/2	–	–	–
Martin F. Herrmann (since 12 March 2021)	3/3	3/3	–	–
Barbara Hoffmann	5/5	–	2/2	1/1
Heike Kamradt	5/5	5/5	3/3	–
Gregor Kurth	4/5	4/5	2/3	1/1
Thoralf Lingnau	5/5	–	–	–
Dr. Lorenz Näger	5/5	5/5	–	–
Tatjana Ratzel	5/5	–	–	1/1
Thorsten Riehle (since 12 March 2021)	3/3	–	–	1/1
Susanne Schöttke (since 12 March 2021)	2/3	–	–	–
Bernhard Schumacher	5/5	–	–	–
Dr. Stefan Seipl	5/5	–	–	–
Christian Specht	5/5	–	–	–
Prof. Heinz-Werner Ufer (until 12 March 2021)	2/2	2/2	–	1/1
Susanne Wenz	4/5	–	–	–
Jürgen Wiesner	5/5	–	2/3	–

Main topics of discussion at Supervisory Board meetings

At our meeting on **2 December 2020,** we prepared the agenda for the Annual General Meeting on 12 March 2021 and voted on the necessary draft resolutions, including those relating to the Executive Board remuneration system and the election of the auditor for the 2021 financial year. Further topics addressed included the review and approval of the consolidated financial statements (IFRS) and annual financial statements for the 2020 financial year. Furthermore, we dealt with the investment project to secure the supply of district heating (Rheinufer Neckarau and Friesenheimer Insel), the takeover of the shares held by Stadtwerke Bernburg GmbH in MVV Biogas Bernburg GmbH and the reappointment of Ralf Klöpfer as the Executive Board member responsible for sales.

At its meeting on **11 March 2021**, the Supervisory Board approved the resolution to acquire a windfarm in Mecklenburg-Western Pomerania from the Group's subsidiary Juwi and to include this windfarm in the generation portfolio at MVV Energie AG. Moreover, we adopted the resolution to found sMArt City Mannheim GmbH, a joint venture with Mannheimer Kommunalbeteiligungen GmbH. This joint venture is intended to press further ahead with decarbonising and digitalising activities in the municipal sector. The objectives here on the one hand involve ensuring that the electricity used by municipal properties, including schools and municipal undertakings, comes from climate-neutral generation by 2027. On the other hand, Mannheim is to be further developed into a "smart city". Furthermore, we were informed about current IT topics, the progress made with digitalisation and IT security at MVV.

The constitutive meeting of the Supervisory Board held directly after the Annual General Meeting on **12 March 2021** voted to elect the Supervisory Board Chairman and committee members. The Supervisory Board additionally adopted the Executive Board remuneration system and took leave of the retired Supervisory Board members.

At the meeting on **28 June 2021,** we approved the construction of a river heat pump in Mannheim and a further initiative in the sewage sludge business. Moreover, we adopted the resolution to increase our stake in the IT service provider and data centre operator DC-Datacenter-Group GmbH from 74.9 % to 100 %. Further topics addressed at the meeting included the company's growth strategy in its private and commercial customer business ("Future Retail") and the expansion in our product solutions in this area.

The key focus of our meeting on **24 September 2021** was the Group's long-term strategic alignment and the approval of its business plan for the 2022 financial year. In this context, the Supervisory Board also discussed the three-year plan. Further topics addressed were a project to recycle phosphorous from sewage sludge, the Declaration of Compliance with the German Corporate Governance Code, which we approved for the 2021 financial year, and the reappointment of Verena Amann as the Executive Board member responsible for personnel.

Committee work

To improve the efficiency of the work performed by the Supervisory Board, many topics and resolutions due to be discussed and adopted at Supervisory Board meetings are prepared by the relevant Supervisory Board Committees **Page 188.** The committee chairs keep our full body regularly and promptly informed about their activities. Any decisions due to be taken at the next Supervisory Board meeting are also discussed.

The **Audit Committee** held five scheduled meetings in the year under report. Upon the retirement of Prof. Heinz-Werner Ufer from the Supervisory Board, the chairmanship passed to Dr. Lorenz Näger in March 2021. Consistent with its remit, the committee focused in particular on the audit of the annual financial statements of MVV Energie AG, the consolidated financial statements and the combined management report for the 2020 financial year, as well as on the financial reporting upon the conclusion of the first three months, the first half and the first nine months of the 2021 financial year. Furthermore, the committee dealt with the company's risk situation and risk management on a quarterly basis.

Together with the Executive Board, the committee also discussed the company's 2022 business plan and its medium-term planning and strategic alignment. Following careful scrutiny, it recommended that the Supervisory Board should approve the budget for the 2022 financial year. The committee took receipt of supplementary reports from the company. It assured itself that both the group internal audit and the internal control system (IKS) in respect of the financial reporting process and compliance management system were appropriate, functional and effective. In this context, the committee inspected the mechanisms underlying MVV's decentralised management and control systems. Moreover, it determined the key audit focuses for the 2021 financial year. Other topics addressed by the committee included the grids business field and its return on capital, the concluding status report on the gas-fired CHP plant in Kiel and status of the energy from waste plant in Dundee/Scotland, a review of plant availability, the scope and utilisation of the guarantee framework, assumptions of liability and shareholder loans, the development of cost-to-serve and project development in the field of renewable energies.

The **Personnel Committee** met three times in the 2021 financial year and adopted corresponding recommendations for the Supervisory Board. It mainly discussed matters relating to the remuneration of Executive Board members and the Executive Board remuneration system and prepared the reappointment of the Executive Board members responsible for sales and for personnel.

The **Nomination Committee** held one meeting in the 2021 financial year, at which it determined the candidates to be proposed for election to the Supervisory Board at the 2021 Annual General Meeting.

Neither the **New Authorised Capital Creation Committee** nor the **Mediation Committee** held any meetings in the year under report.

Composition of the Supervisory and Executive Boards

By ruling of Mannheim District Court dated 21 September 2020 and effective as of 1 October 2020, Sabine U. Dietrich, supervisory board member and consultant, Tatjana Ratzel, lawyer and department head at INTER Krankenversicherung AG Mannheim, and Dr. Stefan Seipl, businessman and independent management consultant, were appointed as members of the Supervisory Board of MVV Energie AG and confirmed by the Annual General Meeting on 12 March 2021. Martin F. Herrmann, business angel and mentor, and Thorsten Riehle, managing director of Capitol-Betriebs GmbH, were newly elected as members of the Supervisory Board by the Annual General Meeting on 12 March 2021. They thereby succeeded Prof. Heinz-Werner Ufer and Ralf Eisenhauer, who retired from the Supervisory Board.

Further new members of the Supervisory Board since 12 March 2021 are Angelo Bonelli, trade union secretary at ver.di, Baden-Württemberg state district, and Susanne Schöttke, state district director at ver.di Nord, both of whom assumed their positions as employee representatives. They are the successors to Peter Erni and Gabriele Gröschl-Bahr, who retired from the Supervisory Board upon the conclusion of the 2021 Annual General Meeting.

On behalf of the entire Supervisory Board, I would like to thank those members of the Supervisory Board who retired in the year under report very sincerely for the commitment they showed to the benefit of the company. Their dedication and our trust-based cooperation contributed significantly to the company's further development.

Ralf Klöpfer was appointed for a further five years as a member of the Executive Board of MVV Energie AG on 2 December 2020, as was also the case for Verena Amann on 24 September 2021.

Corporate governance

In the year under report, we once 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 2021 financial year at our meeting on 24 September 2021 **Page 82.**

In view of the new composition of the Supervisory Board introduced in the year under report, we have postponed the self-assessment of the effectiveness of the Board's activities recommended by the Code to the 2022 financial year in order to enhance the meaningfulness of the assessments submitted and improvements thereby proposed.

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 2021 financial year by the Annual General Meeting on 12 March 2021. The declaration of independence from the auditor has been submitted to the Supervisory Board.

The annual financial statements of MVV Energie AG for the 2021 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 2021 financial year are published in the Federal Gazette (Bundesanzeiger).

We received the following documents in good time for our own audit: the consolidated financial statements, combined management report, annual financial statements of MVV Energie AG, proposal by the Executive Board concerning the appropriation of profits and the auditor's audit reports. 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 3 December 2021, 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 2021 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

Although conditions on the energy market and the coronavirus pandemic were consistently challenging, MVV concluded the 2021 financial year on an extremely successful note. The company's employees can rightly be proud of this great success as it was due to the efforts made by all involved: from the Executive Board of MVV Energie AG to the executive boards and management teams at subsidiaries and shareholdings through to employees and works council members. On behalf of the entire Supervisory Board, I would like to thank everyone for all their work and for the dedication they have shown!

[redacted]

Dr. Peter Kurz
Chairman

Mannheim, December 2021

Share

Volatile stock markets with upward trend

Developments on international stock markets in the period under report were chiefly shaped by the coronavirus pandemic and associated macroeconomic effects. Despite recording losses of around 40 % at times, Germany's lead index, the DAX, closed 2020 at 13,719 points, 3.5 % higher than at the start of the year. In the wake of what had been the worst global economic crisis for decades due to the pandemic, investors quickly set their sights on a strong economic recovery in 2021. Moreover, the German lead index benefited from the hopes placed in the successful development of safe and effective vaccinations against the virus. Stock markets were also buoyed by the extensive economic aid and stimulation packages introduced by numerous countries, as well as loose monetary policies at central banks. Due above all to the outcome of the US Presidential Elections, the rally continued at the beginning of 2021. The DAX passed the 14,000-point mark for the first time at the beginning of January and then exceeded 15,000 points at the end of March. The further extension in the lockdown due to the coronavirus pandemic, significant price rises on the oil market triggered in part by the temporary blockage of the Suez Canal, growing inflation and rising interest rates – none of these factors led to any sustained correction in stock markets. Due to central bank monetary policies and investors' positive economic expectations, the DAX passed the 16,000-point mark for the first time in mid-August, reaching a new all-time high at 16,030 points. In the further course of the year, the DAX ceded ground at a high level. It closed at 15,261 points at the end of September, 19.6 % higher than one year earlier.

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

		FY 2021	FY 2020
Closing price at 30 September [1]	Euro	32.00	26.00
Annual high [1]	Euro	32.60	29.00
Annual low [1]	Euro	25.00	23.80
Market capitalisation at 30 September	Euro million	2,109	1,714
Average daily trading volume	No. of shares	4,374	2,871
No. of individual shares at 30 September [2]	000s	65,907	65,907
Dividend per share [3]	Euro	1.05	0.95
Total dividend [3]	Euro million	69.2	62.6
Adjusted earnings per share [4, 5]	Euro	2.28	1.57
Cash flow from operating activities per share [5]	Euro	18.26	5.81
Adjusted carrying amount per share [5, 6, 7]	Euro	21.67	20.41
Price/earnings ratio [8]		14.0	16.6
Price/cash flow ratio [8]		1.8	4.5
Dividend yield [8]	%	3,3 [3]	3.7

1 XETRA trading

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

3 Subject to approval by Annual General Meeting on 11 March 2022

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

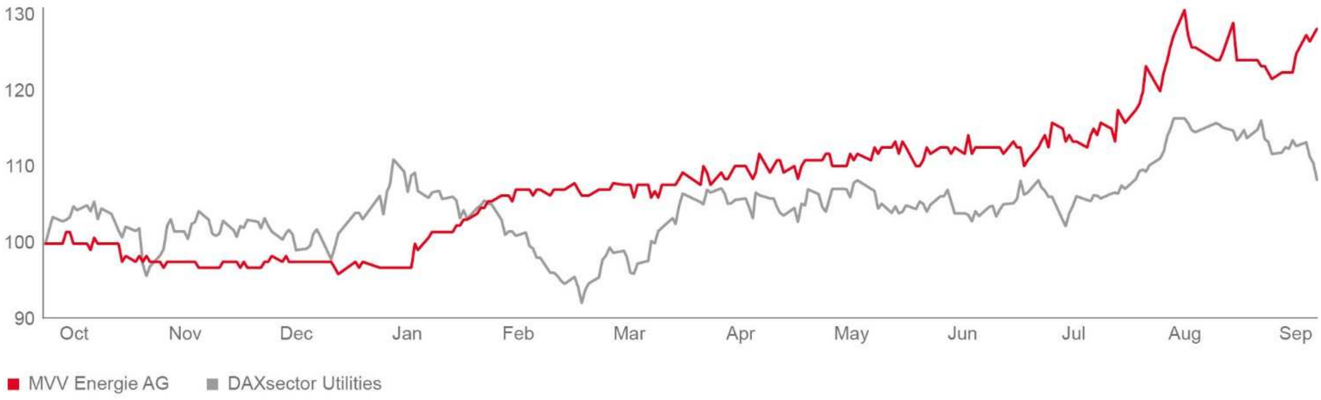
5 Number of shares (weighted annual average)

6 Excluding non-operating measurement items for financial derivatives

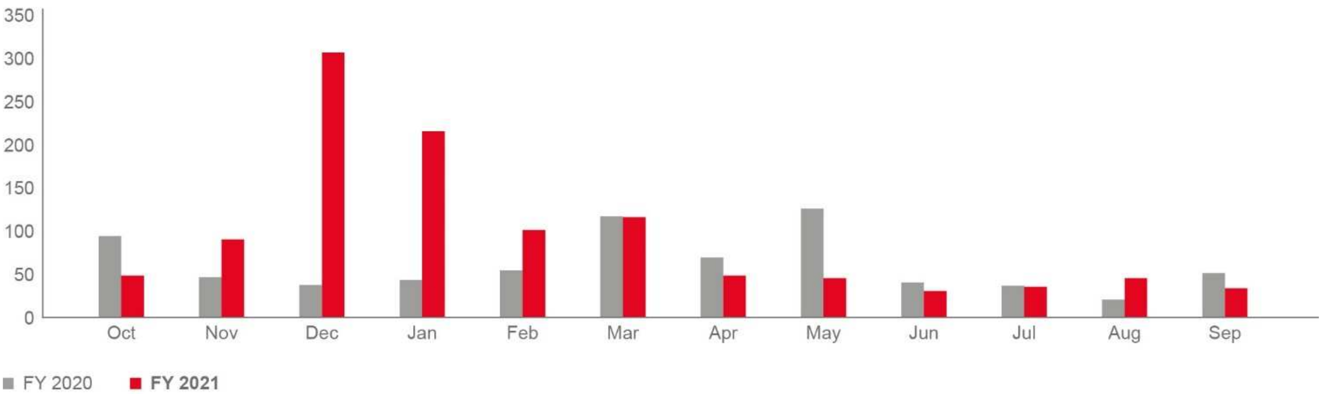
7 Excluding minority interests

8 Basis: closing price in XETRA trading at 30 September

MVV ENERGIE AG SHARE PRICE PERFORMANCE COMPARISON FY 2021
(%)



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



MVV share price increases

The MVV Energie AG share was listed at Euro 32.00 on 30 September 2021, corresponding to a 23.1 % increase compared with its price of Euro 26.00 on 30 September 2020. Including the distribution of a dividend of Euro 0.95 per share in March 2021, our share price rose year-on-year by 27.4 %. The DAXsector Utilities, the comparative sector index for the energy industry, improved by 8.2 % over the same period. In the share price performance chart, we include our dividend payment in line with the calculation of the comparative index.

Higher market capitalisation and increased trading volumes

The growth in the share price also increased our market capitalisation, which rose from Euro 1,714 million at the previous year's balance sheet date to Euro 2,109 million at 30 September 2021. The 4.8 % free float accounted for market capitalisation of around Euro 102 million (previous year: Euro 72 million based on free float of 4.2 %). In total, around 1.1 million MVV Energie AG shares were traded on all German marketplaces in the 2021 financial year, 52.4 % more than in the previous year. Accordingly, the equivalent value of trading volumes also rose, in this case to Euro 28 million (previous year: Euro 20 million).

Change in free float

In June 2020, First Sentier Investors acquired the stakes in MVV previously held by EnBW and RheinEnergie (45.1 %) and then submitted a voluntary takeover bid. Due to the shares tendered within the takeover bid, the stake held by First Sentier Investors rose to 45.7 % at 30 September 2020; the free float showed a corresponding reduction to 4.2 %. During the year under report, First Sentier Investors then resold all the shares previously tendered. Its shareholding thus stood at 45.1 % again at 30 September 2021. The City of Mannheim still holds an unchanged stake of 50.1 %. As was the case prior to the voluntary takeover bid, 4.8 % of the shares are in free float.

Higher dividend proposed for 2021 financial year

The Annual General Meeting on 12 March 2021 accepted the proposal from the Executive and Supervisory Boards and approved the distribution of a dividend of Euro 0.95 per share for the 2020 financial year, corresponding to an increase of Euro 0.05. Based on 65.9 million outstanding shares, the distribution sum totalled Euro 62.6 million (previous year: Euro 59.3 million).

We intend to pay a dividend to our shareholders that is aligned to MVV's earnings performance in future as well. In view of this, the Executive Board has decided to propose a dividend of Euro 1.05 per share, corresponding to an increase of Euro 0.10 per share, for approval by the Annual General Meeting on 11 March 2022. Should the Annual General Meeting approve this dividend proposal, then this would correspond to a dividend yield of 3.3 % based on the closing price of MVV's share in XETRA trading on the balance sheet date on 30 September 2021.

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 (WKN)	A0H52F
Symbol	MVV1
Reuters Instrument Code	MVVG
Bloomberg Symbol	MVV1:GR
Share category	Individual registered shares (ordinary shares); prorated share of share capital per individual share: Euro 2.56
Share capital	Euro 168,721,397.76
Share capital (no. of shares)	65,906,796
Date of initial listing	2 March 1999

Our investor relations activities

In the year under report, we once again explained our business model and our strategic alignment to institutional and retail investors. We are also always available for questions and suggestions from our shareholders. At analysts' conferences held upon the publication of our half-year and full-year results, the Executive Board presented our company's latest business performance. We make recordings of analysts' conferences and the accompanying analysts' presentations available to the public on our website at

[redacted]

The MVV Energie AG share is currently covered by one financial institution: Landesbank Baden-Württemberg. As of 30 September 2021, the analyst recommended holding our share with a target price of Euro 33.00.

Combined Management Report

Group Fundamentals

GROUP STRUCTURE

Company structure and shareholdings

As the publicly listed parent company of the MVV Group, MVV Energie AG, which has its legal domicile in Mannheim, directly or indirectly owns shares in the companies which form part of the Group and also has its own operations. Including MVV Energie AG, the MVV Group comprises 133 fully consolidated companies and 35 companies which are consolidated via the equity method (at-equity companies). Our group of companies has its largest locations in Mannheim, Kiel, Offenbach and Wörrstadt in Germany. We are also present in around 20 other countries, of which the United Kingdom and the Czech Republic are the most important.

Organisational structure

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

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

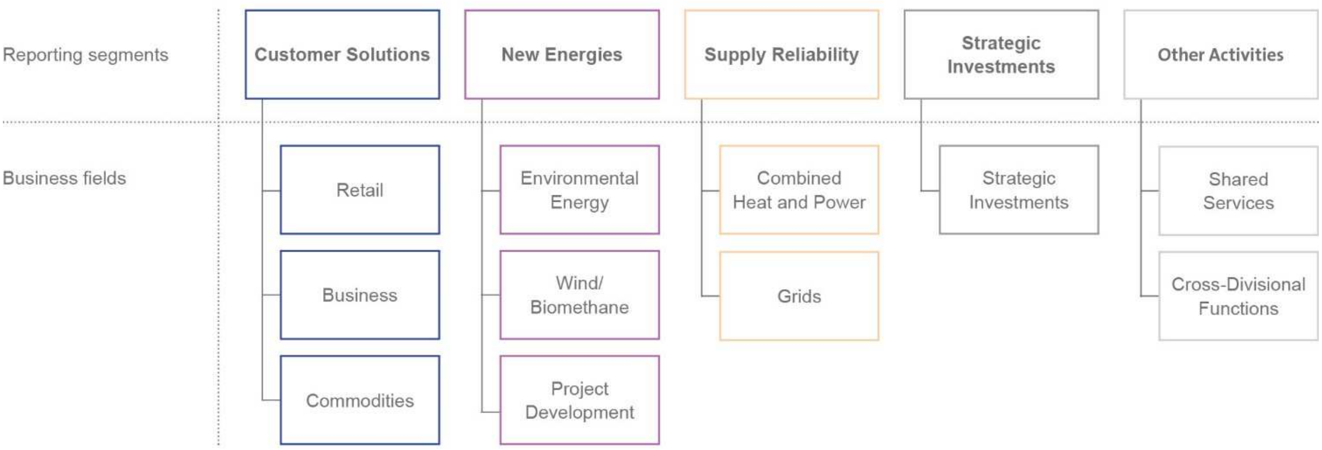
The Environmental Energy, Wind/Biomethane and Project Development business fields are allocated to the **New Energies** reporting segment.

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

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

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

REPORTING SEGMENTS AND BUSINESS FIELDS



BUSINESS MODEL

We cover all key stages of the energy industry value chain and, based on calculations compiled by the Association of the German Energy and Water Industries (BDEW), are one of Germany's leading energy companies. We generate and trade with energy, distribute energy via proprietary grid companies, market energy solutions to various customer groups and operate in the environmental energy business. We also have water production and distribution activities. We have a special focus on renewable energies. Here, we are active in the fields of project development and operations management for windfarms, solar parks and biomass power plants. Not only that, we also have these kinds of plant in our own generation portfolio and market electricity from these plants and on behalf of third parties, also via PPA/PSA models.

Customer Solutions segment

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

New Energies segment

In the New Energies reporting segment we on the one hand pool our competence in making ecological use of waste and biomass. We draw on this expertise not only at our plants in Mannheim, Offenbach, Leuna, Königs Wusterhausen and Flörsheim-Wicker, but also in the United Kingdom, where we operate an energy from waste plant with heat extraction in Plymouth and a biomass power plant with CHP capability at Ridham Dock. In the Scottish city of Dundee, we took over an energy from waste plant three years ago and have built a new additional plant in the direct vicinity. Operations here were launched in the 2021 financial year. In Germany, we also have biogas and biomethane plants, including organic waste fermentation. On the other hand, the New Energies segment also contains our proprietary wind turbines and photovoltaics systems, as well as our national and international project development business. The focus in the international business is on photovoltaics, while in Germany onshore wind power is an additional focal point. Furthermore, we act as operations managers for windfarms and solar parks and develop hybrid projects in which, depending on requirements, we supplement various energy systems such as photovoltaics or wind turbines with storage units and manage these using smart measurement and control technology.

Supply Reliability segment

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

CORPORATE STRATEGY

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

Our goal is for our activities to make a positive contribution towards achieving the Paris Climate Agreement. We made intensive use of the 2021 financial year to further develop our existing **decarbonisation targets, Pages 51 to 55** and to significantly step up the pace at which we intend to achieve even greater climate protection:

We will

- Reduce our direct CO_2 emissions (Scope 1) by more than 80 % by 2030
- Become climate neutral by 2040, and
- Be climate positive from 2040 onwards.

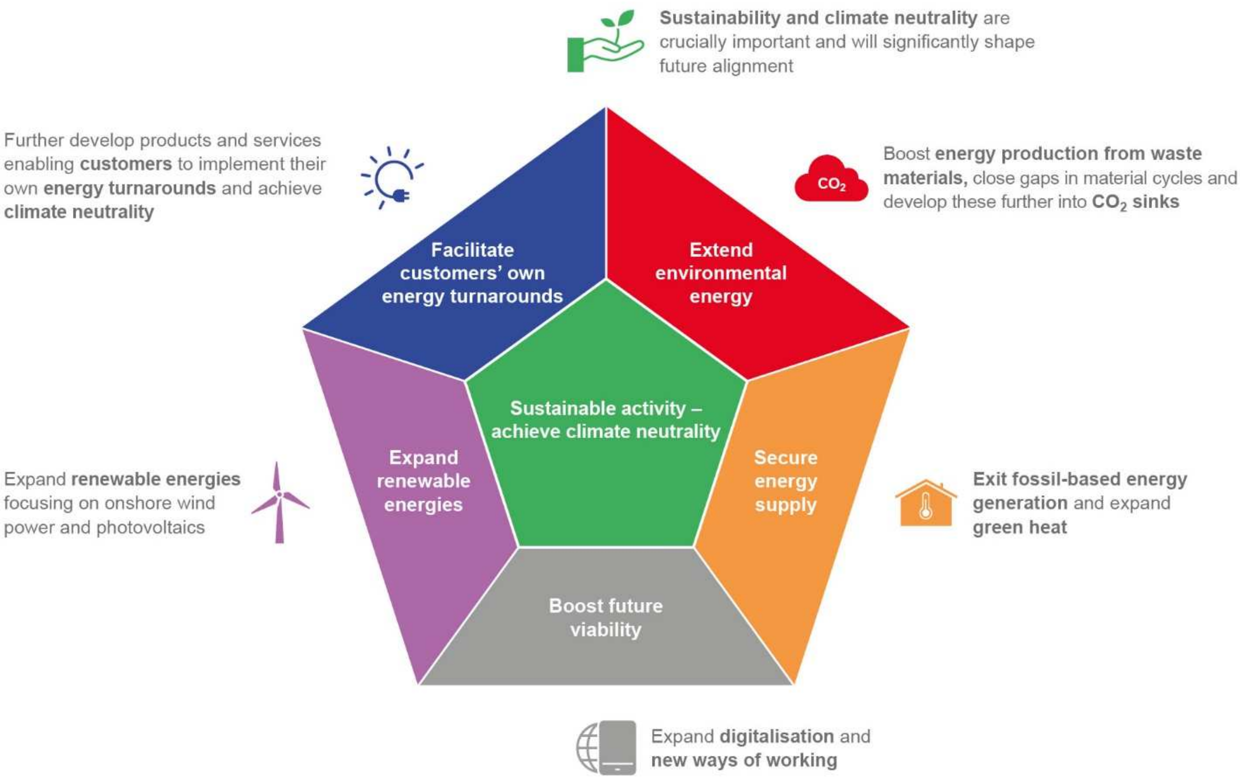
To achieve this, we will

- Maintain a high pace of expansion for renewable energies used to generate electricity and green heat
- Convert our district heating supply for Mannheim and the region to 100 % green energy sources by 2030 at the latest
- Facilitate climate neutrality for and at our customers by offering suitable products and services
- Create proprietary CO_2 sinks for unavoidable residual emissions or facilitate permanent and secure storage or use of the greenhouse gases (BECCUS)
- Press consistently ahead with the coal exit resolved by lawmakers
- Gradually reduce the emissions from our conventional generation capacities to zero, and
- Not build any new (CHP) power plants fired by fossil-based natural gas for the general public supply (electricity, district heating).

This way, we have supplemented the **sustainability targets, Page 58** which we set ourselves for a 10-year period in 2016 already, namely doubling our proprietary portfolio of renewable electricity generation capacity by 2026, installing 10,000 MW of generation capacity based on regenerative energies and saving one million tonnes of net CO_2 emissions a year by 2026. Thanks to investment initiatives at MVV, we met the last of these targets in the 2021 financial year already. This shows how seriously we take decarbonisation and that we have the expertise needed to actually meet our targets.

We are investing in sustainable growth

The key focus for the years ahead will be on consistent action, rather than further discussions about targets. That is why one major aspect of our strategy is a broad-based, long-term **investment programme, Page 45** that is aligned to our ambitious decarbonisation and sustainability targets. As we pursue this course, we will in future make even greater use of the opportunities arising as the energy turnaround progresses, and that both in Germany and beyond.



We offer customer-specific solutions

The wide range of solutions we offer includes suitable products and services for all customer groups. These enable us to structure the electricity turnaround, including mobility, and the heat turnaround together with our customers. Given the preliminary work performed in recent years, we believe that we are well positioned to meet the various requirements of decarbonisation. The solutions we offer to private customers include combined products comprising photovoltaics systems, storage facilities, charging points and an e-vehicle, as well as energy management solutions. We complement these products and services with proprietary installation services and heat and water products. For business customers, we are supplementing the range of e-mobility solutions we offer, such as charging infrastructure and smart charging management, by expanding the range of options we offer for electricity-based energy generation, such as contracting models for photovoltaics. As a partner to local authorities and municipal utility companies, we are developing and implementing holistic concepts for towns and cities of the future, as well as decentralised district solutions. In the past financial year, for example, we founded the joint venture "sMArt City Mannheim GmbH" together with the City of Mannheim. This is intended to promote decarbonisation and digitalisation in the municipal sector.

We are expanding our environmental energy activities

Our environmental energy activities also contribute to the common denominator of "decarbonisation". In the long term, we will add CO_2 capture facilities to our energy from waste plants and turn these into CO_2 sinks **Page 54.** At the same time, our plants are making an ever more important contribution to ensuring a reliable and sustainable supply of heat and electricity and are thus key pillars of a modern, resource-efficient circular economy. Based on analysis performed by the consultancy ecoprog, we are one of the three largest operators of energy from waste plants and biomass power plants in Germany. Furthermore, the plants we have operated in the United Kingdom for several years now, namely our energy from waste plants in Plymouth and Dundee and our biomass plant at Ridham Dock, mean that we also have an international presence in this field.

By making increasing use of organic waste fermentation and recycling phosphorous from sewage sludge, we are turning our locations into integrated resource management and energy hubs. This way, we are enhancing their future viability and competitiveness.

We are pressing further ahead with our growth initiatives in the field of waste treatment in other countries and focusing here on our technological and operating expertise. We also have plants that generate biomethane in environmentally compatible ways. This is one of the most versatile forms of green fuel and can be used to generate electricity and heat, as well as to fuel vehicles.

We are building on renewable energies

In expanding our portfolio of renewable generation plants, we are continuing to focus above all on onshore wind power and photovoltaics, also combined with battery storage facilities and based on long-term marketing contracts, known as PPAs. For existing plants, we are reviewing and implementing repowering options with higher performing turbines, and that both in our own portfolio and for third parties. Our two subsidiaries Juwi and Windwärts focus on developed markets offering potential for growth, both abroad and in Germany.

We provide our customers with a reliable supply of energy

The further expansion in renewables-based energy generation involves challenges, as the volume of electricity fed in by wind turbines and photovoltaics systems is significantly dependent on the time of day and weather conditions. We nevertheless intend to provide our customers with a secure and reliable supply of energy. The reliability, intelligence and performance capacity of our grids have a key role to play here. We are continually modernising and extending our grids to meet growing requirements. Moreover, we are drawing on our expertise as a distribution grid operator to further expand our grid services for third parties.

Alongside climate neutrality, supply reliability is also a key focus of our grid-bound heat supply. This is and will remain an indispensable component of a sustainable, forward-looking heat supply at all our locations. In large built-up areas, it is therefore set to gain further significance in competition with decentralised heat solutions. In Mannheim and the Rhine-Neckar metropolitan region, we will have converted district heating to 100 % green energy sources by 2030 at the latest. We took the first step in 2020 already by linking up our energy from waste plant to the regional district heating grid. Further steps will follow in the years ahead. We will build above all on scalable river heat pumps on the Rhine, biomass, geothermal energy, biomethane or waste industrial heat. Concepts to make the heat supply green are also being compiled at the other heat-supplying locations within the MVV Group. These are based on local conditions.

We are extending our fitness for the future

Together with innovations, an approach to **diversity management, Page 67** that is in line with the times will make MVV fit for the future. That is why we are committed to a corporate culture in which diversity is strengthened, and expertise actually lived and nurtured with groupwide training opportunities that meet current needs. We observe and repeatedly question the current status of the technologies, processes and procedures we use and which underpin our approach. In this, we take due account of the economic, ecological and political framework.

Digitalisation plays a key role in our efforts to innovate. As well as creating a modern hybrid world of work and cooperation, we make targeted use of digitalisation to continually improve our process efficiency. On an operating level, we use digital solutions in both our B2C and B2B segments. In our decentralised energy solutions and energy efficiency activities, digital solutions form the basis for monitoring, controlling and optimising customer plants. For our customers, we also offer apps that are easy to use, such as for e-mobility. On process level, we work with approaches such as predictive maintenance based on artificial intelligence and big data. These enable us, for example, to optimise maintenance cycles at our power plants or wind turbines and to minimise downtime.

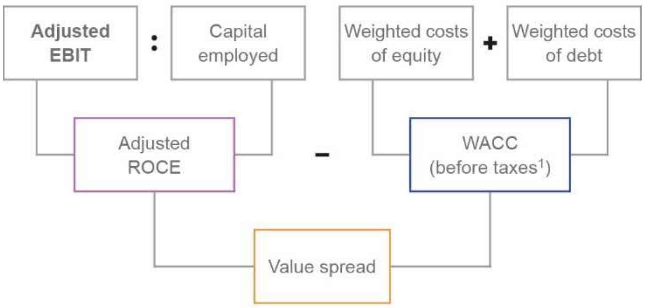
We have designated our strategy the “Mannheimer Model”. Its three components combine the electricity and heat turnarounds with products and services for all customer groups to support these in meeting their own specific decarbonisation targets.

VALUE-BASED CORPORATE MANAGEMENT

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

CALCULATION OF VALUE SPREAD

(simplified presentation)



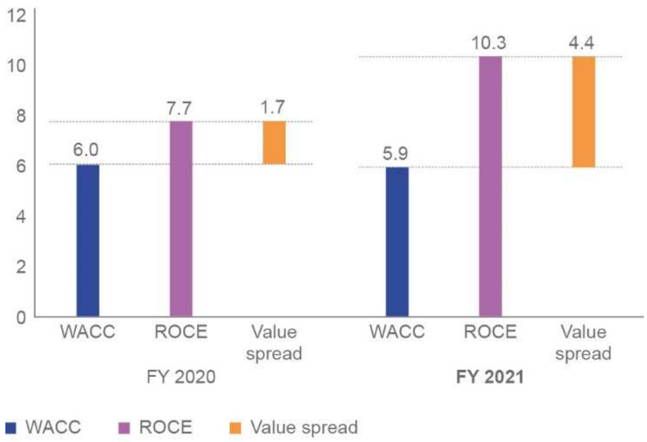
1 WACC before taxes = WACC after taxes/0.7

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

On this basis, we calculated equity costs after taxes of 6.3 % (previous year: 6.7 %) and debt costs after taxes of 1.2 % (previous year: 1.7 %). The capital structure of MVV's peer group amounts to 55.7 % for equity (previous year: 50.1 %) and to 44.3 % for debt (previous year: 49.9 %). The Group tax rate is unchanged at 30 % (previous year: 30 %). The WACC calculated on this basis for the 2021 financial year stands at 4.1 % after taxes (previous year: 4.2 %) and 5.9 % before taxes (previous year: 6.0 %).

KEY VALUE MANAGEMENT FIGURES

(%)



The ROCE rose from 7.7 % to 10.2 % in the 2021 financial year. One factor driving this increase was the significantly higher volume of adjusted EBIT. A further cause is the reduction in capital employed. The main reason for the lower volume of capital employed is the increase in cash and cash equivalents by Euro 843 million due to high inflows of funds for security deposits for counterparty default risk (margins). One half of this increase has been deducted for the purpose of calculating average capital employed.

Following the subtraction of WACC before taxes of 5.9 %, the increase in ROCE led the value spread to rise to 4.3 %. In the previous year, this key figure amounted to 1.7 %.

TECHNOLOGY AND INNOVATION

Innovative projects

We have set ourselves the goal of developing smart energy products and innovative solutions that meet our customers' needs. Our efforts to meet this objective are driven among other areas by our Customer Experience and Innovation department. Here, innovation managers and market researchers work on research and development projects, as well as on specific projects aimed at increasing customer satisfaction and in which colleagues from our operating business fields are also involved. Moreover, our operating units and our Digital City department are also independently involved in forward-looking projects. As a result, the development expenses for technology and innovation are not fully reflected in the research and development expenses reported in accordance with IFRS **Notes to Balance Sheet (Note 14), Page 128.**

In what follows, we present some of the projects we continued to pursue or newly launched in the 2021 financial year.

Decentralised energy management system in FRANKLIN District and Spinelli

The FRANKLIN conversion space in Mannheim was one of nine cells participating in C/sells, a project which developed and demonstrated sample solutions for a digital, secure and environmentally compatible energy supply.

Starting in 2017, we simulated and tested the energy system of the future at FRANKLIN by interconnecting the sectors of electricity, heat and mobility. The energy system, which has been in the operating stage since the 2021 financial year, consists of:

- Effective heat generation with photovoltaics electricity and power-to-heat in the low-temperature heating grid
- A control system for several decentralised buffer storage facilities to provide heating flexibility
- Interfaces to the e-mobility charging infrastructure and to high-resolution smart meters.

One aim was to further develop the heat supply concept at FRANKLIN and to plan Spinelli, a CO_2-neutral district. This means that the generation of the heat, warm water and electricity used by residents should be CO_2 neutral in the annual energy balance sheet. To achieve this, we will connect a low-temperature grid to the existing district heating grid using a heat exchanger. Energy generated on a decentralised basis from renewable sources will in turn be fed into the local low-temperature grid and local electricity grid. Both grids will be linked to storage facilities and coupled via a district energy management system (sector coupling).

The district garage planned for Spinelli will be equipped with public charging infrastructure and integrated into the district energy management system.

Furthermore, it is planned to provide a mobility service for residents. Alongside a stationary range of e-cars and e-scooters, this should also make electronic delivery bikes available on site and bookable via an app. These vehicles too are integrated as “storage facilities” into the district energy management system.

Development of Smart City Mannheim

In December 2020, the City of Mannheim was awarded federal funding within the “Smart Cities made in Germany” programme. Here, digital solutions are to be deployed to improve the quality of life, enhance public space and make processes more “citizen-friendly” and efficient, particularly in the fields of energy, transport and resources.

MVV and Mannheimer Kommunalbeteiligungen GmbH (MKB), the holding company of the City of Mannheim, have founded a joint venture to further promote decarbonisation and digitalisation in the municipal sector.

One objective in this context is to ensure climate-neutral generation by 2027 for the electricity used at properties owned by the city, including schools and municipal undertakings. To this end, photovoltaics systems are to be installed and operated on the roofs of properties owned by the City of Mannheim and its shareholdings, as well as at suitable open-space sites.

On the other hand, Mannheim is to be developed further into a smart city. We aim to lay the foundations for this with our joint venture sMArt City Mannheim GmbH. The term “smart city” refers to a holistic, cross-sector development concept which, by using digital and interlinked applications, aims to improve the quality of life for the local population and increase resource efficiency. A smart mobility system should make it possible to combine different modes of transport effectively, for example, and thus reduce the environmental impact, time spent in queues and the hunt for parking spaces.

Smart networking at “SynergieQuartier Walldorf”

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

From almost 60 applicants, a total of 27 private households with their own photovoltaics system and a private charging point to charge their electric cars were selected by the end of May 2021 as pilot customers for the project. These households were equipped by Stadtwerke Walldorf with smart meter gateways and Beegy’s energy management system. Furthermore, they received a web portal, as well as the HERMINE charging app if they have a suitable wall box. Practical field trials to investigate the impact of the new loads and generation facilities on the distribution grid will start at the beginning of 2022. One key focus involves the grid loads that will be called up due to optimised charging processes that account for variable electricity prices. In a dialogue-based format, the pilot customers will then be able to report on their experience. This information will be fed back into the project, enabling it to better meet the needs of participants.

Hydrogen and green gases: a new market is arising

The adoption of hydrogen strategies for Europe and for Germany in 2020 gave rise to a framework which sets out expansion targets for green and blue hydrogen, possible subsidy instruments, timeframes and prioritised sectors for the introduction of a decarbonised hydrogen economy. The addition of up to 5 GW of electrolyser capacity for producing green hydrogen is planned for Germany by 2030; a further 5 GW will be added by 2040 at the latest. Decarbonised hydrogen will first be launched into the mobility and industry markets, with the energy industry then following suit.

The groupwide “Green Gases and Hydrogen” project was further developed as the “Hydrogen Programme” in the year under report. To this end, a core team was formed to deal with project enquiries. This team ensures joint cooperation across all units for hydrogen enquiries and safeguards the transfer of knowledge to the respective units. By planning the Stassfurt Energy Region, we have already specified a first practical pilot project in greater detail. Working together with regional partners, we are developing an integrated solution that involves a 1 MW electrolysis plant to produce hydrogen from regional wind power, as well as the use of hydrogen in mobility and the heat supply.

EU project NUDGE: incentives for energy-efficient electric car charging

Within the EU project NUDGE, MVV is working together with nine other partners from universities, research institutes and companies to investigate the potential for non-monetary incentives to promote energy-efficient behaviour and the resultant benefits for consumers. By applying recognised methods from behavioural sciences, the project will look into which factors determine energy consumption behaviour and how behavioural changes can be triggered. To find out more, various test areas will be investigated in the next three years in Germany, Belgium, Greece, Croatia and Portugal.

For the German pilot trials, we are cooperating with our subsidiary Beegy and the Fraunhofer Institute for Systems and Innovation Research (Fraunhofer ISI) to promote the energy-efficient charging of electric cars in the context of the NUDGE project. In the field trials, around 100 pilot households from Mannheim and the region will gain access to a web portal that supplies information about their individual energy balance sheets. Moreover, smart charging control will be made available as a smartphone app to pilot households with charging points and electric cars. This enables the solar power which the households generate themselves with their photovoltaics systems to be put to preferential use for cost-optimised vehicle charging. The field trial has the aim of optimising energy consumption, and in particular home charging of the electric car.

The findings of the overall project are to be used as a basis for deriving suggestions to develop directives and formulate country-specific recommendations. The project has a three-year term and is being supported by the European research and innovation programme “Horizon 2020”.

Progress in expanding e-mobility charging infrastructure in Mannheim and the region

In structuring the transport turnaround and expanding the range of e-mobility solutions, we are pursuing the same course as the City of Mannheim. Drawing on federal grants from the charging infrastructure subsidy programme, since early summer 2019 we have installed more than 120 charging points for electric vehicles in Mannheim and the region. Within the "TENK Network", all our charging points are connected with further charging infrastructure in other towns in the Rhine-Neckar metropolitan region. Our own charging network is also being expanded further. By the end of 2022, it is planned to install more than 200 additional charging points. This expansion has two key focuses: On the one hand, by increasing the density of the existing alternating current (AC) infrastructure we aim to ensure that charging infrastructure is within walking distance in all districts of Mannheim. On the other hand, we are pressing ahead with expanding direct current (DC) rapid charging points. Here, we also plan to install high power charging (HPC) hubs. With high charging capacities of around 300 kW, these significantly reduce the time needed for charging processes while also making it possible to charge larger vehicle classes, such as e-trucks.

Making Mannheim's traffic smart

We are supplementing our e-mobility services with smart technologies. Most public charging points in Mannheim are now already equipped with modern parking space sensors working with long-range wireless technologies and linked up to MVV's data platform. These sensors can detect whether charging points are occupied regardless of whether a vehicle is actually connected to the point with a cable or the space is otherwise occupied. This makes it possible to drive directly to the infrastructure and lowers the volume of traffic on the lookout for vacant charging opportunities. Moreover, the measurement of traffic flows in the Mannheim area is being tested with the assistance of sophisticated sensors. We are working closely together with the City of Mannheim for these activities as well.

Innovative hybrid project about to be implemented

At the Schmölln II windfarm in Randowtal in the Uckermark region of Brandenburg, our subsidiary Juwi is for the first time building two wind turbines with a nominal capacity of 3.6 MW each together with a battery storage facility. Juwi was awarded the contract for this project in September 2020 in the first nationwide innovation tender organised by the Federal Network Agency (BNetzA). To date, it is the only "wind+storage" project of this kind in Germany. The infrastructure on site is currently being prepared for the construction of the two wind turbines. The turbine components are due to be delivered and assembled from mid-November, which means that operations can begin in January 2022 at the latest. A lithium-ion storage facility with a capacity of almost 3 MWh will then be installed together with the relevant measurement and control technology. This will make it possible to feed the electricity generated by the turbines into the electricity grid on a more constant basis than previously, particularly in periods of low wind volumes.

Innovation processes

Company ideas management

The company ideas management programme is based in the personnel department. Our ideas management is intended to involve our employees in MVV's continuous improvement process. By organising special topic-specific campaigns, we support our corporate strategy while calling on and rewarding the creativity of our staff.

In the 2021 financial year, we completed 210 proposed improvements. The ideas implemented enabled us to save Euro 197 thousand in the first year of implementation alone. We distributed bonuses of Euro 62 thousand to the relevant employees. The multiyear benefit (over 4 years) of the proposals implemented in the year under report currently amounts to Euro 317 thousand.

Tapping the entrepreneurial potential of our employees

Responding to the restrictions caused by the coronavirus pandemic, we launched the "Ready for Take-Off" initiative. Working with new virtual formats, this enables staff to develop new business ideas, also at a distance and in teams. Not only that: A variety of impulses were triggered for innovations consistent with our corporate strategy. The aim here is to further develop our culture of innovation and prepare employees for the next round of "Take-Off", our programme for developing new business models.

Fresh impulses from new companies

We have founded MVV Startup Challenge, our external innovation process, which enables us to absorb innovative impulses and anchor these at our company via networks and in cooperation with young companies. In the first MVV Startup Challenge, held in August 2020, our subsidiary Beegy opened the race with no less than three challenges. The winner was ultimately the young company logarithmo, which submitted a proposal as to how artificial intelligence could be used to optimise the calculation of own-use and autarchy ratios, improve generation and consumption forecasts and compile a feed-in forecast for direct marketing. Its joint cooperation project with MVV began in April 2021.

Group Business Performance

» Adjusted sales increase from Euro 3.5 billion to Euro 4.1 billion
» Adjusted EBIT improves from Euro 233 million to Euro 278 million
» Ongoing high volume of investments
» Expansion in renewables-based generation

MAJOR DEVELOPMENTS AND EXECUTIVE BOARD SUMMARY

Investments in a climate-neutral future

Our goal is climate neutrality. We aim to become climate positive from 2040 onwards. In view of this, our broad-based investment programme with its long-term horizon is an indispensable component of our strategy. We have invested for many years now in further expanding renewable energies, boosting energy efficiency and developing innovative products and services. In the 2021 financial year, we invested a total of Euro 306 million.

We have made further progress on this course. We have successfully completed, pressed ahead with and newly launched projects. This way, we have laid the foundations for further sustainable and profitable growth at MVV.

We connected our energy from waste plant in Leuna to the district heating grid at Stadtwerke Merseburg, enabling that municipal utility company to cover up to 50 % of its total district heating requirements with energy from climate-neutral generation. After more than three years of construction work, we launched operations with our new energy from waste plant in the Scottish city of Dundee. This is one of the most efficient plants of its kind in Europe. A further example of a modern and sustainable circular economy is being implemented in Saxony-Anhalt: Here, we are building our second plant to ferment and generate energy from organic waste. The bio-natural gas produced at the plant will be fed into the regional gas grid.

In Mannheim and Offenbach we are investing in a new technology. Phosphorous recycling plants are due to begin operating at both locations. These plants will recover the phosphorous contained in sewage sludge and make this available for fertiliser production.

Moreover, we have taken over several wind turbines and, for the first time, photovoltaics parks as well that were developed and built by Juwi and Windwärts into our own green generation portfolio.

Success in project development business

We promote the expansion in renewable energies particularly in our project development business. In the 2021 financial year, we connected renewable energies plants with a capacity of 610 MW to the grid in Germany and especially abroad. This represents an increase of 348 MW on the previous year.

Significant increase in sales and adjusted EBIT

Adjusted sales grew to Euro 4.1 billion in the 2021 financial year (previous year: Euro 3.5 billion). This significant growth was driven above all by volume and price factors for electricity and gas.

At Euro 278 million, adjusted EBIT was also significantly higher than in the previous year (Euro 233 million). This improvement was largely due to cooler weather conditions than in the previous year, the positive development in energy market prices and the remeasurement performed on the shares held in Fernwärme Rhein-Neckar GmbH due to the full takeover and subsequent full consolidation of this company in the year under report. Our project development business at Juwi and Windwärts performed positively. Not only that: Since launching operations at the end of November 2019, our gas-fired CHP power plant in Kiel now generated earnings for the entire period under report and thus contributed to the increase in adjusted EBIT. Earnings were adversely affected, on the other hand, by lower wind volumes compared with the previous year and by provisions stated for risks due to changes in market conditions.

Pre-tax earnings (adjusted EBT) increased year-on-year by Euro 53 million to Euro 234 million. Adjusted annual net income after minority interests improved by Euro 46 million and amounted to Euro 150 million in the year under report. Adjusted earnings per share amounted to Euro 2.28 (previous year: Euro 1.57).

Executive Board summary of business performance and economic position

The environment in which we operate remains challenging in terms of conditions in the energy industry and of energy policy. Moreover, energy and procurement markets have shown increased volatility with rapid movements in prices. Despite these conditions and the restrictions resulting from the coronavirus pandemic, we can look back on a very successful year.

We exceeded our target for adjusted sales: We had expected year-on-year sales growth of between 10 % and 15 %. At Euro 4.1 billion, adjusted sales were 18 % higher than in the previous year. Adjusted EBIT, for which we twice raised our forecast during the year under report, ultimately rose by 19 % to Euro 278 million.

Our operating performance in the 2021 financial year shows that financial success and business stability can go hand in hand with climate neutrality.

COMPARISON OF EXPECTED AND ACTUAL BUSINESS PERFORMANCE AND OUTLOOK

Comparison of expected and actual business performance and outlook

	Forecast FY 2021	Results FY 2021	Outlook FY 2022
Adjusted sales	Forecast adjusted after end of first nine months of FY 2021: around 10 % to 15 % higher than previous year's level (Euro 3.5 billion)	Sales of Euro 4.1 billion (+ 18 %)	Significantly higher than previous year; subject to uncertainties due to energy market developments and further course of coronavirus pandemic
Adjusted EBIT	Forecast adjusted after end of first nine months of FY 2021: around 20 % to 25 % higher than previous year's level (Euro 233 million)	Adjusted EBIT of Euro 278 million (+ 19 %)	Moderately higher than previous year; subject to uncertainties influenced above all by developments on energy markets and further course of coronavirus pandemic; in general dependent on weather and wind conditions, electricity and fuel prices and the availability of our plants. High volatility in renewable energies project development business
Adjusted equity ratio	Target > 30 %	Adjusted equity ratio of 28.6 % (33.3 % excluding security deposits for counterparty default risk (margins))	Target > 30 %
Adjusted ROCE	At around previous year's level (7.7 %)	Adjusted ROCE of 10.2 % (8.9 % excluding security deposits for counterparty default risk (margins))	At around previous year's level (excluding security deposits for counterparty default risk (margins))
Investments	Increase on previous year (Euro 322 million)	Total investments of Euro 306 million	Significant increase on previous year
Employees	Increase in personnel totals in growth fields; further efficiency measures in existing business	Increase in personnel totals to 6,470 employees at 30 September 2021 (previous year: 6,260)	Increase in personnel totals in growth fields; further efficiency measures in existing business

BUSINESS FRAMEWORK

Energy policy developments

EU adopts stricter climate target and EU Commission presents "Fit for 55" package

In April 2021, the European Parliament and the EU Council of Ministers agreed a new, more ambitious climate target. By 2030, the EU's greenhouse gas emissions are to be cut by 55 % compared with 1990. The EU intends to achieve climate neutrality by 2050.

In July 2021, the EU Commission published its "Fit for 55" package, which contains legislative proposals setting out how the climate target should be reached by 2030. These include new emissions reduction pathways for existing European emissions trading and a proposal to establish a second emissions trading system for the transport and buildings sectors from 2026. Further components of the package include raising targets for the share of renewable energies and decarbonised fuels, as well as increasing energy efficiency across all sectors.

In the next step, the EU Commission will negotiate the final resolutions with the EU Parliament and Council of Ministers within the trialogue procedure. Were the proposals made by the EU Commission to be implemented in their present form, this would be a major support for MVV's strategy.

Germany raises climate targets

A ruling passed by the Federal Constitutional Court in spring 2021 made it necessary to adopt retrospective improvements to the German Climate Protection Act (KSG) from 2019. Lawmakers responded by amending the KSG legislation in June 2021 and raising the existing greenhouse gas reduction target to be achieved by 2030 compared with 1990 from – 55 % to – 65 %. Germany is to achieve climate neutrality by 2045. For the energy industry, these new targets and the allocation of additional savings to individual sectors will significantly increase the previously envisaged pace of decarbonisation, particularly in the years to 2030.

The new German Climate Protection Act does not yet provide for any specific measures. These will have to be specified by the country's new Federal Government.

After state elections in Baden-Württemberg: new government aims to reach climate neutrality by 2040

The outcome of the state elections in March 2021 allowed the previous coalition to continue in government. One focus of the current legislative period will be climate protection: Baden-Württemberg is to become climate neutral by 2040 already. This new climate protection target was adopted with further measures in the Baden-Württemberg Climate Protection Act in October 2021. Here, the state government is building on faster expansion in renewable energies than previously planned. At least 2 % of the surface area is to be set aside for the addition of renewable energies plants. New wind turbines are planned on forest and state land, while the expansion in photovoltaics is to be boosted with a mandatory photovoltaics requirement that already applies for new non-residential buildings and is to be extended to new housing as well. Furthermore, the coalition agreement underlines the importance of municipal heat planning as an instrument to implement a climate-friendlier heat supply. We expect the measures aimed at by the state government to create extra potential for our various project developments.

Reforms to German Renewable Energies Act

The amendment to the German Renewable Energies Act (EEG) in December 2020 included setting the binding target for Germany that 65 % of electricity consumption should be covered by renewable sources by 2030. Furthermore, it was resolved that all electricity in Germany should come from greenhouse gas-neutral generation before 2050 already. The amendments took effect as of 1 January 2021.

To enable these targets to be reached, the tender volumes for new plants through to 2030 were increased; in a minor legislative amendment adopted in spring 2021, the targets for onshore wind and photovoltaics for 2022 were increased further. Moreover, additional improvements were adopted for the conditions governing onshore wind power and photovoltaics subsidies, such as those applicable to tenant electricity. Some of these amendments are currently still subject to state aid approval by the EU Commission.

Launch of national emissions trading for heat and transport

A national CO_2 emissions trading model for the heat and transport sectors was introduced in Germany at the beginning of 2021. Since then, fossil-based greenhouse gas emissions in these sectors have been subject to a price of Euro 25 per tonne. This will gradually be raised each year. The German Fuel Emissions Trading Act (BEHG), which governs the pricing of these emissions, formed part of the Climate Package announced by the Federal Government in 2019. Part of the proceeds from national emissions trading is to be used to further reduce the EEG allocation in future. The government aims to promote the efficient use of energy and enhance the competitiveness of climate-friendly heat and mobility solutions compared with fossil-based technologies.

BGH confirms general sectoral productivity factor for gas grid operators

At the end of January 2021, the Federal Supreme Court (BGH) confirmed the stipulation of the general sectoral productivity factor for gas (Xgen) at 0.49 % in the third regulatory period. In appeal proceedings in summer 2019, the Higher Regional Court in Düsseldorf had previously repealed this factor set by the Federal Network Agency (BNetzA). The gas Xgen is important in determining the level of grid fees, and thus also earnings at grid operators. The Xgen reduces the permissible revenue cap. Its calculation is based on the assumed level of progress in grid productivity compared with the overall economy. This factor is countered by inflation.

ECJ criticises inadequate independence of regulatory authority

On 2 September 2021, the European Court of Justice (ECJ) announced its ruling in the treaty infringement proceedings filed by the EU Commission against the Federal Republic of Germany. According to the ECJ ruling, Germany infringes the independence of the regulatory authority required by EU Single Market directives. Due to the requirements of the relevant ordinances, the regulatory authority is not fully independent in setting grid access rates. Further aspects of the ruling related to specific unbundling rules that are nevertheless of minor significance for MVV Energie AG. The Federal Republic of Germany is now obliged to amend the relevant laws and ordinances and bring these in line with the respective directives. Until the requirements are implemented or amended, the existing domestic regulations will continue to apply. This ruling will have implications for the mode of operation at regulatory authorities, particularly the Federal Network Agency (BNetzA), and, further down the line, on grid operators as well. These implications are not yet foreseeable.

Expansion in climate-friendly mobility boosted

In May 2021, the Federal Parliament adopted the German Fast Charging Act and the German Act on the Further Development of the Greenhouse Gas Reduction Quota. This legislation is intended on the one hand to safeguard the expansion of 1,000 fast-charging hubs by way of tenders and on the other hand to reduce the greenhouse gas intensity of fuels. Both provisions have the potential to boost our e-mobility business models. Alongside traction current, biofuels are an important means to reduce greenhouse gases. We therefore expect to see a further rise in demand for biomethane from the transport sector.

Lawmakers pave the way for legally secure smart meter rollout

At the end of June 2021, the Federal Parliament and Federal Council adopted amendments to the German Metering Point Operation Act (MsbG) that are intended to provide legal security and planning reliability for companies implementing the further rollout of smart meter systems (iMSys). A ruling passed by the Higher Administrative Court (OVG) in Münster on 4 March 2021 had criticised a general ruling issued by the Federal Office for Information Security (BSI) and thus the establishment of the technical possibility of installing smart meter systems under the MsbG legislation. This created uncertainty in the wider industry beyond the parties involved in the legal dispute. Lawmakers have now clarified the points criticised in the MsbG legislation and taken the amendment as an opportunity to adjust the scope of tasks performed by the smart meter gateways in terms of plausibility checks, replacement value creation and data transfer in line with actual possibilities.

Federal Funding for Efficient Heating Networks (BEW) and Federal Funding for Efficient Buildings (BEG)

The German Federal Ministry for Economic Affairs and Energy (BMWi) has submitted draft legislation for Federal Funding for Efficient Heating Networks (BEW). This programme is intended to promote both the construction of new heating networks with a high share of renewable energies and the decarbonisation of existing networks. In the case of existing networks, the funding will be based on a transformation plan showing the way to a climate-neutral heat supply. Assuming that it is suitably financed, this funding programme provides opportunities for the industry to decarbonise district heating. The new Federal Government is therefore called on to develop the funding framework further and ensure a secure investment climate.

The Federal Funding for Efficient Buildings (BEG) took effect as of 1 July 2021. This pools all state funding programmes that property owners can draw on when renovating their buildings in energy terms and for new buildings. In the original version of the BEG, the criteria for funding a district heating connection were formulated very restrictively. In an amendment introduced in October 2021, these criteria have now been adjusted to the extent that connecting any existing building to any of MVV's district heating grids is now eligible for funding. As soon as a transformation plan pursuant to BEW is available for our district heating grids, a district heating connection for new and existing buildings will be deemed equivalent to a decentralised renewable heating system.

Federal Network Agency publishes equity return stipulations

On 20 October 2021, the Federal Network Agency (BNetzA) published the stipulations for future rates of equity return for electricity and gas grid operators. In these, the BNetzA set a uniform equity return for electricity and gas grid operators amounting to 5.07 % before corporate income tax for new systems (previously 6.91 %). For existing systems, a return of 3.51 % before corporate income tax was stipulated (previously 5.12 %). The new rates of return apply from the 4th regulatory period, which begins in 2023 for gas grid operators and 2024 for electricity grid operators. From the perspective of grid operators, this level of return will threaten the performance and investment capacity of grid operators, and thus the success of the energy turnaround. In particular, the market risk premium proposed by the BNetzA is very low in comparison with other European countries.

Market climate and competition

German economy shows slight recovery

In their autumn survey, Germany's leading economic research institutes reduced their growth forecast for the German economy in the 2021 calendar year. Having still forecast GDP growth of 3.7 % in the spring, the experts now expect gross domestic product to rise by 2.4 %. In the previous year, economic output fell sharply due to the measures taken to contain the coronavirus pandemic.

GDP DEVELOPMENT IN GERMANY
(%)

1 Calendar year

Source: Forecast in autumn survey of leading German economic research institutes (October 2021)

Increase in electricity generation in Germany

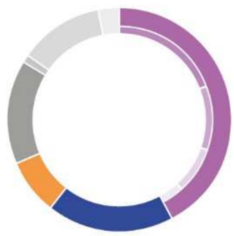
Based on current calculations compiled by the Association of the German Energy and Water Industries (BDEW), gross electricity generation volumes totalled 426 billion kWh in the first nine months of 2021 and were thus around 4 % higher than the previous year's figure (411 billion kWh).

Renewables share of German electricity generation falls to 42 %

According to BDEW estimates, the share of gross electricity generation in Germany attributable to renewable energies totalled 42 % in the first nine months of the 2021 calendar year, down from 47 % in the previous year's period. A major portion of this relative reduction is due to the higher volume of electricity consumption, which rose year-on year by around 4 % to 395 billion kWh in the first three quarters of 2021. The decrease in the renewables share was due in particular to wind-based generation. Offshore wind turbines reported a reduction of 15 %. Electricity generation volumes from onshore wind turbines were 17 % lower than in the previous year. Biomass and biogenic municipal waste generated around 1 % less electricity than one year earlier. By contrast, photovoltaics systems produced around 2 % more electricity. Overall, around 177 billion kWh of electricity was generated from renewable energies.

GROSS ELECTRICITY GENERATION IN GERMANY
Shares (%)

	2021[1]
Electricity from renewable energies	42
Wind power	19
Photovoltaics	11
Biomass, including biogenic municipal waste	8
Water	4
Lignite	18
Hard coal	9
Natural gas	15
Petroleum products	1
Nuclear energy	12
Other	3



1 January to September 2021

Wind power expansion remains at low level

In January 2021, the German Wind Energy Association (BWE) published its "Wind Energy Fact Sheet Germany" for the 2020 calendar year. Overall, gross wind power capacity totalling 1,650 MW, of which 1,431 MW onshore, was newly installed in Germany. Total installed wind power capacities amounted to 62,708 MW, which was around 2 % higher than the previous year's figure.

Gross onshore wind power capacity totalling 971 MW was added in Germany in the 1st half of the 2021 calendar year. This figure therefore still remained low compared with the record years between 2014 and 2017. The gross volume of wind power capacity newly added was nevertheless 62 % higher than in the first six months of the previous year. For the first time in more than ten years, no offshore wind capacity was newly added in Germany. At 63,542 MW, total installed wind power capacities were around 2 % higher than the previous year's figure.

Rising requirements in market climate and climate protection confirm our strategic alignment

The EU has adopted more ambitious climate targets for 2030 and resolved to achieve climate neutrality by 2050. Germany has adopted a stricter emissions target for 2030 and committed to becoming climate neutral by 2045. Current studies show that these goals are achievable if countries act quickly and lay the right foundations in the years ahead.

In its energy system analysis published in 2021, the Fraunhofer Cluster of Excellence Integrated Energy Systems (CINES) recommends a series of measures to reach the targets: a balance between not stipulating which technologies should be used and relevant requirements, promoting sector coupling by reducing the energy price components attributable to state levies, rapidly accelerating the expansion of wind and solar power, promoting the heat turnaround, subsidising investments in CO_2-neutral production technology, extending the transport turnaround and planning reliability for expanding energy infrastructures.

The "Climate-Neutral Germany 2045" study published by Agora Energiewende in June 2021 shows that Germany can achieve climate neutrality. This will require a significant acceleration in the use of climate-friendly technologies. Examples cited are the hydrogen economy, renewable energies expansion, transport and agriculture turnarounds, as well as the use of CO_2 capturing and removal of CO_2 from the atmosphere. With net negative emissions, Ger many can even make an additional contribution to international climate protection in the period from 2045 onwards.

The new lead study "The Road to Climate Neutrality" published by the German Energy Agency (dena) at the beginning of October 2021 also concludes that CO_2 capturing will be necessary in future. By reference to a central "climate neutrality 100" scenario, this study shows how sector targets can be reached in 2030 and climate neutrality achieved by 2045. The study makes it clear that this will require extreme efforts. Decarbonisation is based here on four pillars: a high level of ambition for energy efficiency, comprehensive direct use of renewable energies, widespread deployment of renewable fuels in gaseous and liquid forms and accessing natural and technical CO_2 sinks. Even if they are all implemented, these measures to reduce greenhouse gases will not be enough without using natural CO_2 sinks and deploying CO_2 capturing plants and active CO_2 withdrawal. Only this way will it be possible to offset unavoidable process and residual emissions, such as those arising in agriculture.

District heating represents a fast and comparatively inexpensive option when it comes to decarbonising the heat supply in urban areas. The Fraunhofer Institute for Energy Economics and Energy System Technology published a detailed analysis of the heat turnaround in July 2021. The "Transformation Pathways for District Heating in Liaison with the Energy System and Necessary Conditions" study looks into the specific potential and challenges involved in decarbonising district heating in Germany. Technologies such as heat pumps, waste heat, geothermal energy and energy from waste can act as the core of decarbonisation. However, this will require effective subsidy incentives.

Our strategic alignment means that we will benefit from the implementation of climate targets in the long term: in our energy generation from renewable energies, our project development and operations management for renewable energies plants and our marketing of the energy produced, our decentralised energy and heat supply and our energy efficiency solutions and service offerings.

Wholesale prices for fuels, emission rights and electricity show significant upward trend

Wholesale prices (average) from 1 October to 30 September

	FY 2021	FY 2020	+/– change	% change
Crude oil [1] (US$/barrel)	62.20	47.52	+ 14.68	+ 31
Natural gas [2] (Euro/MWh)	21.56	14.77	+ 6.79	+ 46
Coal [3] (US$/tonne)	79.52	59.75	+ 19.77	+ 33
CO_2 rights [4] (Euro/tonne)	43.52	24.45	+ 19.07	+ 78
Electricity [5] (Euro/MWh)	61.62	41.65	+ 19.97	+ 48

1 Brent crude oil; front-month

2 NetConnect Germany market region; front-year

3 Front-year

4 Front December contract

5 Front-year

Prices for Brent crude oil for supply in the following month averaged US$ 62.20 per barrel in the period under report and were thus US$ 14.68 higher than in the previous year's period. Due to the renewed rise in coronavirus cases in autumn 2020, the crude oil price – as the clearest indicator of global economic developments within the energy complex – initially fell sharply in October 2020. This was followed by significant price growth from November, which took the oil price to its highest level since autumn 2018. Overall, by the end of the 2021 financial year the oil price had risen by more than 100 % compared with its low at the end of October 2020.

Coal prices also rose significantly in the past financial year, almost trebling in value by the end of the year compared with their low at the beginning of November 2020. On average, listed front-year prices for hard coal in the ARA region (Amsterdam, Rotterdam, Antwerp) were 33 % higher in the period under report than in the previous year. Despite this substantial rise, the relative price increase in the coal market fell short of the other energy markets.

Average natural gas price listings for the front-year product in the NetConnect Germany (NCG) market region came to Euro 21.56/MWh in the period under report, Euro 6.79/MWh higher than in the previous year. Gas prices were affected not only by the economic recovery, but also by increased demand for gas due to cooler weather conditions compared with the winters in previous years. The heating period was exceptionally long, lasting into what was one of the three coldest months of May in the past 30 years. As a result, stocks available in gas storage facilities fell to comparatively low levels. In this respect, the increase in demand for gas was exacerbated by a tense global market with higher price settings in Asia. In summer 2021, front-year gas prices ultimately topped the peak price dating back to 2018 and thus exceeded a seven-year high. Most recently, reduced gas imports created a tense outlook for the winter ahead. The sharp increase corresponds to a quadrupling in gas prices over the financial year.

Alongside the gas market, the market for CO_2 emission rights (EUA) showed the sharpest rise in prices within the energy complex for large stretches of the financial year. Average prices in the period under report were 78 % higher than in the previous year, with numerous new price records set from December 2020 onwards. As well as the corresponding upward trend on financial markets, one key driver of this price increase of up to 171 % (October minimum to September maximum) was the expectation that emissions trading would be reformed in connection with more ambitious EU climate targets.

Prices of base load electricity for supply in the following year averaged Euro 61.62/MWh in the year under report and thus rose by Euro 19.97/MWh compared with the previous year. Alongside developments on the emissions market and in fuel prices, key drivers of this price increase in the electricity market also included the significantly lower volume of electricity generated by wind turbines, particularly in winter 2020/21 and in the months of June and September 2021.

On average for the 2021 financial year, the margins achieved from generating electricity from coal and gas – the clean dark spread (CDS) and the clean spark spread (CSS) – fell compared with the previous year. More specifically, however, the final quarter of the financial year witnessed sharply opposing movements in the CSS and CDS in conjunction with the fuel-driven rally in energy prices. While the CSS fell sharply, reaching its lowest level for several years at the end of the financial year, the CDS showed a marked increase.

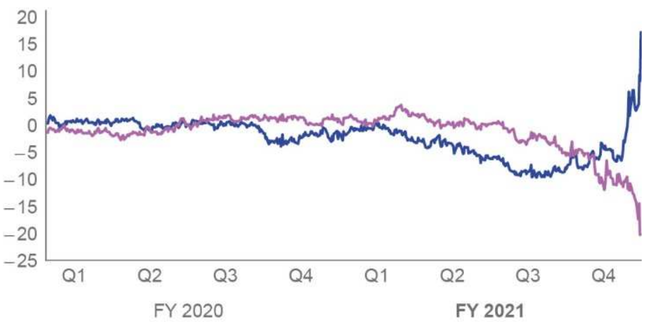
DEVELOPMENT IN WHOLESALE MARKET PRICES FOR ELECTRICITY, GAS AND CO_2 RIGHTS

- EEX electricity base front-year (Euro/MWh)
- EEX natural gas NCG front-year (Euro/MWh)
- EUA front-year (Euro/tonne CO_2)

DEVELOPMENT IN WHOLESALE PRICES FOR OIL AND COAL

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

DEVELOPMENT IN CLEAN DARK SPREAD AND CLEAN SPARK SPREAD 2022



- Clean dark spread 2022 (Euro/MWh)
- Clean spark spread 2022 (Euro/MWh)

MVV's market position

- Based on analysis performed by the consultancy ecoprog, we are one of Germany's largest operators of energy from waste and biomass plants. At our locations in Germany, we accepted a total of 1.7 million tonnes of non-recyclable waste and refuse-derived fuels for incineration in the 2021 financial year.
- According to the Market Master Data Register at the Federal Network Agency (BNetzA), with our Juwi and Windwärts subsidiaries we are one of Germany's leading renewable energies project developers.
- Directly marketing electricity from renewable energies in the market premium model also forms part of our portfolio. At the end of the year under report, we had around 4,000 MW under contract in Germany. According to Energie & Management, the energy market journal, this makes us Germany's largest direct marketer.
- Our grid companies in Germany have district heating grids with a total length of around 1,200 kilometres. In the year under report, we generated district heating turnover of 6.2 billion kWh in Germany. According to the report compiled by the AGFW industry association, this makes us Germany's third-largest provider of district heating. Including industrial steam, we are even the second-largest provider in Germany.
- In the Czech heating energy market, our subsidiary MVV Energie CZ a.s. operates at 15 locations. Based on our own calculations, we are one of the market leaders there.

Impact of weather conditions

Relatively cool weather conditions

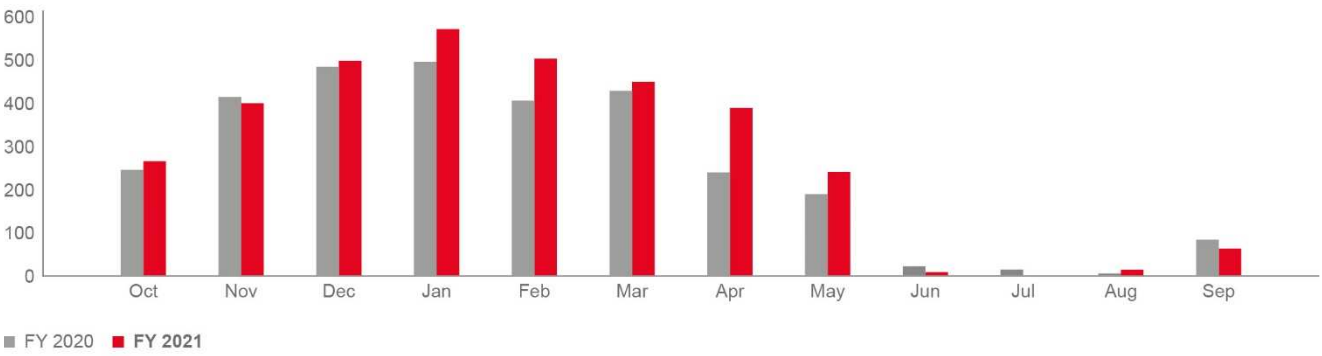
Lower outdoor temperatures lead to higher heat requirements at our customers. That is also reflected in higher degree day figures, which are used as an indicator of temperature-based heat consumption. The weather was relatively cool in the year under report. Overall, degree day figures were around 12 % higher than the previous year's figures, which had nevertheless been low.

Lower wind volumes than in previous year

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

In the regions relevant to us, the volume of usable wind power in the 2021 financial year was around 4 % lower overall than the long-term average. Wind volumes fell short of the previous year's high figure, which over the same period exceeded the long-term average by around 11 %. For this comparison, we draw on the "EMD-ERA" wind index with a reference period (historic average).

DEGREE DAY FIGURES



PRESENTATION OF EARNINGS PERFORMANCE

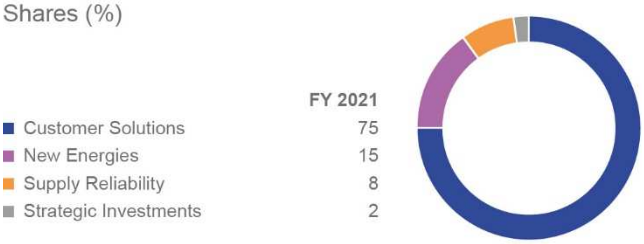
The period under report is the 2021 financial year, which started on 1 October 2020 and ended on 30 September 2021. Unless otherwise indicated, the comments below refer to the MVV Energie Group ("MVV"), i.e. all companies fully consolidated and the updated measurement of those shareholdings that are recognised at equity.

MVV from 1 October to 30 September

Euro million	**FY 2021**	FY 2020	+/– change	% change
Development in turnover				
Electricity (kWh million)	24,380	20,147	+ 4,233	+ 21
Heat (kWh million)	6,940	6,249	+ 691	+ 11
Gas (kWh million)	27,094	24,974	+ 2,120	+ 8
Water (m^3 million)	40.3	41.4	– 1.1	– 3
Usable residual waste delivered (tonnes 000s)	2,432	2,388	+ 44	+ 2
Adjusted sales excluding energy taxes	4,131	3,515	+ 616	+ 18
of which electricity revenues	1,989	1,629	+ 360	+ 22
of which heat revenues	391	375	+ 16	+ 4
of which gas revenues	776	635	+ 141	+ 22
of which water revenues	90	89	+ 1	+ 1
Adjusted EBIT	278	233	+ 45	+ 19

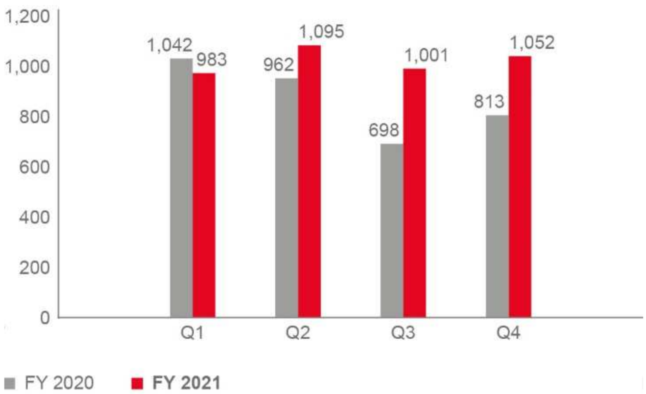
In sales, we eliminate the difference between the hedge and reporting date prices as of the respective realisation date pursuant to IFRS 9. This resulted in net totals of Euro 102 million at 30 September 2021 and Euro – 83 million at 30 September 2020. Adjusted sales increased year-on-year by 18 % to Euro 4.1 billion. This means that we slightly exceeded our forecast that sales would be around 10 % to 15 % higher than the previous year's figure. This sales growth was due above all to volume and price factors for electricity and gas. Of consolidated sales in the 2021 financial year, a total of 92 % were generated in Germany (previous year: 92 %) while, as in the previous year, MVV generated 8 % of its sales abroad.

ADJUSTED SALES EXCLUDING ENERGY TAXES BY REPORTING SEGMENT
Shares (%)



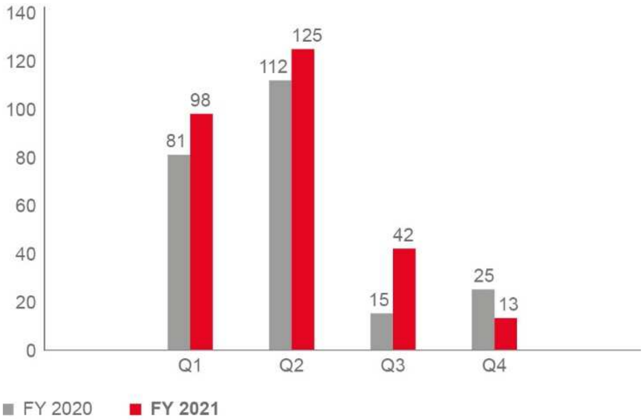
ADJUSTED SALES EXCLUDING ENERGY TAXES BY REGION
Shares (%)

ADJUSTED SALES EXCLUDING ENERGY TAXES BY QUARTER
Euro million



At Euro 278 million, adjusted EBIT was 19 % higher than in the previous year. This improvement, which was driven by all operating reporting segments, was mainly due to cooler weather conditions compared with the previous year, positive developments in prices on energy markets and the remeasurement of the shares held in Fernwärme Rhein-Neckar GmbH due to the full takeover of this company and its subsequent full consolidation in the year under report. Furthermore, having launched operations at the end of November 2019 our gas-fired CHP plant in Kiel now generated earnings for the entire reporting period and thus contributed to the increase in adjusted EBIT. By contrast, our earnings were negatively influenced by lower wind volumes compared with the previous year and provisions for risks resulting from changes in market conditions.

ADJUSTED EBIT BY QUARTER
Euro million



Customer Solutions reporting segment

Customer solutions from 1 October to 30 September

Euro million	**FY 2021**	FY 2020	+/– change	% change
Development in turnover				
Electricity (kWh million)	23,832	19,496	+ 4,336	+ 22
Heat (kWh million)	4,948	4,466	+ 482	+ 11
Gas (kWh million)	26,714	24,661	+ 2,053	+ 8
Wasser (m³ million)	39.3	40.5	– 1.2	– 3
Usable residual waste delivered (tonnes 000s)	156	152	+ 4	+ 3
Adjusted sales excluding energy taxes	3,101	2,553	+ 548	+ 21
Adjusted EBIT	47	21	+ 26	>+ 100

The rise in electricity volumes chiefly resulted from higher trading volumes and our new customer business. Largely as a result of cooler weather conditions, our heat turnover was above the previous year's figure. The higher volume of gas turnover was also mainly due to increased trading volumes; gas turnover additionally benefited from the cooler weather and the build-up in volumes, as well as from the new customer business.

The sales growth was driven by higher electricity and gas trading volumes, as well as by a weather-related rise in acceptance volumes and our new customer business.

The increase in adjusted EBIT was due above all to the cooler weather conditions and the remeasurement of the shares held in Fernwärme Rhein-Neckar GmbH resulting from the full takeover and subsequent full consolidation of this company in the year under report.

New Energies reporting segment

New Energies from 1 October to 30 September

Euro million	**FY 2021**	FY 2020	+/– change	% change
Development in turnover				
Electricity (kWh million)	350	469	– 119	– 25
Heat (kWh million)	1,271	1,115	+ 156	+ 14
Gas (kWh million)	258	211	+ 47	+ 22
Usable residual waste delivered (tonnes 000s)	2,152	2,126	+ 26	+ 1
Adjusted sales excluding energy taxes	622	591	+ 31	+ 5
Adjusted EBIT	120	113	+ 7	+ 6

The reduction in electricity turnover and increase in heat volumes resulted, among other factors, from the connection in 2020 of our energy from waste plants in Mannheim and Leuna to their regional heat grids. This led to both plants generating less electricity to enable them to increase their district heating production. Moreover, lower wind volumes meant that our wind turbines generated less electricity than in the previous year. The increase in gas turnover was due above all to improved availability at our plants.

The sales growth was primarily driven by our project development business.

Adjusted EBIT benefited in the year under report from the development in prices on the energy markets and the positive performance of our project development business. Earnings were adversely affected by factors including the lower volume of wind compared with the previous year.

Supply Reliability reporting segment

Supply Reliability from 1 October to 30 September

Euro million	**FY 2021**	FY 2020	+/– change	% change
Adjusted sales excluding energy taxes	310	278	+ 32	+ 12
Adjusted EBIT	78	67	+ 11	+ 16

The growth in sales was attributable to the launch of operations at our gas-fired CHP plant in Kiel, as well as to price and volume effects for grid fees.

Year on year, adjusted EBIT benefited in particular from the launch of operations at the gas-fired CHP plant in Kiel, which was available for the first full heating period in 2021. This factor was countered by lower revenues from the non-regulated divisions.

Strategic Investments reporting segment

Strategic Investments from 1 October to 30 September

Euro million	**FY 2021**	FY 2020	+/– change	% change
Development in turnover				
Electricity (kWh million)	198	182	+ 16	+ 9
Heat (kWh million)	721	668	+ 53	+ 8
Gas (kWh million)	122	102	+ 20	+ 20
Water (m^3 million)	1.0	0.9	0.1	+ 11
Usable residual waste delivered (tonnes 000s)	124	110	+ 14	+ 13
Adjusted sales excluding energy taxes	97	91	+ 6	+ 7
Adjusted EBIT	22	24	– 2	– 8

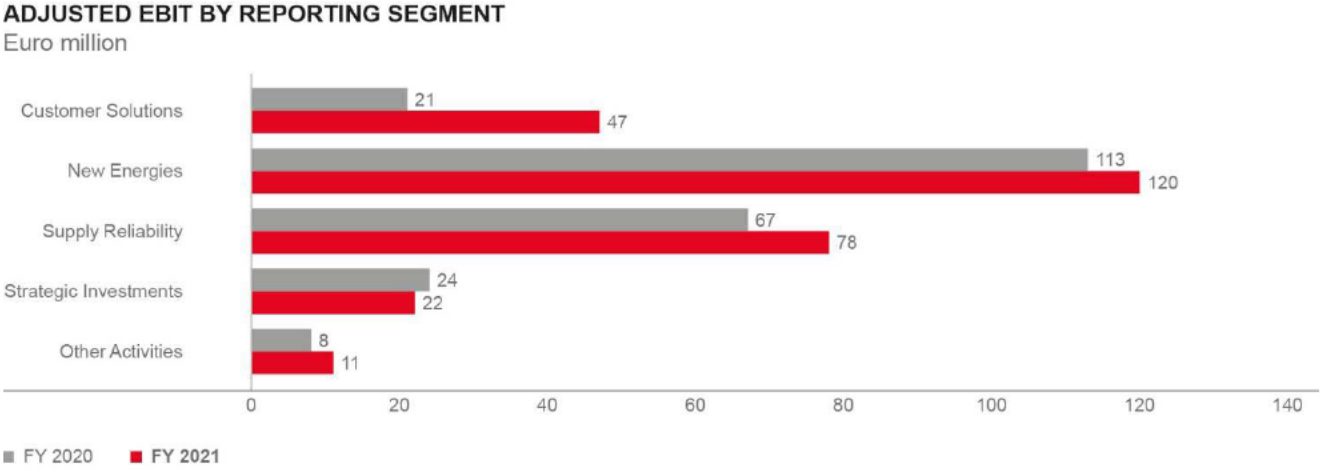
The increase in electricity turnover was due among other factors to the new customer business, while heat and gas turnover benefited from cooler weather conditions. The development in turnover is also reflected in the sales performance. Adjusted EBIT was at around the previous year's level.

Other Activities reporting segment

Other Activities from 1 October to 30 September

Euro million	**FY 2021**	FY 2020	+/– change	% change
Adjusted sales excluding energy taxes	1	2	– 1	– 50
Adjusted EBIT	11	8	+ 3	+ 38

The main reasons for the increase in adjusted EBIT were one-off items in other operating income and cost savings.



Reconciliation with adjusted EBIT

In the following table, we show how we reconcile the EBIT reported in the income statement for the 2021 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 2021**	FY 2020	+/– change
EBIT as reported in income statement	530	209	+ 321
Financial derivative measurement items	– 256	20	– 276
Structural adjustment for part-time early retirement	<1	<1	0
Interest income from finance leases	4	4	0
Adjusted EBIT	**278**	**233**	**+ 45**

For our value-based management, we refer to adjusted EBIT and calculate this key operating earnings figure by chiefly adjusting our operating earnings before interest and taxes to eliminate the positive and negative items due to fair value measurement as of the reporting date of financial derivatives recognised pursuant to IFRS 9. These came to net totals of Euro 256 million at 30 September 2021 and of Euro – 20 million at 30 September 2020. The measurement items reflect the development in prices on the commodities and energy markets. They have no impact on payments, neither do they affect our operating business or dividend.

Development in key income statement items

In cost of materials, we eliminate the difference between the hedge and reporting date prices pursuant to IFRS 9. Adjusted cost of materials rose by Euro 566 million to Euro 3,148 million. Above all, this increase reflects volume and price factors for electricity and gas, as well as the expenses incurred to build a data centre in Offenbach. Moreover, the cost of materials also increased in our project development business.

At Euro 487 million, adjusted employee benefit expenses were Euro 31 million higher than in the previous year. The main reasons for this were the increase in the number of staff in our growth fields, one-off payments and collectively agreed items.

Within other operating income, IFRS 9 measurement items amounted to Euro 1,224 million (previous year: Euro 111 million). Adjusted to exclude these items, the development in other operating income **Notes to Income Statement (Note 4), Page 125** was affected by factors including the refund of energy taxes in the year under report. Overall, adjusted other operating income increased year-on-year by Euro 14 million to Euro 110 million.

Within other operating expenses, IFRS 9 measurement items amounted to Euro 899 million (previous year: Euro 123 million). Adjusted to exclude these measurement items, other operating expenses **Notes to Income Statement (Note 7), Page 126** rose by Euro 36 million to Euro 204 million. Key reasons for this development included expenses for energy taxes and advisory services.

IFRS 9 measurement items are included in the **Income Statement** **Page 109** under other operating income and other operating expenses. Their net balance resulted in a positive item of Euro 325 million in the 2021 financial year, as against a negative measurement item of Euro 12 million in the previous year.

The increase of Euro 15 million in income from companies recognised at equity was chiefly due to the remeasurement of the shares in Fernwärme Rhein-Neckar GmbH given the subsequent full consolidation of this company, as well as to the retirement of Naunhofer Transport GmbH.

Depreciation and amortisation **Notes to Income Statement (Note 9), Page 126** decreased by Euro 3 million to Euro 204 million. This reduction was attributable above all to goodwill write-downs recognised in the previous year. This factor was countered by investments in and the launch of operations with property, plant and equipment in the period under report.

Chiefly as a result of foreign-currency financing measures, the adjusted financial result improved by Euro 8 million to Euro – 44 million.

Net of the adjusted financial result, the adjusted EBIT of Euro 234 million in the 2021 financial year was higher than the previous year's figure (Euro 181 million). Adjusted taxes on income came to Euro 58 million (previous year: Euro 54 million). Accounting for deferred tax income resulting from the remeasurement of tax loss carryovers, tax-exempt income from write-ups of shareholdings and tax-exempt disposal gains and dividend income, adjusted income tax expenses only rose to an immaterial extent.

Adjusted annual net income rose by Euro 49 million and amounted to Euro 177 million for the year under report.

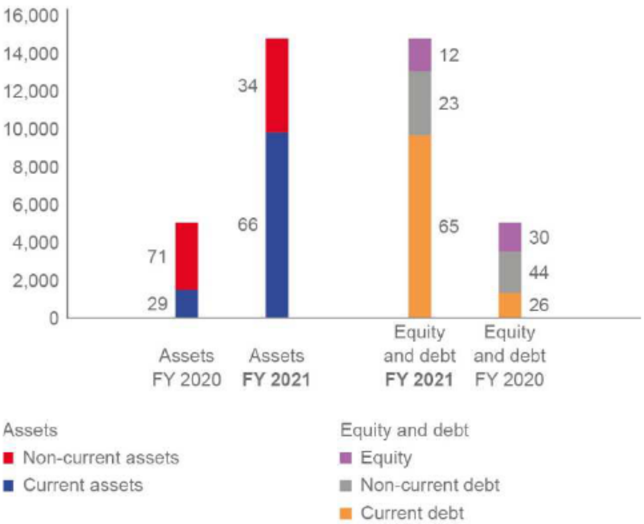
Adjusted minority interests came to Euro 27 million and were thus Euro 3 million higher than in the previous year. Adjusted annual net income after minority interests rose to Euro 150 million (previous year: Euro 104 million). Calculated on this basis, adjusted earnings per share amounted to Euro 2.28 (previous year: Euro 1.57). The number of shares was unchanged at 65.9 million.

PRESENTATION OF ASSET POSITION

Balance sheet structure

Euro 000s	30 Sep 2021	30 Sep 2020	% change
Assets			
Non-current assets	4,968,905	3,564,401	+ 39
Current assets	9,840,753	1,466,921	>+ 100
Total assets	**14,809,658**	**5,031,322**	**>+ 100**
Equity and debt			
Equity	1,758,624	1,534,300	+ 15
Non-current debt	3,373,131	2,191,933	+ 54
Current debt	9,677,903	1,305,089	>+ 100
Total equity and debt	**14,809,658**	**5,031,322**	**>+ 100**

BALANCE SHEET STRUCTURE
Euro million, shares (%)



Balance sheet development

Total assets amounted to Euro 14,810 million at the balance sheet date and were thus Euro 9,778 million higher than at 30 September 2020 **Balance Sheet, Page 110.**

Non-current assets increased by Euro 1,405 million to Euro 4,969 million. Property, plant and equipment rose by Euro 161 million to Euro 2,888 million, a development chiefly due to investments in our grids, the addition of Fernwärme Rhein-Neckar GmbH and the construction of windfarms, energy from waste and biogas plants. Further changes related above all to non-current other receivables and assets **Notes to Balance Sheet (Note 22), Page 137.** This line item increased by Euro 1,158 million to Euro 1,260 million, which was predominantly attributable to the year-on-year rise in the value of derivative financial instruments. This in turn was particularly due to the greater changes in market prices and resultant increase in the fair values of energy trading transactions recognised under IFRS 9. This item stood at Euro 1,240 million at the balance sheet date (30 September 2020: Euro 81 million). The increase in deferred tax assets by Euro 74 million to Euro 103 million was primarily due to the change in negative fair values pursuant to IFRS 9.

Current assets rose by Euro 8,374 million to Euro 9,841 million. On the one hand, current other receivables and assets **Notes to Balance Sheet (Note 22), Page 137** grew by Euro 7,402 million to Euro 7,966 million, a development chiefly due to more marked changes in market prices and the resultant rise in the positive fair values of energy trading transactions recognised under IFRS 9. This item stood at Euro 7,757 million at the balance sheet date (30 September 2020: Euro 367 million). Moreover, the development in current other receivables and assets was also influenced by higher contract assets in our project development business and lower receivables for security deposits for counterparty default risk (margins). In addition, mainly due to higher price levels on energy markets and the expansion in our electricity and gas trading business current other trade receivables **Notes to Balance Sheet (Note 24), Page 139** rose by Euro 43 million to Euro 376 million. Cash and cash equivalents **Notes to Balance Sheet (Note 26), Page 139** increased to Euro 1,258 million, up Euro 915 million on the previous year's balance sheet date. This increase was chiefly due to the high inflows of funds for security deposits for counterparty default risk (margins), which amounted to Euro 843 million in the period under report (previous year: outflow of Euro 8 million), as well as to net new borrowing to finance major projects currently underway. These factors were opposed by payments made for investments in our current major projects, as well as by payment of the dividend for the 2020 financial year.

Our equity including non-controlling interests amounted to Euro 1,759 million at the balance sheet date and was thus Euro 224 million higher than in the previous year **Notes to Balance Sheet (Note 27), Page 140.**

Non-current debt increased to Euro 3,373 million, up by Euro 1,181 million compared with the previous year's balance sheet date. Within this item, non-current other liabilities **Notes to Balance Sheet (Note 31), Page 147** rose by Euro 997 million to Euro 1,287 million. This increase was primarily due to more marked changes in market prices and the resultant rise in the negative fair values of energy trading transactions recognised under IFRS 9. This item amounted to Euro 1,125 million at the balance sheet date (30 September 2020: Euro 129 million). The increase in deferred tax liabilities by Euro 134 million to Euro 274 million was due above all to the change in the positive fair values of derivatives recognised under IFRS 9.

Current debt increased by Euro 8,373 million and amounted to Euro 9,678 million in total. This development was notably influenced by current other liabilities **Notes to Balance Sheet (Note 31), Page 147,** which rose by Euro 8,156 million to Euro 8,805 million. This increase was chiefly due to significant movements in market prices and the resultant rise in fair values of energy trading transactions recognised under IFRS 9. This item amounted to Euro 7,733 million (30 September 2020: Euro 369 million). Furthermore, the development in current liabilities was also influenced by the high inflows of funds for security deposits for counterparty default risk (margins) in the period under report. As a result, liabilities for security deposits for counterparty default risk (margins) increased by Euro 822 million. Due above all to a higher volume of services not yet invoiced, current other provisions **Notes to Balance Sheet (Note 28), Page 141** rose by Euro 46 million to Euro 174 million. The main reason for this increase was the provision of CO_2 rights for the power plant Grosskraftwerk Mannheim due to the sharp rise in prices in the 2021 financial year. This increase was countered by factors which included a lower volume of warranty provisions. The rise in trade payables **Notes to Balance Sheet (Note 32), Page 149** by Euro 46 million to Euro 383 million largely reflected higher price levels on the energy markets and the growth in our electricity and gas trading business.

For Group management purposes, we adjust our consolidated balance sheet at 30 September 2021 to eliminate cumulative IFRS 9 measurement items. On the asset side, we eliminate positive fair values of derivatives, which amounted to Euro 8,994 million (30 September 2020: Euro 450 million). On the equity and debt side, we eliminate negative fair values and allocable deferred taxes, which stood at Euro 8,897 million, from liabilities (30 September 2020: Euro 486 million). Within equity, we then eliminate the net balance of Euro 97 million (30 September 2020: Euro – 36 million). This resulted in adjusted equity of Euro 1,662 million at 30 September 2021 (30 September 2020: Euro 1,571 million). As a percentage of adjusted total assets of Euro 5,815 million (30 September 2020: Euro 4,582 million), the adjusted equity ratio came to 28.6 % at 30 September 2021, compared with 34.3 % at 30 September 2020. This reduction is due above all to the substantial growth in total assets due to the unusually high inflows of security deposits for counterparty default risk (margins). Excluding these margins, the adjusted equity ratio would amount to 33.3 % at 30 September 2021 (30 September 2020: 34.3 %).

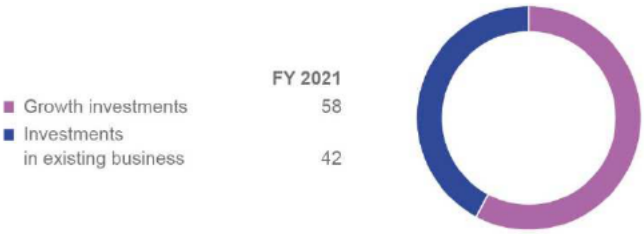
Investments

We invested a total of Euro 306 million in the 2021 financial year (previous year: Euro 322 million).

Investments from 1 October to 30 September

Euro million	FY 2021	FY 2020	+/– change	% change
Customer Solutions	34	39	– 5	– 13
New Energies	124	104	+ 20	+ 19
Supply Reliability	125	149	– 24	– 16
Strategic Investments	8	19	– 11	– 58
Other Activities	15	11	+ 4	+ 36
Total	**306**	**322**	**– 16**	**– 5**

INVESTMENTS
Shares (%)



Our largest investment projects included:

- Plants to generate green heat and backup capacities in district heating business
- Taking over several photovoltaics systems and wind turbines developed by Juwi and Windwärts, some of which still under construction, into our proprietary portfolio
- A new plant technology to produce phosphorous from sewage sludge
- Building a new energy from waste plant in Dundee/ Scotland
- Financial assets, mainly for the acquisition of share-holdings
- Building an organic waste fermentation plant in Bernburg
- Maintaining and renewing our distribution grids
- Expanding and increasing the density of our district heating grids.

PRESENTATION OF FINANCIAL POSITION

Current and non-current financial debt increased by Euro 169 million to Euro 1,886 million. New loans taken up to finance investments and working capital were countered by repayments of existing loans. At the same time, cash and cash equivalents rose by Euro 915 million to Euro 1,258 million, a development due above all to high inflows of security deposits for counterparty default risk (margins), which amounted to Euro 843 million (previous year: outflow of Euro 8 million). Mainly for this reason, net financial debt (current and non-current financial debt less cash and cash equivalents) fell by Euro 746 million to Euro 628 million.

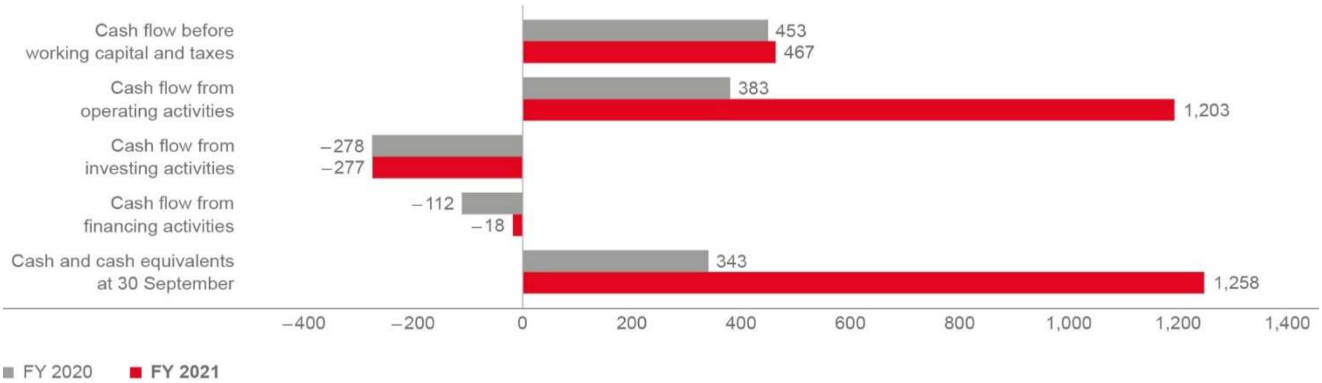
After the elimination of non-cash income and expenses, the improvement in earnings before taxes (EBT) compared with the previous year led the cash flow before working capital and taxes to improve by Euro 14 million. The largest item in this elimination related to non-cash IFRS 9 measurement.

This positive development is significantly amplified in the cash flow from operating activities, which improved year-on-year by Euro 820 million. This exceptional development was due above all to the high inflow of security deposits for counterparty default risk (margins), which amounted to Euro 843 million (previous year: outflow of Euro 8 million). From an operating perspective, the cash flow was positively influenced compared with the previous year above all by the elimination of the significantly higher volume of provisions recognised. The greatest impact was attributable to the provision of CO_2 rights for the power plant Grosskraftwerk Mannheim, as prices rose sharply in the 2021 financial year, and to provisions for risks resulting from changes in market conditions. These factors were mainly countered by a greater increase in receivables due to higher price levels and the expansion in our electricity and gas trading business. The cash flow was also reduced by changes in VAT liabilities; these mainly resulted from pandemic-related deferments in VAT payments due in the 2020 calendar year. By contrast, no deferments were granted for the VAT due for payment in the 2021 financial year.

The development in the cash flow from investing activities was mainly shaped by a lower volume of payments for other financial assets. As well as a lower volume of payments for finance lease projects, the volume of capital increases at joint ventures recognised using the equity method was also lower in the 2021 financial year. An opposing and thus negative effect resulted above all from divestments, which were lower in the period under report than in the previous year. Payments for the acquisition of fully consolidated companies and other business units remained at around the previous year's level. In the 2021 financial year, these related to the acquisition of the remaining shares in Fernwärme Rhein-Neckar GmbH and in Zschau GmbH, as well as to the acquisition of assets and takeover of staff at IRK DCI GmbH in the context of an asset deal. Overall, the cash flow from investing activities was at the previous year's level.

The cash flow from financing activities increased year-on-year by Euro 94 million, a development mainly due to higher net new borrowing.

CASH FLOW STATEMENT
Euro million



REPAYMENT PROFILE
Euro million

Professional financial management

Our access to the capital markets remains as strong as ever and this means that 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 resources in the form of cash funds and bank credit lines.

Our repayment profile still does not show any notable spikes.

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

Credit rating

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

COMBINED NON-FINANCIAL DECLARATION

General information

By publishing this combined non-financial declaration (NFD), we have complied with our reporting obligations in accordance with § 289b (1) and § 315b (1) of the German Commercial Code (HGB). We submit the NFD both for the MVV Group (MVV) and for its parent company, MVV Energie AG. The guidelines and concepts applied by MVV and MVV Energie AG are consistent with each other; no non-financial targets refer solely to MVV Energie AG. The NFD comprises this chapter and forms a constituent part of the combined management report. 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), Frankfurt am Main, 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 on **Page 202.**

From 1 January 2023, MVV will be subject to the scope of application of the German Act on Corporate Due Diligence Obligations for the Prevention of Human Right Violations in Supply Chains (LkSG), which was adopted in summer 2021 and lays down new requirements for processes and reporting on aspects relevant to human rights. We have reviewed the statutory requirements in connection with our existing supply chain-related processes and will ensure that these are complied with at the MVV Group **Page 74.**

We are consistently working to minimise any potentially negative implications of our business activities and to make measurable contributions to the transformation in the energy supply and to protecting the climate and the environment. In connection with our Annual Report and on our website, we have for many years now provided information about the challenges we face and the progress we have made as a company that acts sustainably. Moreover, we will publish our Sustainability Report for the 2021 financial year on our website in the first quarter of 2022. We prepare this in accordance with the core option of the Sustainability Reporting Standards of the Global Reporting Initiative (GRI). By publishing the Sustainability Report, we have in customary form satisfied the transparency requirements of our stakeholders and have gone beyond our statutory reporting obligations.

The contents of the NFD and our Sustainability Report are based on our materiality analysis. To perform this, we continually monitor public discussions and the positions of our stakeholders. We regularly assess whether and how these have altered the relevance of our material topics. This multistage process involves desk-based research, internal analysis and surveys of those specialist departments which have interfaces with our external stakeholder groups. In addition, in the year under report we also held workshops and interviews with select stakeholders. We review all aspects of the materiality process every three to four years, most recently in the 2021 financial year. Moreover, we also update the main characteristics and prioritisations on an annual basis. In term of its contents, the materiality analysis also accounts for global challenges and megatrends, Sustainable Development Goals, industry and technology-related trends and the expectations of our internal and external stakeholders. In this, we account for the two perspectives relevant to GRI, namely “importance to stakeholders” and “impact of our business activities”. These perspectives result in the topics that we then identify as material pursuant to GRI. Furthermore, on an internal level we also consider further topics that are of relevance to our company. In determining the GRI-based material topics, we proceed in accordance with the approach recommended by the GRI.

To identify which sustainability topics are particularly significant to us, in 2021 we once again performed a materiality analysis in accordance with GRI. 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 of the MVV Group, as well as the implications of our business activities for these aspects. The table on the following page provides an overview of these disclosures. We base our description of concepts and our non-financial key figures in this NFD on GRI Standards. However, we do not comply with all aspects of these standards in this report; in this respect we refer to our Sustainability Report.

Business model and risk analysis

We have pursued a sustainability-driven strategy for many years now. 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 meet their own climate protection targets. We cover all major stages of the energy industry value chain. Further information can be found in the Business Model and Corporate Strategy chapters **Pages 20 to 23.**

Within our existing risk management system, we record and evaluate all material risks associated with our business activities and business relationships **Page 98.** The review process performed on non-financial risks in the 2021 financial year concluded that there were no risks which satisfied the materiality criteria set out in § 289c (3) Nos. 3 and 4 HGB.

We are carefully monitoring the coronavirus pandemic and its implications. Its impact on our own business processes and activities is not only direct. As well as our employees, our business partners and customers also face direct and indirect potential health risks. Moreover, the pandemic influences the political implementation of the energy turnaround and decarbonisation, whether due to shifting political priorities or changed fiscal scope. Should the coming months and years witness a greater focus on measures to stabilise the economy and employment levels, and should this be accompanied by a reduction in the momentum intended for the energy turnaround on national and European levels, then the long-term objective of climate neutrality would be at risk. MVV would also only be able to escape a trend of this nature to a limited extent, as our business depends to a significant extent on the political and regulatory framework. To date, however, there are no signs of this kind of development. Quite the reverse: In recent months, the European Commission and the German Federal Government have taken further steps aimed at transforming the economy and society with a view to climate neutrality. And the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), released in August 2021, also shows that accelerated implementation is required. In particular, the resources used to combat the coronavirus pandemic should also serve to speed up this process.

Sustainability management

Our sustainability management focuses on those topics, processes and measures that we view as forming part of our core business **Business Model, Page 20** and is based on our **Corporate Strategy, Page 21**. Our strategic decarbonisation and sustainability targets **Pages 51 to 58** were adopted by the Executive Board and discussed by the Supervisory Board and are an integral component of our corporate strategy. We developed these targets further in the year under report and stepped up their timescale and contents. We are pleased that, thanks to the increased efforts made in recent years, we have already reached our target for net CO_2 savings earlier than planned.

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

Disclosures on contents of combined non-financial declaration

Contents of combined non-financial declaration

Aspects pursuant to § 289c HGB	MVV area of action pursuant to MVV materiality analysis according to GRI	Disclosures on concepts, targets, measures, results, due diligence processes and non-financial key figures pursuant to § 289c HGB in section
Environmental concerns	Energy system transformation	Climate neutrality Renewable energies and energy turnaround 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

The initial findings of the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), published in August 2021, show the increased urgency of a faster and more ambitious approach to climate protection. According to the IPCC report, there is no doubt that climate change is man-made. The report underlines the need to limit the rise in global temperatures to 1.5 degrees, as the overall ecosystem otherwise risks passing irreversible tipping points. As temperatures rise, the frequency and intensity of extreme weather events will significantly increase, also in Germany. Even today, however, it will already only be possible to achieve the necessary limitation in global warming to 1.5 degrees by implementing significantly faster climate protection measures than those aimed for to date.

Politicians, economic players and society as a whole all agree that achieving climate neutrality is the global task for the decades ahead. In the EU, climate neutrality is to be achieved by 2050. In the German Climate Protection Act (KSG), the Federal Government stipulated in 2021 that Germany should become climate neutral by 2045 already. We have described the associated developments in energy policy in the chapter **Business Framework, Page 30.** MVV has accorded great importance to climate protection, decarbonisation and renewable energies for many years already.

Energy industry has a key role to play

To achieve climate neutrality, the energy industry has to reduce its direct emissions to zero. This means doing entirely without fossil fuels. The great challenges for the 2020s involve rapidly exiting from coal-based power generation and the use of heating oil, and that in parallel with the exit from nuclear energy. At the same time, it will be necessary to build or modernise the infrastructures needed to safeguard a fully climate-neutral energy supply by 2040 at the latest. This involves the accelerated expansion in renewable energies and the infrastructures needed for the generation, transport and use of climate-neutral gases. These are the technical preconditions enabling the use of fossil-based natural gas to be gradually phased out in the 2030s while simultaneously upholding supply reliability. Due to the complexity involved and the pace required, the installation of a new energy infrastructure in less than one generation also represents a challenge for society as a whole.

Like all other sectors, the energy industry will also have to reduce its indirect emissions to zero. These are emissions arising at its upstream suppliers and its end customers. In this regard, full climate neutrality will only be achieved when other economic sectors also succeed in protecting the climate. Our climate balance sheet, in which we also explain our direct and indirect CO_2 emissions in Scopes 1, 2 and 3, can be found on **Page 56.**

Going beyond climate neutrality

The German Climate Protection Act states that, by 2045, greenhouse gas emissions have to be reduced far enough for the country to achieve "net greenhouse gas neutrality". The target hereby formulated is consistent with the terms agreed in the Paris Climate Agreement and means that all greenhouse gas emissions caused by people will have to be removed from the atmosphere in other areas to enable the climate balance sheet to reach zero and global temperatures to stabilise. Climate neutrality is the term used to summarise this process for political and communication purposes. As the 2021 IPCC Report makes clear, in the second half of the century the net balance will have to become negative, meaning that more CO_2 will have to be permanently captured than additionally emitted.

MVV will be one of the first climate-positive energy companies

At MVV, we define climate neutrality as follows: We include all direct and indirect sources of emissions at our fully consolidated companies and the prorated share of emissions at our at-equity shareholdings. This way, we also assume responsibility for the products we sell, such as natural gas, as well as for indirect greenhouse gases at our upstream suppliers, such as those emitted in the production of wind turbines and photovoltaics systems. For MVV, climate neutral means that, on portfolio level, we will reduce our emissions by at least 95 % in absolute terms and offset potentially unavoidable residual emissions with our own permanent CO_2 sinks. We will reach this target by 2040. We will not use any offsetting certificates or projects to achieve net climate neutrality. We understand residual emissions as involving those unavoidable greenhouse gas emissions which we cannot reduce any further in technical terms by drawing on other alternatives for the same application case. Examples here are the incineration of waste or upstream emissions resulting from ground movements in agriculture. To achieve full climate neutrality here as well, we will offset these unavoidable residual emissions in the long term with our own CO_2 sinks in MVV's portfolio or ensure permanent and secure storage of the greenhouse gases.

To meet our targets, we are investing in sustainable growth. We have aligned our investment programme, which is broad-based and has a long-term focus, to our ambitious decarbonisation and sustainability targets. In future, we will be drawing even more closely on the opportunities arising in the course of the energy turnaround. For the 10-year period from 2016 to 2026, we set ourselves the following target:

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

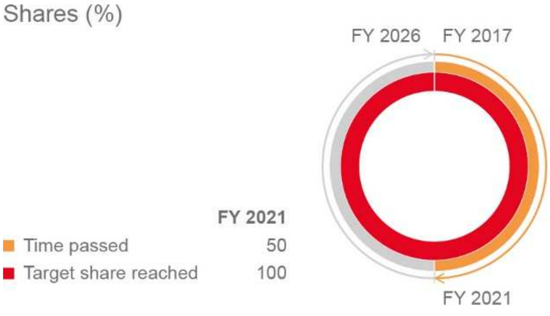
INVESTMENTS
Shares (%)

	FY 2021
Time passed	50
Target share reached	47

Decarbonisation target for net CO_2 savings met ahead of schedule

In 2016, we set ourselves the target of tripling our annual CO_2 savings in the overall system to 1 million tonnes a year by 2026. Thanks to investment initiatives at MVV, we met this target in the 2021 financial year already. The fact that we achieved this half-way through the timeframe originally planned shows how seriously we take decarbonisation and the extent to which we have stepped up the pace of our decarbonisation in recent years.

NET CO_2 SAVING PER YEAR
Shares (%)



Together with Öko-Institut e.V., Freiburg, we developed a method of calculating net CO_2 savings in 2013 already. This covers the emissions saved along the whole of the value chain and reflects genuine effective savings in the climate system. Here, we assess the extent to which all new strategic activities, projects and investments at our group of companies impact on greenhouse gas emissions. This involves netting all additional emissions (debit) and CO_2 reductions (savings) within and outside our reporting entity, i.e. the calculation accounts not just for electricity, but also for heat, services and efficiency measures for third parties. We record all CO_2 savings for a maximum period of ten years from the beginning of the measure. We do not include historic reduction projects or financial transactions in the calculation.

The significant rise in net CO_2 savings in the 2021 financial year was mainly due to the successful launch of operations with renewable energies plants, especially wind turbines and open-space photovoltaics systems, the connection of our energy from waste plant on Friesenheimer Insel to the district heating grid in Mannheim and further energy efficiency projects.

Further development of our decarbonisation targets

Having reached our net CO_2 savings target ahead of schedule, in the 2021 financial year we further developed our existing decarbonisation targets and reviewed them in the light of a 1.5-degree trajectory. We will step up our efforts to save CO_2 in our own energy generation (Scope 1) by 2030. The existing interim target for emissions from district heating generation has become obsolete, as it is included in our overall target for Scope 1 emissions. The target paths adopted by lawmakers in the year under report confirmed our climate protection strategy.

NET CO_2 SAVING
1,000 tonnes $CO_{2\,eq}$

When it comes to reducing our direct emissions, we are guided by the decarbonisation trajectory for the overall energy sector in Germany, and that despite our young power plant portfolio. The reduction trajectory set out in the 2021 German Climate Protection Act (KSG) represents a potential approximation to a 1.5-degree trajectory. For our company-specific CO_2 reduction targets, we have for several years now taken 2018 as our base and reference year and set milestone year-based targets to document our progress. At the same time, on a company-internal basis we are also guided by budget-based analyses even though neither the European nor the national climate legislation include cumulative emission budgets for the energy industry sector. From an analytical scientific perspective, a budget-based approach of this nature would be more precise. However, planning exact volumes for energy generation and sales volumes over such long periods would be subject to great uncertainties and therefore often unpractical.

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

We made intense use of the 2021 financial year to further develop our sustainability strategy and plan medium-term and long-term measures. In terms of our decarbonisation targets, we now go well beyond the decarbonisation trajectory set out in the KSG legislation: Whereas the KSG provides for a 64 % reduction in CO_2 emissions in the energy industry between 2018 and 2030 and calls for climate neutrality by 2045, we aim to be notably more ambitious in implementing climate protection and to reduce our CO_2 emissions faster than the sector. To achieve this, we are pressing ahead with the electricity turnaround and associated expansion in renewable energies, as well as supporting our customers in their own decarbonisation; above all, we are promoting the heat turnaround.

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

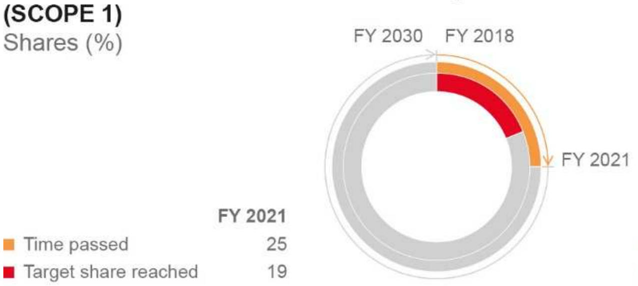
From 2040 at the latest, we will not only be climate neutral in terms of all our direct and indirect emissions sources; we will actually be climate positive. We aim to achieve this on the one hand by deploying suitable technologies to remove greenhouse gases from the atmosphere on a permanent basis.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

In autumn 2021, our decarbonisation targets were verified by the Science Based Target initiative as being compatible with the 1.5-degree trajectory. These targets form the basis for our strategic group planning, which we operationalise within the company with further detailed and interim targets. Our corporate strategy is specified in greater detail on a decentralised basis by our business fields, which take due account of local conditions. On group level, the investments made by all business fields are assessed in terms of their contribution to climate neutrality.

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

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

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

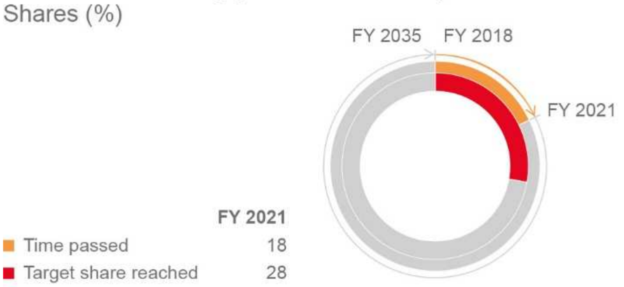


This corresponds to emissions of less than 0.5 million tonnes in 2030 (Scope 1). Key decarbonisation measures for direct emissions (Scope 1) are:

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

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

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



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

- We support our customers in achieving their own climate neutrality by promoting the procurement and supply of green energy and offering services and solutions for their own energy turnarounds and energy efficiency.
- We are gradually making our products and services 100 % climate neutral. When it comes to supplying green energy to our customers, we are already able to offer all necessary products and services.
- In our procurement of goods and services right through to power plants, we ensure that our suppliers aim for ambitious reductions in their CO_2 footprints.
- We are enhancing our own energy efficiency and using green energies in our own buildings and to operate our grids.

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

Around half of the non-recyclable waste incinerated at energy from waste plants comprises biological components, such as organic waste, paper residues and cellulose components. Where no better technical alternatives are available for the same application, the other half of the non-recyclable waste generates unavoidable greenhouse gases. These are attributed to the products thereby incinerated and the disposal process, rather than to the energy products derived in the form of waste heat.

The energy acquired from the waste heat makes a material contribution towards protecting the climate as it reduces the use of fossil-based fuels harmful to the climate. For this reason, the law states that district heating from energy from waste plants, for example, counts as CO_2 neutral and is on a par with renewable energies when it comes to building energy assessments. Compared with other players in the sector, our energy from waste plants also have very high energy efficiency levels. The plant in Mannheim is one of the most energy-efficient plants in the world.

By adding CO_2 capture facilities and storing or using CO_2 on a long-term basis, energy from waste plants can also achieve physical climate neutrality. When biogenic emission sources are used, end-to-end concepts of this nature are referred to as Bio-Energy Carbon Capture Utilisation and Storage (BECCUS) solutions. If the CO_2 thereby captured is permanently stored, the biogenic share of emissions can be viewed as “negative emissions”. This way, energy from waste plants not only become climate neutral in the long term, they even turn climate positive, i.e. become large-scale industrial CO_2 sinks. Thanks to BECCUS, the CO_2 previously bound in the biomass is no longer returned to the atmosphere. This helps to reduce the global concentration of CO_2. The technology used to capture CO_2 is already mature, yet options for sustainable implementation are still limited by a lack of political regulation, inadequate acceptance within society, downstream value chains and economic viability. Widespread application is not expected before the 2030s.

We are closely reviewing the technical, economic and ecological feasibility of fitting our own energy from waste plants with CO_2 capture and downstream CO_2 storage paths. We will deploy this technology on a permanent basis as soon as long-term, sustainable and secure storage or long-term recirculation of the CO_2 can be ensured and the political and social framework permits its use. BECCUS will play a key role in turning MVV into a climate-positive company. We currently expect this to be the case in 2040. Should it be technically, politically and economically viable to capture and store CO_2 at an earlier date, then we will accelerate the implementation of our activities in this area.

Key decarbonisation measures for unavoidable residual emissions are:

- We are extending our own expertise in the field of BECCUS for energy from waste and biomass plants and seeking to exchange views and experience with relevant players in business and science, within society and in the political arena.
- We are planning to build a first CO_2 capture pilot plant at the Mannheim location in the medium term.
- We are pressing ahead with feasibility analyses and plans through to preparing plant technology at our energy from waste and biomass power plants with the aim of making it possible to implement BECCUS from the 2030s.
- We aim to create proprietary CO_2 sinks for unavoidable residual emissions or facilitate the permanent and secure storage/use of greenhouse gases (BECCUS).

Our main areas of success with decarbonisation in the 2021 financial year

We pressed ahead once again in the 2021 financial year with numerous projects and activities that will ease our CO_2 balance sheet in the short to medium term. Examples include:

- Go-ahead for implementing further green generators in Mannheim, and in particular for river heat pump, waste heat and geothermal heat technologies.
- Extending our proprietary renewable generation portfolio by 33 MW_e.
- Extending our range of solutions: expanding advisory services, including climate protection management, planning and building photovoltaics systems and electric charging infrastructure, implementing sustainable solutions for our customers' own energy turnarounds. By drawing on a sustainable steam supply solution, for example, our customer Olam alone will reduce its CO_2 emissions by 8,100 tonnes a year.
- Converting all own-use operations at MVV Netze (grid business) to renewable energies.
- Improving the basis of data at central procurement for our CO_2 footprint for our product groups and strategic suppliers.
- Active involvement in municipal climate protection activities at our locations, such as the publication of the Integrated Energy Framework Concept Mannheim and the 2030 Climate Protection Action Plan Mannheim.

Our climate balance sheet

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

STRUCTURAL COMPOSITION OF OUR CLIMATE BALANCE SHEET

37 %	2 %	39 %	22 %
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	» Grid losses in proprietary grids » Energy used in facilities	» Energy industry: energy generation (electricity, heat) » Disposal industry: EfW, RDF » Methane emissions in grid and plant operations	» Burning by end customers of natural gas sold » Emissions due to end customers using generation plants sold

1 Market-based

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

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

Our direct Scope 1 emissions showed a slight year-on-year increase in the 2021 financial. This was due in particular to higher heat requirements at our customers as a result of weather conditions.

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 slightly 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 to 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. In the 2021 financial year, this key figure also for the first time includes emissions from non-commodities procurement activities.

The increase in Scope 3 emissions in the 2021 financial year largely reflects the increase in commodities sales volumes and in the renewable energy capacities installed by our project development business.

Climate balance sheet
Fully consolidated companies and companies recognised at equity

1,000 tonnes CO_{2eq}	**FY 2021**	FY 2020	+/– change	% change
Direct CO_2 emissions (Scope 1) [1]	3,440	3,315	+ 125	+ 4
Energy industry activities	2,491	2,386	+ 105	+ 4
Disposal activities (EfW/RDF)	949	929	+ 20	+ 2
Indirect CO_2 emissions (Scope 2) [2, 3]	200	219	– 19	– 9
of which energy procured for proprietary plants	196	214	– 18	– 8
of which energy used for grid operations	4	5	– 1	– 20
Indirect CO_2 emissions (Scope 3)	5,232	4,367	+ 865	+ 20
of which for purchased goods and services (GHG Category 1)	986	471	+ 515	+ 109
of which for fuel and energy-related activities (GHG Category 3)	2,270	2,198	+ 72	+ 3
of which for use of sold products (GHG Category 11)	1,976	1,698	+ 278	+ 16
Net CO_2 savings	1,002	766	+ 236	+ 31

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 emission factors of the respective locations for district heating.
2 Indirect Scope 2 emissions (location-based) cover the Mannheim, Kiel, Offenbach and Wörrstadt locations; these figures are based on calendar years and, from the 2021 financial year, also include grid losses.
3 The emissions for energy losses in grid operations, which were recognised in Scope 3.9 through to the 2020 Annual Report, have been reported pursuant to the GHG Protocol in Scope 2.

Specific CO_2 emissions

The specific CO_2 emissions for our generation portfolio showed only marginal changes compared with the previous year.

Specific CO_2 emissions in the groupwide generation portfolio

g CO_2/kWh	**FY 2021**	FY 2020
Electricity generation	422	416
Heat generation	124	125
Energy generation in the generation portfolio	231	232

All our plants were again operated in accordance with the approvals granted and relevant legal requirements in the 2021 financial year; we continually monitored compliance with the threshold values applicable to the plants.

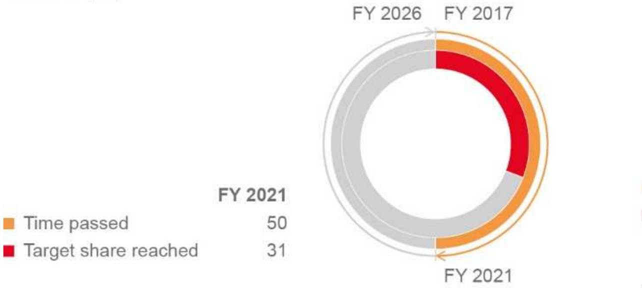
Renewable energies and energy turnaround

Renewable energies contribute to achievement of climate protection targets

By 2045 at the latest, electricity generation in Germany should be based almost entirely on renewable energies. They have a crucial role to play in meeting national climate protection targets. This situation harbours growth potential for our company; not least because of this, renewable energies are a key focus of our strategic alignment. By expanding renewable energies, we are also making a measurable contribution towards achieving climate protection targets on behalf of society as a whole. In this area as well, we set two specific sustainability targets in 2016 already and intend to reach these by the end of the 2026 financial year.

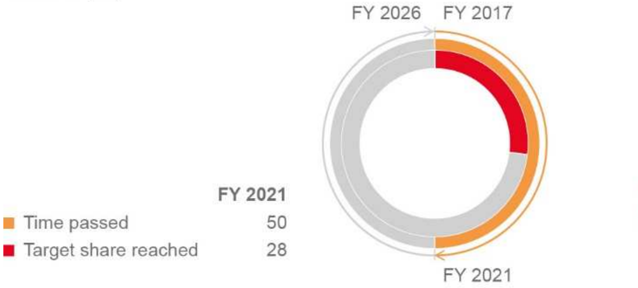
We will double our proprietary electricity generation from renewable energies between 2016 and 2026.

RENEWABLE ENERGIES ELECTRICITY GENERATION CAPACITY
Shares (%)



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

COMPLETED DEVELOPMENT OF NEW RENEWABLE ENERGIES PLANTS
Shares (%)



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

In the 2021 financial year, we made further progress on the way to reaching our target. Including our shareholdings recognised at equity, our electricity generation capacity from renewable energies stood at 564 MW at the end of the 2021 financial year, 33 MW higher than one year earlier. This growth was largely due to the expansion in our wind power portfolio and the fact that we also strengthened the portfolio by repowering older turbines. A further contribution resulted from the launch of operations at our new energy from waste plant in Dundee.

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.

Since the beginning of the 2017 financial year, we have connected renewable energies plants with capacities of 2,755 MW to the grid. In the 2021 financial year, we added new capacities of 610 MW **Page 59.**

Forward-looking generation portfolio

At the end of the 2021 financial year, electricity generation at renewable energies plants (including biomass/biogas plants and EfW/RDF) accounted for 32 % of our total electricity generation capacity (previous year: 34 %).

Electricity generation capacity
Fully consolidated companies and companies recognised at equity

MW_e	FY 2021	FY 2020	+/– change	% change
Biomass and biogas plants [1, 2]	117	117	0	0
EfW/RDF	176	165	+ 11	+ 7
Wind power	265	243	+ 22	+ 9
Photovoltaics	4	4	0	0
Hydroelectricity	2	2	0	0
Renewables and EfW/RDF	**564**	**531**	**+ 33**	**+ 6**
Conventional CHP and other	702	712	– 10	– 1
Total	**1,266**	**1,243**	**+ 23**	**+ 2**

1 Including biomethane plants
2 Previous year's figure adjusted

Our biomethane plants had capacities of 30 MW in the year under report. The biomethane produced at our plants in an environmentally compatible manner is one of the most versatile green fuels. It is used both to generate electricity and heat and as a fuel for vehicles.

At the end of the financial year, green heat accounted for a 20 % share of our total heat generation capacities (previous year 18 %).

Heat generation capacity
Fully consolidated companies and companies recognised at equity

MW_t	FY 2021	FY 2020	+/– change	% change
Biomass and biogas plants [1]	34	33	+ 1	+ 3
EfW/RDF	759	719	+ 40	+ 6
Green heat capacity	**793**	**752**	**+ 41**	**+ 5**
Conventional CHP and other	3,292	3,445	– 153	– 4
Total	**4,085**	**4,197**	**– 112**	**– 3**

1 Previous year's figure adjusted

Increasing significance of our project development business

With our Juwi and Windwärts subsidiaries, we offer end-to-end project development and services for planning, building and managing operations at renewable energies plants, as well as for hybrid projects, i.e. systems combined with battery storage facilities.

Completed development of new renewable energies plants

MW_e	FY 2021	FY 2020	+/– change	% change
Wind power	92	74	+ 18	+ 24
Photovoltaics	518	188	+ 330	+ 176
Total	**610**	**262**	**+ 348**	**>+ 100**

The project development business is by its very nature volatile. 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, as well as on specific implementation dates for individual projects, and can therefore vary widely from year to year. Moreover, changes in underlying conditions, such as those due to the coronavirus pandemic, may have a notable impact on the implementation of projects.

Operations management for renewable energies plants

MW_e	FY 2021	FY 2020	+/– change	% change
Wind power	1,282	1,343	– 61	– 5
Photovoltaics	2,529	2,386	+ 143	+ 6
Total	**3,811**	**3,729**	**+ 82**	**+ 2**

Resource efficiency and local environmental protection

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

We use natural resources to generate energy. Our conventional generation plants also use finite resources such as natural gas and hard coal as fuels. We accord great importance to very high resource efficiency. One key indicator of efficient use involves the highest fuel efficiency rates resulting from optimised use of the energy contained in the fuel. This means that we minimise the energy losses arising when the fuels are converted into end energy, such as electricity or heat. It also means that we consistently invest in enhancing the energy efficiency of our generation plants and in expanding green heat in conjunction with highly efficient combined heat and power generation **Page 45.**

Local environmental protection is a fixed component of our management systems, into which quality and compliance aspects are also integrated. For us, environmental protection on both national and local levels is closely based on legal requirements. The approvals granted and legal requirements form the basis for our activities, and that both when we build or modernise plants and in our day-to-day operations. Compliance, particularly with the prescribed threshold values, is monitored by the relevant authorities. Certain aspects of our operations, such as plant-specific emissions at large combustion plants, are subject to reporting requirements. Our subsidiaries and shareholdings are responsible for the operative management of environmental concerns on a decentralised basis. As they use different technologies and our stakeholders in the regions have different concerns, these companies set their own relevant focuses within the framework provided by our groupwide guidelines. 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 will make a crucial contribution towards a sustainable circular economy with the ecological disposal of municipal sewage sludge. We are building innovative phosphorous recycling plants at our locations in Mannheim and Offenbach that will enable us to recover phosphorous from the sewage sludge; this can then be used to produce manure.

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.

Including at-equity shareholdings, our generation plants emitted around 1.7 million tonnes of climate-neutral biogenic CO_2 in the year under report. This results from the direct use of timber, other biogenic waste and other regenerative resources used as fuels at our plants.

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

Tonnes	**2020** [1]	2019 [1]	+/– change	% change
NO_x	2,924	3,135	– 211	– 7
SO_2	885	1,048	– 163	– 16
Dust	18	38	– 20	– 53
Fly ash [2]	90,470	135,991	– 45,521	– 33
Ash and slag	529,882	524,313	+ 5,569	+ 1

1 Calendar year
2 Previous year's figure adjusted

Further environmental protection aspects form part of the environmental management systems at our companies, which are responsible for these on a decentralised basis. MVV Netze and Stadtwerke Kiel, for example, play an active role in protecting ground water and water surfaces. As they are responsible for the supply of drinking water in their regions, their supply systems have to be regularly analysed and checked. Here, the production, treatment and distribution of drinking water are not only of economic significance; the public supply mandates serve the common good. As the most important source of life, drinking water is governed by strict quality standards. The most important objective for the water supply involves complying with these quality standards and minimising relevant contents. We have formulated our targets for our drinking water supply in detail in our Water Policy **mvv.de/water-policy.**

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 energy yield. By continually increasing the fuel efficiency rates of our plants, we reduce the volume of fuels used and cut our emissions. In the year under report, our plants had an average fuel efficiency rate of 67 %. Our energy yield is thus ahead of the German average for generation activities. The Working Group on Energy Balances (AG Energiebilanzen) published an average efficiency rate of 52.7 % for electricity generation in Germany in 2020.

We operate our major generation plants almost exclusively using 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. In the 2020 financial year, Stadtwerke Kiel launched operations at its new gas-fired power plant in Kiel, which generates electricity and heat using CHP. In the year under report, this plant was therefore included in our key figures for the first full-year reporting period.

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. By-products, primarily ash and slag, arise in our energy from waste and CHP plants **Page 60.** The volume of this ash and slag is determined by technical factors or by the fuels used and does not lie within our control. Wherever technologically possible and economically viable, we put these by-products to further use. After suitable treatment, they are returned to the economic cycle, for example as products for the construction industry.

Fuels used at power plants
Fully consolidated companies and companies recognised at equity

	FY 2021	FY 2020	+/– change	% change
Biomass [1] (1,000 tonnes)	566	540	+ 26	+ 5
Biogenic share of waste/RDF (1,000 tonnes)	2,014	1,939	+ 75	+ 4
Natural gas (kWh million)	3,501	3,342	+ 159	+ 5
Hard coal (tonnes 000s)	688	664	+ 24	+ 4
Other fossil fuels (kWh million)	307	278	+ 29	+ 10

1 Previous year's figure adjusted

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

%	**FY 2021**	FY 2020	+/– change	% change
	67	66	+ 1	+ 2

Coal-based generation decreasing at MVV

In the 2020 financial year, the decommissioning in 2019 of Gemeinschaftskraftwerk Kiel, a hard coal-fired power plant which we owned with Uniper, also became clearly visible in our non-financial figures. This means that the 60 MW_e plant in Offenbach is now the only hard coal-fired power plant in our conventional portfolio in Germany. Due to the lead time needed to build new low-CO_2 heat generation capacity, which amounts to several years, we expect this plant to be decommissioned during the 2020s.

In the Czech Republic, we operate several small coal-based plants to generate and secure the supply of heat. There too, we will be discontinuing the use of coal and decarbonising the heat supply in the years ahead.

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 past financial year, GKM registered Block 7 for decommissioning, i.e. it is no longer available for regular operations. Given the latest developments, we our basing our plans and measures on the assumption that coal-based electricity generation will be phased out by the end of the 2020s. The setting of specific decommissioning dates for the individual power plant blocks is subject to the proviso of supply reliability, as well as to the legal framework and the agreements reached between GKM and its shareholders. The speed at which substitute green technologies and backup capacities for district heating generation become available in the years ahead also plays a role in this respect. Block 9 at GKM is one of the newest and most efficient hard coal-fired power plants in Germany. The German Coal Exit Act (KAG) does not stipulate the precise modalities and decommissioning dates.

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

The next specific steps we will take to decarbonise district heating are:

- GKM is building a first river heat pump on our behalf in Mannheim-Rheinau. With a heat generation capacity of 20 MW_t, this plant will draw on the environmental heat in the Rhine from 2023 onwards.
- By 2023, we will launch operations with a plant to recycle phosphorous from sewage sludge at our Mannheim energy park on Friesenheimer Insel.
- We are extending our biomass power plant (waste timber) in Mannheim to include a heat extraction facility. With a heat extraction capacity of 45 MW_t, this CHP plant will make a major contribution to the district heating supply from 2024 onwards.
- We are gradually tapping the potential for waste industrial heat at the plants at our energy park on Friesenheimer Insel.

Further options are currently being examined closely. Examples include solutions such as geothermal energy, further river heat pumps, the use of biomass, biomethane CHP plants and the use of further waste industrial heat potential. We are also working on green heat concepts at MVV's other locations with heat activities.

Sustainable circular economy

Even when it has been correctly separated, household and commercial waste is by no means "rubbish", but can rather be "recycled" as energy. Treating the waste in strictly controlled conditions at an energy from waste plant offers threefold benefits. Firstly, the waste is sanitised, meaning that materials harmful to people's health or the environment are destroyed. Secondly, the energy contained in the waste is used to produce steam for industry, heat for the local population and electricity. Put simply, households deliver their waste to MVV and in return receive energy in the form of heat and electricity. Around 50 % of the energy generated is renewable, as around half of the waste is of biogenic origin. Thirdly, incineration in this way makes an active contribution to climate protection. The alternative – landfilling – would lead to the emission of large volumes of methane, which is harmful to the climate. Thermal treatment of the waste avoids this.

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 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 met, and in cases where that is not possible, the next-best solution is to use unavoidable waste to generate energy. If it were possible to enhance global production in the long term in such a way that all waste incurred is free of fossil fuels, then the energy generated at energy from waste plants would be fully regenerative.

In our environmental energy, business customers and strategic investments business fields, we are making a major contribution to saving resources and building a circular economy. We operate a total of eight energy from waste plants in Germany, the UK and the Czech Republic. At these plants, we incinerated around 2.5 million tonnes of non-recyclable waste and refuse-derived fuels in the 2021 financial year. In the Scottish city of Dundee, we have built a new energy from waste plant at which operations were successfully launched in the year under report.

Supply reliability

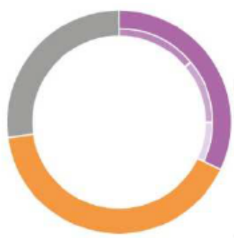
Energy companies play a key role in the energy system transformation by investing in the energy infrastructure to prepare this for the energy turnaround and make it fit for the future. At the same time, they perform what is for society the important task of ensuring that the supply of electricity, gas,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

Gradual conversion of our generation portfolio

To shape the energy system transformation along social, ecological and economic lines, we are working to an increasing extent with renewable and to a decreasing extent with conventional energies and relying here on a variety of energy sources and technologies. Doubling our proprietary electricity generation from renewable energies **Page 58** will change our generation portfolio, which is set to become even more diversified. This kind of generation portfolio will help us to ensure a secure energy supply for our customers. That is particularly true for the supply of heat to those private, business and industrial customers connected to our district heating and industrial steam grids in Mannheim, Offenbach and Kiel.

ELECTRICITY GENERATION
Shares (%)

	FY 2021
Electricity from renewable energies [1]	32
Electricity from biomass and biogas plants	14
Electricity from wind power	11
Electricity from biogenic share EfW/RDF	7
Electricity from CHP	41
Other electricity generation	27



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

At the end of the 2021 financial year, the electricity generated at renewable energies plants (including biomass/biogas and the biogenic share of waste/refuse-derived fuels) accounted for a 32 % share of our total electricity generation (previous year: 34 %).

Electricity generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2021	FY 2020	+/– change	% change
Biomass and biogas plants [1]	522	511	+ 11	+ 2
Biogenic share of EfW/RDF	268	314	– 46	– 15
Wind power [1]	421	440	– 19	– 4
Hydroelectricity	3	5	– 2	– 40
Photovoltaics	3	4	– 1	– 25
	1,217	**1,274**	**– 57**	**– 4**
Electricity from CHP	1,594	1,417	+ 177	+ 12
Other electricity generation [1]	1,028	1,083	– 55	– 5
Total	**3,839**	**3,774**	**+ 65**	**+ 2**

1 Previous year's figure adjusted

The electricity we generated at renewable energies plants (including biomass/biogas and the biogenic share of waste /refuse-derived fuels) showed a slight year-on-year reduction. On the one hand, this was because the energy from waste plants in Mannheim and Leuna produced lower volumes of electricity in order to increase their heat volumes. On the other hand, as wind volumes fell short of the previous year's figure our wind turbines generated less electricity, and that despite the addition of new capacities to our wind power portfolio. The increase in electricity generation volumes from combined heat and power generation (CHP) was driven above all by the launch of operations at our gas-fired CHP plant in Kiel in November 2019. This new plant generates electricity and heat using combined heat and power generation and made its first full-year contribution to our electricity generation in the 2021 year under report.

At the end of the 2021 financial year, green heat generation accounted for a 36 % share of our total heat generation volumes (previous year: 31 %).

Heat generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2021	FY 2020	+/– change	% change
Biomass and biogas plants [1]	77	84	– 7	– 8
EfW/RDF	2,464	1,906	+ 558	+ 29
Green heat generation	**2,541**	**1,990**	**+ 551**	**+ 28**
Other heat generation	4,466	4,517	– 51	– 1
Total	**7,007**	**6,507**	**+ 500**	**+ 8**

1 Previous year's figure adjusted

The increase in our green heat generation volumes was largely driven by our energy from waste plants in Mannheim and Leuna, which we connected to their regional district heating grids in February and December 2020 respectively.

Biomethane generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2021	FY 2020	+/– change	% change
Biomethane generation	269	222	+ 47	+ 21

The increase in biomethane generation volumes was due to a higher level of plant availability compared with the previous year.

Safeguarding grid stability despite growing loads

One way to assess the reliability of the energy supply involves measuring the frequency and duration of grid downtime. Our three large grid companies MVV Netze, Energienetze Offenbach and SWKiel Netz have set themselves the goal of ensuring a secure supply free of interruptions and thus to avoid grid downtime and remedy any such downtime as quickly as possible. One key task for our grid companies is to work on further developing and operating our grid infrastructure. They therefore invest large sums in maintenance and modernisation measures. In the 2021 financial year, we invested Euro 115 million in maintaining and expanding our grids.

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

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

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

We were able to improve the cumulative SAIDI figure for our grid regions in the 2020 calendar year. We provided our customers with an electricity supply that was largely free of interruptions and once again ahead of the national average.

Electricity supply interruptions (SAIDI)

Minutes/year	2020 [1]	2019 [1]	+/– change	% change
Electricity at MVV	9	10	– 1	– 10
Electricity in Germany [2]	11	12	– 1	– 8

1 Calendar year
2 Source: Federal Network Agency (BNetzA)

Employee concerns aspect

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

We offer attractive and secure jobs to 6,400 employees in an environment in which everyone can make his or her contribution to promoting decarbonisation. That is also a great responsibility, one that we are aware of and factor into our strategic decisions.

The ongoing coronavirus pandemic has presented us with particular challenges since the 2020 financial year. Working together, however, the Executive Board, managers, employees and employee representatives have managed these challenges successfully. The decisions we have taken to handle the crisis have enabled us to live the values underpinning our corporate culture – Community, Responsibility, Appreciation and Courage – in our daily work. To protect our employees and safeguard operating processes, we have agreed new rules and implemented solutions. We have changed previous forms of working together, communicating with each other and entering into dialogue and adapted these in line with new requirements.

We have noticed that these new forms of cooperation are influencing our activities, management and communication. We are observing and evaluating these changes. We will draw on the positive aspects at MVV in future as well.

Employer attractiveness

Our employees are our future

Motivated, healthy and well-qualified employees are crucial to MVV's success. Viewed in the long term, demographic trends and changes in the population structure will create additional challenges when it comes to finding and retaining suitable employees in future as well. This being so, our personnel strategy focuses on the following areas:

- Leadership: We are continually and systematically improving the quality of management at the company and adapting this in line with changing market and employee requirements.

- Demographics, work-Life balance, remuneration management: We aim to remain an attractive employer. That is why we offer attractive remuneration packages and are committed to helping our employees combine their work with family or nursing care commitments. In our recruitment, we particularly focus on expanding diversity at the company and especially on promoting women.

- Ongoing change management: We are making continuing efforts to further develop our company and corporate culture and aim to retain and enhance our employees' skills. To this end, we invest in training our workforce and enhancing its willingness to embrace change. After all, we need highly trained, flexible and innovative specialists and managers who are keen to make their contribution to the new energy system.

- Talent management: We deliberately identify, support and cultivate upcoming talent – within the company from among our trainees and new recruits through to managers, and externally with strong personnel recruitment efforts on the market.

MVV is strengthening the company's forward-looking development with an approach to diversity management that is in line with the times: "Energy for Diversity". This is because we see diversity as a foundation for success. The programme is based on the three pillars: promoting women, work and family and demographic management **Page 67.**

Furthermore, with our broad range of training options we aim to offer young people a wide variety of vocational opportunities at the company. We have upheld our high training rates during the coronavirus pandemic as well.

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

MVV has a Group Works Council, as well as works council bodies and committees on the relevant levels. The company's management works together with these bodies on a basis of trust, meaning that both the company's concerns and those of its workforce are accounted for in all significant decisions. The Supervisory Board of MVV Energie AG includes equal numbers of shareholder and employee representatives. This means that employee concerns are also central to any important company decisions.

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

Personnel figures (headcount) at balance sheet date

	30 Sep 2021	30 Sep 2020	+/– change	% change
MVV [1]	6,470	6,260	+ 210	+ 3
of which in Germany	5,520	5,351	+ 169	+ 3
of which abroad	950	909	+ 41	+ 5

1 Including 340 trainees (previous year: 341)

We employed a groupwide total of 6,470 individuals as of 30 September 2021. This increase compared with the previous year was due above all to higher employee totals in our growth fields, as well as to the full consolidation of a company.

Our international workforce includes 498 employees at our Czech subgroup, 292 at Juwi's shareholdings and 152 at the British subsidiaries of MVV Umwelt.

Training and development

Training with promising prospects for the future
In Mannheim alone, we offer the next generation of employees training in more than 17 different commercial and technical vocations, as well as combined training and study programmes. In Mannheim, Offenbach, Kiel and Gersthofen close to Augsburg, we are among the largest trainers in the respective regions.

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

As of 30 September 2021, a total of 340 young women and men were in training at MVV. Since March 2020, our trainees in combined training and study programmes and our commercial trainees have mostly worked from home. This enabled us to maintain the high quality of training despite the restrictions resulting from the coronavirus pandemic. As a result, we were able to avoid any trainees leaving the company for this reason.

MVV's training scheme was awarded support by the National Agency at the Federal Institute for Vocational Education and Training to implement European Union mobility projects in Plymouth, UK, for the 4th time now. Given Brexit and the coronavirus pandemic, this could not be taken for granted. In view of the pandemic, we drew on the option of extending the ERASMUS+ programme to June 2023. This means that 18 trainees from technical and commercial divisions will once again have the opportunity to participate in an exchange in the next three years. This is organised between our cooperation partner, City College Plymouth, and MVV Environment. In recent years, we enabled 44 trainees to take part in this project and thus promote their intercultural development. Given the pandemic, the specific timing of the new exchange is still unclear.

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

In the 2021 financial year, we pressed consistently ahead with our training concept and held numerous virtual seminars on various topics on all levels of the hierarchy. Our employees and managers made intensive use of the seminars on offer.

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

We aim to develop the potential of our employees.

When it comes to the individual further development measures we provide to our employees, we have set one key focus on digitalisation. In the 2021 financial year, the focus was on IT training accompanying the conversion to a new software, which provided users with good access to the new tools, as well as on training for our new "MVV Connect" intranet. The aim was to network our large organisation even more closely in its day-to-day work and its (partly virtual) cooperation, share knowledge, accept mutual impulses and integrate information and new topics into our own work processes. Moreover, we offered training on topics such as time and self-management, agile work, communications, presentation and virtual management. Our seminar evaluation showed a high level of acceptance for the seminars among participants, who confirmed that they had good possibilities to transfer the skills gained in the training to their daily work.

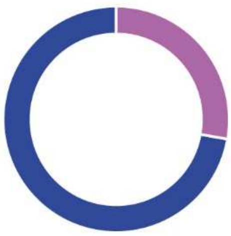
In Mannheim, we work with a management review system to record the skills and further training needs of our managers and high-potential employees and to plan their next career steps. This involves a graded process including self-assessment, third-party assessment, internal management review conferences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

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

"Energy for Diversity"

WOMEN AND MEN
Shares (%)

	FY 2021
Women	28
Men	72



Status: 30 September 2021

Women have traditionally accounted for a comparatively low share of the overall workforce at energy companies, and MVV is no exception in this respect. That is why we deliberately offer closer support to women. We are convinced that different skills and management styles impact positively on our business performance. We therefore see raising the share of women in our Group's workforce on a long-term basis as one key to MVV's successful further development. We are addressing the low share of women in management positions typical to our industry with targeted promotional measures.

We therefore set ourselves the target of raising women's share of our Group's workforce to 35 % by 30 September 2021, up from 27 % at 30 June 2015. With a 28 % share of women employees at 30 September 2021, we only managed to come slightly closer to reaching this target. Among our management staff, we also aimed to increase the share of women up to 25 %, up from 14 % at 30 June 2015. At 14 % at the balance sheet date on 30 September 2021, this figure was still at its 2015 level. As the efforts made so far have not yet enabled us to reach the targeted shares, the Executive Board decided in September 2021 to retain the existing targets of 35 % and 25 % respectively and to reach these by 30 September 2026.

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

To achieve our targets by 2026, we will consistently implement our promotional measures and programmes and further expand these in the years ahead. That is particularly true for our active personnel development activities for women who have the potential to take on management positions and for our targeted recruiting of suitable women candidates for vacant management positions, also on a part-time basis. The two other pillars of our diversity management will also assist us in meeting this target: These are enabling employees to combine their work and family commitments and active demographic management, in which we accompany the transfer of knowledge between employees.

For MVV Energie AG, we report on the share of women in the first and second management tiers below the Executive Board. In August 2017, the Executive Board set targets for the share of women at 25 % for the first and 30 % for the second management tiers, with both targets to be reached by 30 September 2021. The share of women in the first management tier amounted to 14 % at 30 September 2021 and was thus ahead of the previous year (30 September 2020: 10 %). In the second management tier, the share of women amounted to 31 % (30 September 2020: 27 %) and thus exceeded the target level set. We see this as providing a stable basis and as offering an opportunity to fill positions becoming vacant in the next higher management tier with internal candidates in future. In September 2021, the Executive Board adopted a resolution to retain the existing targets of 25 % and 30 % and to achieve and uphold these respectively by 30 September 2026. In addition to those measures that are already in place to promote women, we are taking steps to increase the number of applications we receive from promising external and internal women candidates.

Targeted promotion of women

We have established a new central department, Prevention and Diversity, to promote these topics and associated measures, with an initial priority on promoting women. Activities at this department focus above all on developing and implementing measures in the areas of employer image, recruitment, personnel and cultural development and raising awareness of diversity in specialist departments.

To reach our targets, we are drawing on a variety of promotional measures and programmes and expanding these further. To increase diversity at the company, we offer corresponding training to all managers. This addresses MVV's diversity standards, unconscious prejudice, judgemental habits and the handling of discrimination. We also agree binding measures. Furthermore, we attach great importance to offering targeted personnel development to women with suitable potential. One example is the individual support offered to women in mentoring schemes. In X-Company-Mentoring, a cross-company programme organised each year in cooperation with other well-known companies in the region, male and female mentors in the management tiers of participating companies pass on their skills and experience to talented women employees for a period of one year. This is intended to support employees in their own personal development, with a separate special focus on management. A further focal point involves building networks between current participants and those who took part in the programme in previous years. Moreover, we have introduced an internal mentoring programme in which women managers advise and support select experts and next-generation talent. Thanks to our corporate membership in "European Women's Management Development", an association for professional women, we offer free membership for interested women employees. This way, they benefit, for example, from free contingents of places in presentations and seminars.

Making it easier to combine work and family commitments

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

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

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

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

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

Actively tackling demographic management

The third pillar of "Energy for Diversity" addresses the demographic challenges we face. When employees who have built up extensive and in-depth expertise leave the company, it is important that this knowledge should be retained at the company after their departure. We therefore organise a well-structured and moderated transfer of knowledge by having the retiring employee, the relevant manager and the colleagues due to take on these tasks in future coordinate which knowledge should be transferred, as well as the timeframe and manner in which this should take place. To this end, a transfer plan is compiled. In select departments in Mannheim, for example, we perform so-called "parallel runs", in which employees due to retire from the company help to train their new colleagues over an extended period of time.

Occupational health and safety

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

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

- For us, protecting the health and safety of our employees is not just a task, but rather an obligation.
- All employees are important to us and are involved in health and safety decisions.
- All managers and employees know their responsibilities and actively live up to these in the areas which they are able to influence.
- The aim is to continually improve the safety and health protection of all employees based on a prevention-driven approach.

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

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

Our aim is to prevent accidents from occurring at all in future.

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.

Key foundations are provided by structured programmes and measures, such as an electronic instruction system with occupational safety training tailored to the respective workplace, an inspection concept and regular safety briefings aimed at raising safety awareness and firmly establishing this on all levels.

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

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

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

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

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

Accident statistics

	FY 2021	FY 2020	+/– change	% change
Lost time injury frequency rate (LTIF) [1, 2, 3]	4.1	6.7	– 2.6	– 39
Fatal accidents	0	0	0	0

1 Includes all fully consolidated companies in Germany and individual at-equity shareholdings in Germany

2 Calculation based on work-related accidents from first day of absence per 1,000,000 working hours

3 Basis for centrally recorded FTE figures:
FTE figures at reporting date on 30 September
Basis for non-centrally recorded FTE figures:
FTE figures received directly from companies at reporting date on 30 September
Working hours = number of FTEs (full-time equivalents) at reporting date on 30 September multiplied by 1,700 hours (≙ 1 FTE)

With an LTIF of 4.1, we were able to reduce the frequency of accidents by nearly 40 % compared with the previous year. This convinces us that we are on the right course. There were no accidents with fatal consequences in the year under report.

Protecting health

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

In the year under report, the company doctors at our major locations offered coronavirus vaccinations to our employees to help accelerate the pace of vaccination. At the Mannheim location, for example, up to 60 employees a day voluntarily received their vaccination. This way, more than 2,000 doses (first and second vaccinations) were injected within two months.

Social concerns aspect

Corporate social responsibility

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

We contribute to the common good in those regions in which we operate. The way we deal with and exchange information with all relevant groups within society shapes the relationship between us as a company and local populations. As a general rule, our social commitment is project-based and supports the fields of social welfare, education, culture and sports. We set our focuses here in line with the specific context. Responsibility for our social commitment lies with the management of the respective companies.

As a company with regional roots, we are an active part of society in the locations and regions in which we operate. We are aware of the important role we play in society. We assume responsibility for our decisions, actions, products and services, and that towards our customers and capital providers, as well as towards the environment and society in which we live. The value we create on site makes us a major economic factor at our locations. We invest, award contracts to local or regional businesses where possible, secure 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.

Social commitment – regional focuses

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

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

At MVV Energie, the Sponsorship Fund represents one key example of its regional commitment. This provides financial support to innovative and creative projects at clubs, organisations and institutions in Mannheim and the Rhine-Neckar metropolitan region. Moreover, in 2020 MVV Energie launched the MVV Green Sponsorship Fund, which supports clubs in installing photovoltaics systems. The company's largest sponsorship partners in the Rhine-Neckar metropolitan region are the art gallery Kunsthalle Mannheim, which holds MVV Art Evenings with free entry every first Wednesday in the month, the technology museum Technoseum, the Adler Mannheim ice hockey team, the Reiterverein Mannheim riding club and TSG Hoffenheim football club. With its "Heart and Soul for Your Project!" sponsorship concept, Energieversorgung Offenbach supports regional clubs and organisations. Stadtwerke Kiel has partnered Camp 24/7, in which around 6,000 children and young people a year learn how to sail and the only project of its kind in Germany, since 2002.

In dialogue with stakeholders

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

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

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

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

We attach great value to maintaining an open and transparent dialogue with our stakeholders, 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' and 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 focusing on the energy system transformation. Via our membership in industry associations, we participate in energy policy and energy industry discussions. We are members, for example, in the following associations relevant to the areas in which we operate: Bundesverband der Energie- und Wasserwirtschaft e. V. (BDEW), Verband kommunaler Unternehmen e. V. (VKU), Energieeffizienzverband für Wärme, Kälte und KWK e. V. (AGFW), Bundesverband Neue Energiewirtschaft e. V. (BNE), Bundesverband WindEnergie e. V. (BWE) and Bundesverband deutscher Wohnungs- und Immobilienunternehmen (GdW). Not only that, our subsidiaries and shareholdings on location are involved in local initiatives and networks. Apart from membership fees and project contributions, we do not make payments to associations or other institutions. We occasionally finance studies and surveys on matters relating to the energy industry. These are published and our involvement is suitable indicated.

We have the responsibility to use our resources to promote the conversion in the energy system to provide a more sustainable and efficient energy supply. Acceptance by local populations is crucial for many projects aimed at expanding renewable energies and the infrastructure needed for these. In view of this, in the 2021 financial year we were once again actively involved in 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 perform these measures on a project-by-project basis.

Respect for human rights and combating corruption and bribery aspect

Responsibility for supply chain and human rights

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

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

MVV's procurement

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

The majority of our procurement volumes involve energy carriers such as electricity and natural gas. We typically hedge these by way of financial transactions but do not physically procure them. In recent years, there has been increasing public interest in the greenhouse gas emissions resulting from the production and transport of natural gas. This relates in particular to natural gas from Russia and LNG gas from overseas. We analyse the issues involved very closely but cannot directly influence these or the origin of the natural gas.

We occasionally receive enquiries as to the origin of the hard coal used at power plants and whether we exert influence on production conditions at the coal mines. The only coal-fired plant we operate ourselves is the CHP plant in Offenbach. For this, we directly procured around 79,000 tonnes of hard coal in the 2021 financial year. Most of this came from Russia. We do not have any direct contractual relationships to mine operators but, given the low volumes involved, procure the fuels via intermediaries. Not only that, our very low volume of demand means that we have hardly any possibility of exerting influence on location. Hard coal is also used at the power plant Grosskraftwerk Mannheim, where we are minority shareholders. Here, we have no direct influence on business activities and fuel procurement, as we ourselves are not the operators of the plant. We are nevertheless aware of our responsibility and show our commitment by, for example, raising sustainability topics with GKM AG and requesting information. GKM AG has been a member of the Better Coal Initiative since March 2021.

Apart from commodity procurement, our other procurement volumes are comparatively low. They mostly involve procuring goods and highly qualified services from contract partners often known to us for many years. Based on separate analysis, we also address the major potential risks in our upstream supply chain. In the year under report, infringements of human rights in the photovoltaics supply chain were raised in public. Attention is drawn to potential infringements of human rights in select Chinese provinces where most of the global production of the silicon used in photovoltaics modules is located. Via our subsidiary Juwi, we are in close contact with our suppliers, although we have yet to receive reports of any specific infringements within our supply chains. We have nevertheless agreed more far-reaching precautions with our suppliers.

Procurement and business terms for suppliers

Our cooperation with suppliers and service providers in Germany and the European Union is based on applicable laws and regulations, including the German Act on Corporate Due Diligence Obligations for the Prevention of Human Right Violations in Supply Chains (LkSG), which will apply from 1 January 2023, as well as on those compliance regulations, forms of conduct and work practices relevant to us. Among others, these include 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 adhere to our compliance guidelines. These are published on our website [redacted]. Our suppliers undertake to comply with legal requirements and internationally recognised standards governing anti-corruption measures, the protection of human and workers' rights and environmental protection. If these obligations are breached, then contractual sanctions, including contractual penalties, termination and damages payments, are provided for.

Suppliers to MVV Energie, Energieversorgung Offenbach, Juwi and Stadtwerke Kiel are regularly assessed in terms of their sustainability, risks and compliance, as are the subcontractors we approve. In our supplier management system, all suppliers are required to provide disclosures on whether they have compliance or anticorruption requirements and a code of conduct, as well as on whether they are committed to the UN Global Compact. Moreover, they must disclose whether they have a sustainability concept and, if so, how this is implemented. Corresponding information and certificates are deposited in our supplier management system. These aspects are monitored within our compliance management system. For the most important of our strategic suppliers, we perform additional in-depth analyses of their strategy and of the climate protection and sustainability measures they have in place. Compliance with social welfare standards also forms part of our contract awarding process. As a general rule, we do not obtain data from suppliers located further upstream in the supply chain.

The overwhelming share of our business activities takes place in Germany, the UK and the Czech Republic, i.e. in European countries where respect for human rights is a core aspect of entrepreneurial activity. Within our supplier management, we have taken specific measures to perform a sustainability evaluation of select business areas with potentially critical conditions. 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 yet keep comprehensive records of working conditions at our subcontractors, especially at their production locations.

Compliance and respect for human rights

Compliance

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

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

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

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

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

By actively implementing preventative measures within business processes, we are committed to averting criminal or grossly improper violations of the law. In this respect, we have 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. These measures enable us to minimise the risk of so-called soft bribery. Furthermore, we continually monitor all business fields, specialist divisions, group departments and subsidiaries to ascertain whether compliance requirements have been adhered to. Moreover, employees and third parties can contact the Compliance Officer or an external confidence lawyer directly via anonymous “whistle-blower hotlines” and thus provide tip-offs on potential misconduct. We have published details including the telephone number of the confidence lawyer, also on our website at [redacted]

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

All of MVV’s managers and employees who have contact to customers, service providers or suppliers receive regular training to ensure that they are extensively informed of general compliance requirements and also familiar with the legal requirements relevant to their respective business units. Examples of the topics covered by this training are combating corruption and money laundering, capital market, stock market, competition and cartel law, handling sanction lists and the relevant requirements of energy industry law. In the 2021 financial year, 318 employees at the Mannheim subgroup and 175 employees at the other subgroups took part in this training.

Due to the coronavirus pandemic, training sessions often could not take place in person, but were rather held online. In parallel, a total of 2,087 individuals completed an e-learning programme in the same period that was offered by our Stadtwerke Kiel and Energieversorgung Offenbach subsidiaries and the Juwi subgroup. At the end of each financial year, all managers from a specific management level upwards are required to submit a Compliance Management Declaration (CMD). The same requirement applies to the managing directors of our subsidiaries and specific other shareholdings. In this, they must state whether all relevant compliance regulations and legal requirements have been complied with. 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. Furthermore, 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 our Opportunity and risk Report **Page 98.**

Respect for human rights

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

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

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

Other aspects

Digital transformation

Digitalisation is a key future trend for us. We make targeted use of digitalisation instruments to create modern hybrid ways of working and cooperating with each other and to continually enhance the efficiency and networking of our own business processes. Furthermore, we identify and use digital applications to increase our efficiency by optimising our own plants and grids with data-driven technologies and control systems. At the same time, we draw on the possibilities offered by digitalisation to analyse the energy situation for our customers, for example, and to structure individual optimal solutions. This way, we can also reduce the long-term environmental impact of energy consumption. Smart cities are another field of application now emerging for digital products. Digital solutions not only offer economic benefits, they also provide opportunities to reach ecological and social objectives. Viewed as a whole, the decentralised new energy world needs smart control and offsetting mechanisms. This being so, digitalisation, and here in particular the processing of large volumes of data using artificial intelligence (AI), is an important building block to make the energy industry, and thus also MVV, fit for the future. Adaptable IT and a well-structured approach to data handling form the foundation enabling us to permanently secure a strong competitive position and to deploy AI in other applications too. At MVV, the overriding topic of digitalisation is being implemented in all business fields. We coordinate key aspects of this in our overall digitalisation programme.

Information security and data protection

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

Business Performance of MVV Energie AG

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

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

The annual financial statements of MVV Energie AG, the consolidated financial statements of MVV and the combined management report for the 2021 financial year are published in the Federal Gazette (Bundesanzeiger). The complete 2021 annual financial statements of MVV Energie AG can be downloaded at [redacted] as can the consolidated financial statements and the combined management report.

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

The entry into effect of the KAG has led to shorter useful lives for the generation blocks at the power plant Grosskraftwerk Mannheim. At MVV, this led to additional expenses in a medium single-digit million amount in the year under report already. Based on the relevant investment volumes, these expenses are solely due to the aforementioned reduction in useful lives. They 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 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020
Sales	1,631,755	1,404,404
Less electricity and natural gas taxes	**– 125,782**	**– 110,981**
Sales less electricity and natural gas taxes	1,505,973	1,293,423
Increase or reduction in finished and unfinished products	–	– 173
Other own work capitalised	41	198
Other operating income	28,586	27,252
Cost of materials	1,302,656	1,104,497
Employee benefit expenses	83,890	79,106
Depreciation and amortisation	20,480	18,811
Other operating expenses	96,112	85,662
Financial result	108,714	94,162
Taxes on income	29,292	27,627
Earnings after taxes	110,884	99,159
Other taxes	368	435
Annual net income	110,516	98,724
Profit carried forward from previous year	–	–
Allocation to other revenue reserves	41,314	36,112
Unappropriated net profit	**69,202**	**62,612**

Sales less energy taxes at MVV Energie AG increased year-on-year by Euro 213 million to Euro 1,506 million. MVV Energie AG thus exceeded its forecast of generating sales at around the previous year's level. Sales were generated exclusively in Germany. The electricity business accounted for 61.3 % of total sales (previous year: 58.6 %) and thus remains the strongest division in terms of sales at MVV Energie AG.

At Euro 1,302 million, cost of materials was Euro 198 million higher than in the previous year. The change in this line item largely reflects the development in sales.

Other operating income rose by Euro 1 million to Euro 29 million. This increase was primarily due to higher exchange rate gains and other income. These factors were countered by lower reversals of provisions and disposals of assets.

MVV Energie AG had 890 employees at 30 September 2021, 2 fewer than at the previous year's balance sheet date. At Euro 84 million, employee benefit expenses were Euro 5 million higher than in the previous year, with this increase largely being due to collectively agreed pay rises and higher pension expenses.

Mainly due to additions of assets, particularly in connection with the linking of our energy from waste plant in Mannheim to the district heating grid and investments in transmission and supply grids, depreciation and amortisation rose by Euro 2 million to Euro 21 million. No impairment losses were recognised on non-current assets in the year under report or the previous year.

Other operating expenses increased by Euro 10 million to Euro 96 million. This change was chiefly due to higher consulting services, e.g. for IT projects.

The financial result improved year-on-year by Euro 15 million to Euro 109 million. This development was due above all to higher income from profit transfer agreements and lower write-downs of financial assets.

At Euro 111 million, earnings after taxes were Euro 12 million higher than in the previous year. Following the deduction of other taxes, MVV Energie AG generated annual net income of Euro 111 million in the 2021 financial year and thus exceeded its forecast of approximately matching the previous year's figure. Based on the profit utilisation resolution adopted by the Annual General Meeting on 12 March 2021, the unappropriated net profit of Euro 62.6 million was fully distributed to the shareholders of MVV Energie AG. The dividend amounted to Euro 0.95 per share.

Revenue reserves of Euro 41,314 thousand were formed from the annual net income for the year under report. MVV Energie AG reported unappropriated net profit of Euro 69 million at 30 September 2021. The Annual General Meeting to be held on 11 March 2022 will decide on the dividend proposal adopted by the Executive and Supervisory Boards. The Executive Board will propose to the Annual General Meeting that the dividend should be raised to Euro 1.05 per share (previous year: Euro 0.95 per share); the Supervisory Board will decide on its proposal in December 2021.

Presentation of asset and financial position of MVV Energie AG

Balance sheet

Euro 000s	**30 Sep 2021**	30 Sep 2020
Assets		
Non-current assets		
Intangible assets	389	454
Property, plant and equipment	507,588	469,136
Financial assets	1,521,040	1,454,302
	2,029,017	**1,923,892**
Current assets		
Inventories	280	4,201
Receivables and other assets	420,094	321,444
Cash and cash equivalents	744,056	102,259
	1,164,430	**427,904**
Deferred expenses and accrued income	653	559
	3,194,100	2,352,355
Equity and liabilities		
Equity		
Share capital	168,721	168,721
Capital reserve	458,946	458,946
Revenue reserves	551,857	510,543
Unappropriated net profit	69,202	62,612
	1,248,726	**1,200,822**
Income grants received	38,336	40,442
Provisions	89,738	76,775
Liabilities	1,815,942	1,034,316
Deferred tax liabilities	1,358	–
	3,194,100	**2,352,355**

Total assets increased year-on-year by Euro 842 million to Euro 3,194 million.

The asset side of the balance sheet is largely shaped by financial assets. At 30 September 2021, these totalled Euro 1,521 million, equivalent to a 48 % share of total assets. The figures for the previous year were Euro 1,454 million and 62% respectively. The addition of Euro 67 million to financial assets was chiefly due an increase in loans to associates. Property, plant and equipment increased year-on-year by Euro 39 million to Euro 508 million. This was mainly due to investments in connection with linking our energy from waste plant in Mannheim to the district heating grid and investments in transmission and supply grids.

Current assets rose to Euro 1,164 million, up Euro 737 million compared with 30 September 2020. This increase mainly resulted from the rise in liquid funds received from the exchange in connection with margin credits at MVV Trading. These funds flow to MVV Energie AG via the cash pool. Another reason for the increase in current assets was the taking up of liabilities to banks for loans to subsidiaries, only part of which have so far been passed on.

Furthermore, other receivables from associates also increased. The reduction in inventories for CO_2 rights had an opposing effect on current assets.

Equity increased by Euro 48 million in the year under report and amounted to Euro 1,249 million at the balance sheet date. At 39 %, the equity ratio at 30 September 2021 fell short of the previous year's figure of 51.1 %, a development attributable to the sharp increase in total assets due to the rise in liquid funds and cash pool liabilities to MVV Trading.

Provisions rose by Euro 13 million in total to Euro 90 million, with this being due above all to higher other provisions as a result of the German Fuel Emissions Trading Act (BEHG). Liabilities rose by Euro 782 million to Euro 1,816 million. The increase in liabilities primarily resulted from higher liabilities to associates. These related to margin credits at MVV Trading, which were passed on to MVV Energie AG via the cash pool.

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.

2021 activity statements

With its 2021 activity statements, MVV Energie AG has satisfied its reporting obligations pursuant to § 6b of the German Electricity and Gas Supply Act (German Energy Industry Act – EnWG) and § 3 of the German Metering Point Operation Act (MsbG). In our internal financial reporting, we maintain separate accounts for the activities of electricity and gas distribution, for metering operations, for other activities within the electricity and gas sectors and for other activities outside the electricity and gas sectors.

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

Electricity distribution

The electricity distribution activity field reported sales of Euro 45 million for the year under report (previous year: Euro 45 million). The gross performance for the 2021 financial year was thus at the previous year's level. In terms of total electricity sector sales of Euro 678 million (previous year: Euro 629 million), sales in the electricity distribution activity are of subordinate significance.

Alongside income from the leasing of its electricity grids to MVV Netze GmbH, earnings in the electricity distribution activity field at MVV Energie AG also include income from concession duties. MVV Netze GmbH manages and operates distribution facilities and grids at MVV Energie AG and is responsible for their maintenance. Other operating income resulting from the charging on of the concession duty to MVV Netze GmbH until 30 September 2021 was opposed by corresponding other operating expenses. The electricity distribution activity field generated annual net income of Euro 9 million in the 2021 financial year (previous year: Euro 1 million).

At 30 September 2021, total assets in the electricity distribution activity field came to Euro 153 million (previous year: Euro 142 million). This corresponds to a 50 % share of total assets in the electricity sector at MVV Energie AG (previous year: 49 %). Property, plant and equipment relating to electricity distribution increased compared with the previous year's balance sheet date. At Euro 142 million (previous year: Euro 131 million), this item accounted for a 93 % share of total electricity distribution assets (previous year: 92 %). On the equity and liabilities side of the balance sheet, electricity distribution liabilities rose from Euro 49 million to Euro 73 million. Liabilities to associates involve liabilities due to MVV Netze GmbH.

Metering operations (mME/iMSys)

Consistent with the unbundling requirements of § 3 (4) Sentence 2 MsbG with corresponding application of § 6b (3) EnWG, sales of Euro 0.6 million were reported for metering operations using modern measuring equipment and intelligent measuring systems in the year under report (previous year: Euro 0.4 million). Gross performance for the 2021 financial year therefore amounted to Euro 0.6 million. Measured in terms of total electricity sector sales of Euro 678 million (previous year: Euro 629 million), sales in the mME/iMSys metering operations activity field are of subordinate significance.

Earnings in the mME/iMSys metering operations activity field at MVV Energie AG include income from the leasing of its electricity meters (mME/iMSys). These meters were leased to Soluvia Energy Services GmbH until 31 March 2021 and have been directly leased to the grid operator MVV Netze GmbH since 1 April 2021. As a shared services company, Soluvia Energy Services GmbH nevertheless remains the metering point operator and smart meter gateway administrator and, as such, performs all metering services for MVV Netze GmbH and other grid companies within the Group.

Earnings were countered by depreciation of Euro 0.4 million on the electricity meters (mME/iMSys) recognised under non-current assets at MVV Energie AG (previous year: Euro 0.2 million). In the 2021 financial year, mME/iMSys metering operations posted annual net income of Euro 41 thousand (previous year: Euro 58 thousand).

At 30 September 2021, total assets in the mME/iMSys metering operations activity field amounted to Euro 2.8 million (previous year: Euro 1.8 million), corresponding to a 0.9 % share of total assets in the electricity sector at MVV Energie AG (previous year: 0.6 %). At the balance sheet date, property, plant and equipment relating to mME/iMSys metering operations amounted to Euro 2.8 million (previous year: Euro 1.8 million) and thus accounted for a 99 % share of total assets in mME/iMSys metering operations (previous year: 99%). On the equity and liabilities side, liabilities of Euro 1.6 million were reported for mME/iMSys metering operations (previous year: Euro 0.8 million). These mainly involve liabilities due to other activity fields.

Gas distribution

In the year under report, the gas distribution activity field reported sales of Euro 27 million (previous year: Euro 27 million). Gross performance was thus at the previous year’s level. Compared with total gas sector sales of Euro 90 million (previous year: Euro 65 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 2021 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 3 million).

Total assets in the gas distribution activity field amounted to Euro 125 million (previous year: Euro 112 million) at the balance sheet date on 30 September 2021 and accounted for some 80 % of total assets in the gas sector at MVV Energie AG (previous year: 85 %). At Euro 119 million, property, plant and equipment in gas distribution was Euro 14 million higher than in the previous year and accounted for 95 % of total assets in this activity field (previous year: 94 %). On the equity and liabilities side of the balance sheet, gas distribution liabilities rose from Euro 41 million to Euro 63 million. Liabilities to associates involve liabilities due to MVV Netze GmbH.

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

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

The Corporate Governance Declaration with the Declaration of Compliance on **Page 82** was published together with our Annual Report on 14 December 2021 on our website at [redacted]

Declaration pursuant to § 312 AktG

The Executive Board has compiled a report on relationships with associates for the 2021 financial year (dependent company report) pursuant to § 312 AktG. In this report, 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 2021 financial year, which has been jointly compiled for MVV Energie AG and the MVV Energie Group (“MVV”), has been published as a combined non-financial declaration within the combined management report in this Annual Report on **Page 48.**

Corporate Governance Declaration

High-quality and transparent corporate governance means acting in accordance with the principles of responsible company management aimed at sustainable value creation: For MVV, that is a standard we aim to meet in all aspects and all areas of our company. That is why we promote close cooperation based on trust between the Executive and Supervisory Boards and employees, account for the interests of our shareholders and all other stakeholders in our decisions, comply with applicable laws and structure our reporting and corporate communications transparently and openly. We are convinced that high-quality corporate governance provides a crucial foundation for promoting a relationship of trust with our shareholders, customers, business partners, employees and the general public.

The following Corporate Governance Declaration pursuant to § 289f and § 315d of the German Commercial Code (HGB) includes both the Declaration of Compliance with the German Corporate Governance Code pursuant to § 161 of the German Stock Corporation Act (AktG) and those further disclosures on corporate governance at MVV Energie AG which require inclusion pursuant to § 289f and § 315d HGB.

MVV's Executive and Supervisory Boards dealt extensively with the company's corporate governance in the 2021 financial year. The following Declaration of Compliance shows: MVV Energie complies with the recommendations made in the Code with just one exception. We have set ourselves the objective of following the recommendations and suggestions made by the Code as completely as possible in future as well.

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

The Executive and Supervisory Boards adopted the following Declaration of Compliance with the German Corporate Governance Code in September 2021:

The Executive and Supervisory Boards of MVV Energie AG hereby declare that the company complied and complies with the recommendations made by the German Corporate Governance Code Government Commission in the version dated 16 December 2019 and published in the Federal Gazette on 20 March 2020.

The following recommendation of the Code in its version dated 16 December 2019 has not been applied:

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

MVV's remuneration system, which was approved by a broad majority of shareholders at the Annual General Meeting on 12 March 2021 [redacted] does not provide for any remuneration by way of shares in the company, share ownership obligations or corresponding share-based remuneration models. Variable remuneration for the Executive Board is exclusively disbursed by way of cash payments. MVV's remuneration system nevertheless takes account of the interest of the company and its stakeholders in long-term, value-based and sustainable growth. The bonuses presented in greater detail in the Remuneration Report on **Page 91** are based on the company's operating performance (adjusted EBIT) in the respective financial year and its average return on capital employed (ROCE) over a three-year period. Variable remuneration is disbursed when minimum thresholds specified in advance are exceeded. In particular, the link between variable remuneration and ROCE, and the development in this key figure over a three-year period, enables account to be taken of MVV's capital-intensive business and of the company's long-term performance. The ROCE measures how efficiently a company uses its capital and is, in our opinion, the most suitable key figure for assessing whether MVV has performed sustainably with its capital-intensive infrastructure and taken the right long-term strategic decisions. Moreover, MVV's shareholder structure, and in particular its low level of free float and low share trading volumes, make it less appropriate to offer variable remuneration based on shares in the company or other share-based remuneration models.

Shareholders and Annual General Meeting

Shareholders in MVV Energie AG exercise their voting and control rights at the Annual General Meeting. Each shareholder is entitled to participate in the Annual General Meeting if he or she registers within the relevant deadline and meets the requirements governing participation in the meeting and the exercising of voting rights. Shareholders may make statements on all agenda items at the meeting and submit relevant questions and motions. At the 2021 Annual General Meeting, which was held on an exclusively virtual basis due to the pandemic, due account had to be taken of the specific measures set out in greater detail below. For voting purposes, each share entitles its holder to one vote and voting is possible before or during the Annual General Meeting. Moreover, shareholders can cast their vote in a variety of ways: in person or via a proxy of their choice, by being represented by a voting proxy appointed by MVV Energie AG to act in line with their instructions, or by a bank or shareholders' association. Furthermore, shareholders can submit their votes by post in advance of the Annual General Meeting provided that they register within the relevant deadlines. Alternatively, they can communicate all declarations electronically using our password-protected shareholder portal at MVV's website.

Due to the coronavirus pandemic, we held the 2021 Annual General Meeting on a virtual basis. The Annual General Meeting was broadcast live and in full length on our website and the web-based shareholder portal. Moreover, through to the end of voting shareholders were able to cast their votes via the web-based shareholder portal. Shareholders were thus able to decide at very short notice as to how to cast their vote. Large numbers of our shareholders drew on the option of submitting questions about the agenda via the shareholder portal up to one day ahead of the Annual General Meeting. The questions thereby submitted were answered by the Executive and Supervisory Boards at the Annual General Meeting. This way, we were able to ensure a high-quality exchange of views with our shareholders in the virtual format as well.

The Covid-19 Act (Act Mitigating the Consequences of the Covid-19 Pandemic), which governs the admissibility and requirements for holding virtual annual general meetings, expires upon the conclusion of the 2021 calendar year. It remains to be seen how lawmakers will react to any potential continuation in the pandemic. We have taken precautions enabling us to hold either a physical annual general meeting or another purely virtual annual general meeting if the restrictions on large-scale events should remain in force until March 2022 and the legal requirements governing virtual annual general meetings as set out in the Covid-19 Act are extended beyond 31 December 2021.

We publish all relevant documents for our Annual General Meeting on our website at [redacted] in line with the requirements of stock corporation law. In particular, these include the invitation to the meeting and all reports and information needed for the resolutions.

Transparent and prompt communications

We aim to ensure a high degree of transparency and equal treatment of our shareholders in terms of their access to information. We have therefore set ourselves the standard of providing all stakeholders with simultaneous, equivalent and extensive information about material developments and about the company's situation. Our websites, and here especially [redacted], serve as prompt sources of information. The information we publish on these sites includes our financial reports, analysts' conference presentations, press releases, ad-hoc announcements and our financial calendar.

Disclosures on auditor

The Annual General Meeting on 12 March 2021 elected PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, (PwC), Essen, as auditor for the financial year. Ahead of this, the Supervisory Board convinced itself of the auditor's independence. We comply with all statutory requirements resulting from the Audit Regulation and from § 316 et seq. HGB: from the selection, appointment and rotation of the auditor and of the persons responsible for managing the audit, through to commissioning the auditor to perform non-audit services.

Reporting and audit of financial statements

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

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

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

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

Compliance and risk management

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

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

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

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

By actively implementing preventative measures within business processes, we are committed to averting criminal or grossly improper violations of the law. In this respect, we have 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. These measures enable us to minimise the risk of so-called soft bribery. Furthermore, we continually monitor all business fields, specialist divisions, group departments and subsidiaries to ascertain whether compliance requirements have been adhered to. Moreover, employees and third parties can contact the Compliance Officer or an external confidence lawyer directly via anonymous "whistle-blower hotlines" and thus provide tip-offs on potential misconduct. We have published details including the telephone number of the confidence lawyer, also on our website at [redacted]

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

All of MVV's managers and employees who have contact to customers, service providers or suppliers receive regular training to ensure that they are extensively informed of general compliance requirements and also familiar with the legal requirements relevant to their respective business units. Examples of the topics covered by this training are combating corruption and money laundering, capital market, stock market, competition and cartel law, handling sanction lists and the relevant requirements of energy industry law. In the 2021 financial year, 318 employees at the Mannheim subgroup and 175 employees at the other subgroups took part in this training.

Due to the coronavirus pandemic, training sessions often could not take place in person, but were rather held online. In parallel, a total of 2,087 individuals completed an e-learning programme in the same period that was offered by our Stadtwerke Kiel and Energieversorgung Offenbach subsidiaries and the Juwi subgroup. At the end of each financial year, all managers from a specific management level upwards are required to submit a Compliance Management Declaration (CMD). 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. 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. Furthermore, in the context of the CMD the managers also provide detailed responses to questions specifically tailored to circumstances at their respective business unit.

Upon any changes to the legislation governing money laundering, our compliance requirements relating to the prevention of money laundering and terrorism financing are immediately updated. Given its products, customer base and geographical areas of activity, MVV is only exposed to a low potential risk in this respect. To eliminate the risk of participating in money laundering and terrorism financing entirely, cash transactions are prohibited without exception. Moreover, when business relationships are established requirements have to be met in terms of identifying the contract partners and their economic beneficiaries.

The energy industry supply chain is greatly influenced by fuel trading, which is handled on energy exchanges or in bilateral agreements. A far lower share of our total procurement volumes relates to suppliers who provide us with goods or perform services for us. We attach great importance to compliance in our cooperation with these suppliers as well. We make use of supplier management systems and require all suppliers to commit to our compliance regulations, particularly those relating to anti-corruption measures, environmental protection, respect for human rights in the supply chain and social responsibility. Our cooperation with suppliers and service providers in Germany and the European Union is based on applicable laws and regulations, including the German Act on Corporate Due Diligence Obligations for the Prevention of Human Right Violations in Supply Chains (LkSG), which will apply to us from 1 January 2023, as well as on those compliance regulations, forms of conduct and work practices relevant to us. Among others, these include 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 adhere to our compliance guidelines, which we have published on our website [redacted]. Our suppliers undertake to comply with legal requirements and internationally recognised standards governing anti-corruption measures, the protection of human and workers' rights and environmental protection. If these obligations are breached, then contractual sanctions, including contractual penalties, termination and damages payments, are provided for.

Our risk management system and internal control system in respect of the financial reporting process (IKS) represent further key components of our corporate management. Our IKS covers relevant accounting and financial reporting processes at all major locations. The aim is to minimise those risks that might contravene our objective of ensuring correct, complete, prompt and understandable financial reporting. To this end, all processes and interfaces involved in preparing the consolidated financial statements, the financial statements of MVV Energie AG and the combined management report of MVV are regularly analysed.

Dual management system

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

Composition and mode of operation of Executive Board

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

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

The CEO coordinates the work within the Executive Board and represents the Executive Board externally. Apart from this, Executive Board members enjoy equal rights and bear joint responsibility for managing the company. Each member of the Executive Board manages their division under their own responsibility but nevertheless subordinates the specific interests of the division to the overriding interests of the company.

Diversity concept for composition of Executive Board

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

When concluding employment contracts, an upper age limit of 65 years should be complied with. The term of first-time appointments should not exceed three years. Furthermore, the Supervisory Board and the Executive Board should work together to find long-term succession solutions.

In 2017, the Supervisory Board set itself the objective of raising the share of women on the Executive Board and laid down a target of 25 % to be reached by 30 September 2021. With the appointment of Verena Amann to the Executive Board, this target was met as of 1 August 2019 and thus two years earlier than planned.

The CVs of Executive Board members have been published on our website at [redacted] to provide information about their experience, expertise and skills.

Composition and mode of operation of Supervisory Board and its committees

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

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

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

The **Audit Committee** is entrusted with addressing the corporate planning, strategy and the performance of individual business fields, as well as the development and structure of individual controlling systems. It also deals with fundamental financial reporting issues. Its responsibilities include preparing the selection of the auditor, reviewing and discussing the annual and consolidated financial statements in advance and preparing corresponding resolutions for the full Supervisory Board and discussing the interim consolidated financial statements for the first half and the interim financial statements for the first three and first nine months with the Executive Board. Furthermore, it monitors the effectiveness of the internal control system (IKS) and the internal audit and risk management system. It checks whether the organisational precautions taken are sufficiently effective to ensure compliance with legal requirements and internal company guidelines (compliance). Further tasks incumbent on the Audit Committee include determining key audit focuses and setting thresholds for the commissioning of non-audit services. The Audit Committee consists of three shareholder representatives and three employee representatives. At 30 September 2021, the committee had the following members: Dr. Lorenz Näger (Chairman), Heike Kamradt (Deputy Chair), Angelo Bonelli, Detlef Falk, Martin F. Hermann and Gregor Kurth. The Audit Committee members meet the requirements of § 100 (5) and § 107 (4) AktG in effect since 1 July 2021, which state that at least one member of the committee should have accounting expertise, at least one further member should have auditing expertise, and that the members as a whole should be familiar with the sector in which the company operates. The Committee Chairman Dr. Lorenz Näger therefore also meets the qualification requirement set out in D.4 of the German Corporate Governance Code in its version dated 16 December 2019. All members of the committee are independent pursuant to the definition in C.10 of the Code. The Supervisory Board Chairman, Dr. Peter Kurz, the First Mayor of the City of Mannheim, Christian Specht, and the Supervisory Board member Dr. Stefan Seipl attend Audit Committee meetings as permanent guests.

The activities of the **Personnel Committee** particularly involve preparing any Supervisory Board resolutions which relate to the conclusion, amendment or rescission of employment contracts with Executive Board members. It proposes suitable candidates to the Supervisory Board for appointments to the Executive Board. In this, it takes due account of legal requirements, the diversity concept adopted by the Supervisory Board for the Executive Board and the recommendations made by the German Corporate Governance Code. The Supervisory Board as a whole is responsible for appointing new members to the Executive Board subsequent to preparation of the decisions by the Personnel Committee, as well as for decisions relating to existing employment contracts. When selecting new Executive Board members, the Supervisory Board develops and works with current requirement profiles based on the diversity concept for the composition of the Executive Board. The Personnel Committee comprises six members: the Supervisory Board Chairman, who is also Personnel Committee Chairman, his deputy and four Supervisory Board members, of which two shareholder and two employee representatives. The Personnel Committee had the following members at 30 September 2021: Dr. Peter Kurz (Chairman), Heike Kamradt (Deputy Chair), Angelo Bonelli, Barbara Hoffmann, Gregor Kurth and Jürgen Wiesner.

The responsibilities of the **Nomination Committee** involve determining targets for the composition of the Supervisory Board and recommending suitable candidates to the Supervisory Board for its own proposals to the Annual General Meeting. When selecting candidates, the committee takes particular account of legal requirements, the diversity concept and the recommendations of the German Corporate Governance Code. The six committee members include the Supervisory Board Chairman, who also chairs the committee, and five further shareholder representatives. The Nomination Committee had the following members at 30 September 2021: Dr. Peter Kurz (Chairman), Barbara Hoffmann, Gregor Kurth, Dr. Lorenz Näger, Tatjana Ratzel and Thorsten Riehle. Christian Specht attends the meetings of the Nomination Committee as a permanent guest.

The **Mediation Committee** submits further personnel proposals to the Supervisory Board pursuant to § 27 (3) of the German Codetermination Act (MitbestG) if the two-third majority required to appoint and dismiss Executive Board members is not achieved in the first ballot. The Mediation Committee had the following members at 30 September 2021: Dr. Peter Kurz (Chairman), Heike Kamradt, Gregor Kurth and Jürgen Wiesner.

The **New Authorised Capital Creation Committee** is charged with exercising the powers of the Supervisory Board in connection with any capital increase based on authorised capital. This committee comprises eight members: the Supervisory Board Chairman, who chairs the committee, his deputy and six further Supervisory Board members, of which one employee and five shareholder representatives. The New Authorised Capital Creation Committee had the following members at 30 September 2021: Dr. Peter Kurz (Chairman), Heike Kamradt, Gregor Kurth, Dr. Lorenz Näger, Tatjana Ratzel, Thorsten Riehle, Christian Specht and Jürgen Wiesner.

Diversity concept for composition of Supervisory Board

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

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

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

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

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

The composition of the Supervisory Board changed in the 2021 financial year. Of the shareholder representatives, Prof. Dr. Heidrun Kämper, Brigitte Kemmer and Steffen Ratzel stood down from their positions upon the conclusion of the 2020 financial year. By ruling of Mannheim District Court dated 21 September 2020, Sabine U. Dietrich, Tatjana Ratzel and Dr. Stefan Seipl were appointed as members of the Supervisory Board of MVV Energie AG as of 1 October 2020 and elected to the Supervisory Board by the Annual General Meeting on 12 March 2021. Martin F. Herrmann and Thorsten Riehle were also elected by the Annual General Meeting on 12 March 2021. They have succeeded Prof. Heinz-Werner Ufer and Ralf Eisenhauer, who retired from the Supervisory Board upon the conclusion of the Annual General Meeting on 12 March 2021. By ruling of Mannheim District Court, Gregor Kurth had already been appointed as a Supervisory Board member as of 3 July 2020. He too was elected to the Supervisory Board by the Annual General Meeting on 12 March 2021.

These changes in the Supervisory Board were partly due to the changes in the company's shareholder structure. The election proposals are based on recommendations made by the Supervisory Board Nomination Committee and take due account of the diversity concept adopted by the Supervisory Board for its composition.

Of the employee representatives on the Supervisory Board, Peter Erni and Gabriele Gröschl-Bahr stood down from their positions as of 12 March 2021. Angelo Bonelli and Susanne Schöttke were elected by employees as their successors in the Supervisory Board.

Information about the experience, expertise and skills of our Supervisory Board members can found in their CVs as published on our website at [redacted]

With regard to the evaluation of the effectiveness of its own work and that performed by its committees, the Supervisory Board most recently conducted a self-assessment in the 2019 financial year. Building on the findings of this assessment, ideas and recommendations were devised as to how the Supervisory Board might optimise its efficiency and effectiveness. The next evaluation is scheduled for the 2022 financial year.

Conflicts of interest and independence of Supervisory Board members

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

In respect of Points C.1 and C.6 et seq. of the German Corporate Governance Code in its version dated 16 December 2019, we are of the opinion that all members of our Supervisory Board were and are independent in the spirit of the Code. A Supervisory Board member is considered independent if he or she is independent of the company and its Executive Board and independent of any controlling shareholder. This is the case for all Supervisory Board members. We also view Supervisory Board members who sit on the city council or work for the city administration and are delegated by the City of Mannheim as independent in this sense. The City of Mannheim owns a majority of the shares in MVV Energie AG. Pursuant to the Municipalities Code of the State of Baden-Württemberg, the city council is the topmost political body representing the city. In view of this, it is logical that the City of Mannheim, as the majority shareholder in MVV Energie AG, should be represented on the company's Supervisory Board. When determining independence, the decisive factor is whether there are any material conflicts of interest that are not only of a temporary nature. This is particularly not the case for Supervisory Board members appointed in accordance with the Articles of Incorporation, namely Dr. Peter Kurz and Christian Specht. The same is true of the other Supervisory Board members who sit on the city council or did so in the 2021 financial year.

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

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

Report on equal participation of women and men

The Supervisory and Executive Boards of MVV Energie AG firmly believe that the company can generate sustainable business success only when responsibility is assigned to women and men on a basis of equality. Particularly in view of demographic change, it makes sense for both social and economic reasons to promote all talents regardless of their gender. Among others, this approach has the benefit of proactively countering the effects of any shortage of specialist and management staff. To date, women have only made up a comparatively low share of the overall workforce at companies operating in the energy sector. The Supervisory and Executive Boards of MVV Energie AG believe that increasing the share of women working at the group of companies on a long-term basis is one key to the company's successful further development. We therefore set ourselves the target of raising women's share of our Group's workforce to 35 % by 30 September 2021, up from 27 % at 30 June 2015. With a 28 % share of women employees at 30 September 2021, we only managed to come slightly closer to reaching this target. Among our management staff, we also aimed to increase the share of women to 25 %, up from 14 % at 30 June 2015. At 14 % at the balance sheet date on 30 September 2021, this figure was still at its 2015 level. As the efforts made so far have not yet enabled us to reach the targeted shares, the Executive Board decided in September 2021 to retain the existing targets of 35 % and 25 % respectively and to reach these by 30 September 2026. To achieve our targets by 2026, we will consistently implement our promotional measures and programmes and further expand these in the years ahead. That is particularly true for our targeted personnel development activities for women who have the potential to take on management positions.

For MVV Energie AG, we report on the share of women in the first and second management tiers below the Executive Board. In August 2017, the Executive Board set targets for the share of women at 25 % for the first and 30 % for the second management tiers, with both targets to be reached by 30 September 2021. The share of women in the first management tier amounted to 14 % at 30 September 2021 and was thus ahead of the previous year (30 September 2020: 10 %). In the second management tier, the share of women amounted to 31 % (30 September 2020: 27 %) and thus exceeded the target level set. We see this as providing a stable basis and as offering an opportunity to fill positions becoming vacant in the next higher management tier with internal candidates in future. In September 2021, the Executive Board adopted a resolution to retain the existing targets of 25 % and 30 % and to achieve and uphold these respectively by 30 September 2026. In addition to those measures that are already in place to promote women, we are taking steps to increase the number of applications we receive from promising external and internal women candidates.

Remuneration Report

In what follows, we describe the principles underlying our remuneration system for the Executive and Supervisory Boards, which was approved by the Annual General Meeting in March 2021. Furthermore, we also provide information on the structure and amount of remuneration paid to members of the Executive and Supervisory Boards of MVV Energie AG in the year under report.

EXECUTIVE BOARD REMUNERATION

Remuneration system

Our remuneration system is structured to incentivise the sustainable, long-term development in the company's value and its economic success. We take due account of the requirements of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG), as well as of the recommendations set out in the German Corporate Governance Code. The Supervisory Board reviews the system and amount of remuneration for our Executive Board members at regular intervals and determines both aspects. The Personnel Committee of the Supervisory Board prepares the resolutions thereby required.

Executive Board remuneration comprises non-performance-related and performance-related components. The composition and determination of these components is described below.

No other payments were either committed or made by third parties to Executive Board members in connection with their activities as such.

Non-performance-related remuneration

The non-performance-related remuneration components paid to Executive Board members comprise fixed basic remuneration, fringe benefits and pension commitments.

The fixed remuneration is paid in prorated instalments in the form of a monthly salary. Furthermore, Executive Board members receive fringe benefits. These mainly involve contributions to insurance policies customary to the market and the non-cash benefit in kind resulting from company car use. The Executive Board members are required to tax the fringe benefits under their own individual responsibility.

In addition, all members of the Executive Board at MVV Energie AG have been granted defined contribution pension commitments, the volume of which corresponds to the balances on virtual pension accounts at the time at which the benefits are claimed. Pension contributions bearing annual interest are credited to these accounts each year. The commitments also cover benefits for permanent inability to work and provision for surviving dependants.

Performance-related remuneration

The variable remuneration of our Executive Board members comprises two components, each of which is furnished with appropriate minimum thresholds and caps. The first is the annual bonus, which is measured based on the adjusted EBIT generated by MVV in the past financial year. The second is the sustainability bonus, which is linked to the long-term increase in the company's value.

The latter bonus is determined by reference to MVV's average ROCE (return on capital employed) before IFRS 9 items. This calculation includes the figures both for the past financial year and for the two preceding financial years. The ROCE key figure measures how effectively the company has used its capital employed. Since the capital required for operations is influenced in particular by long-term strategic decisions, this figure is well suited to assess the long-term performance in the company's value. The sustainability bonus is only paid out when the three-year ROCE exceeds a minimum threshold stipulated by the Supervisory Board.

Compared with the annual bonus, the sustainability bonus made up the predominant share of variable remuneration paid to the members of MVV's Executive Board in the 2021 financial year. No further multiyear remuneration is provided for, neither does the company maintain any stock option programmes or comparable instruments.

Any remuneration paid for positions held on group-internal supervisory boards is imputed to and deducted from the performance-related remuneration each year.

Total Executive Board remuneration

Remuneration totalling Euro 3,109 thousand was paid to the Executive Board of MVV Energie AG in the year under report (previous year: Euro 2,812 thousand).

In the following tables, we provide information both about the benefits granted and about the actual incomes paid in the year under report, as well as about total remuneration. The methodology underlying our remuneration system means that the benefits granted and actual incomes paid are identical.

Former members of the Executive Board received benefits of Euro 725 thousand in the year under report (previous year: Euro 630 thousand). As of the balance sheet date, the company had provisions totalling Euro 18,310 thousand for pension obligations to former Executive Board members and their surviving dependants (previous year: Euro 20,288 thousand). Of this total, an amount of Euro 122 thousand was added in the year under report (previous year: Euro 64 thousand).

Provisions governing premature departure of an Executive Board member

Should a member of the Executive Board prematurely depart from his or her role, the potential severance pay agreement is governed by the following provisions: Payments made to a departing Executive Board member may not exceed the value of two annual remuneration packages. Payments may not exceed the maximum remuneration payable for the remaining term of the employment contract. No transitional allowances are paid upon the premature termination or non-extension of the employment contract.

Remuneration of related parties

Management staff performing key functions count as related parties pursuant to IAS 24. As well as Executive Board members, we include active division heads and authorised representatives of MVV Energie AG in this category. Our division heads and authorised representatives receive their remuneration solely from MVV Energie AG. The relevant remuneration amounted to Euro 3,353 thousand in the year under report (previous year: Euro 2,955 thousand), of which Euro 3,247 thousand involved payments with current maturities (previous year: Euro 2,845 thousand). Unless they are insured via municipal supplementary pension companies (ZVKs), these persons receive a defined contribution company pension amounting to up to 8.6 % of their fixed basic remuneration. The total expenses incurred for this remuneration amounted to Euro 106 thousand in the 2021 financial year (previous year: Euro 110 thousand).

Benefits granted and income paid

	Dr. Georg Müller Chief Executive Officer				Verena Amann Personnel Director			
Euro 000s	**FY 2021**	Min FY 2021	Max FY 2021	FY 2020	**FY 2021**	Min FY 2021	Max FY 2021	FY 2020
Fixed remuneration [1]	547	547	547	524	327	327	327	313
Fringe benefits [2]	27	27	27	31	40	40	40	41
Other activities [3]	11	11	11	11	9	9	9	6
Total	**585**	**585**	**585**	**566**	**376**	**376**	**376**	**360**
Variable remuneration	474	–	1,094	394	314	–	654	264
Total pay	**1,059**	**585**	**1,679**	**960**	**690**	**376**	**1,030**	**624**
Pension expenses [4]	1.193[5]	1,193	1,193	349	306	306	306	331
Total remuneration	**2,252**	**1,778**	**2,872**	**1,309**	**996**	**682**	**1,336**	**955**

	Ralf Klöpfer Sales Director				Dr. Hansjörg Roll Technology Director			
Euro 000s	**FY 2021**	Min FY 2021	Max FY 2021	FY 2020	**FY 2021**	Min FY 2021	Max FY 2021	FY 2020
Fixed remuneration [1]	327	327	327	313	327	327	327	313
Fringe benefits [2]	38	38	38	39	20	20	20	23
Other activities [3]	11	11	11	11	6	6	6	6
Total	**376**	**376**	**376**	**363**	**353**	**353**	**353**	**342**
Variable remuneration	313	–	654	259	318	–	654	264
Total pay	**689**	**376**	**1,030**	**622**	**671**	**353**	**1,007**	**606**
Pension expenses [4]	397	397	397	302	456	456	456	316
Total remuneration	**1,086**	**773**	**1,427**	**924**	**1,127**	**809**	**1,463**	**922**

1 Annual fixed remuneration including CEO allowance of Euro 220 thousand for Dr. Georg Müller
2 Contributions to health insurance, nursing care insurance, voluntary contributions to employers' mutual insurance association, non-cash benefits/benefits in kind
3 Remuneration for board activity at subsidiaries and shareholdings (entitlement in respective financial year). This is deducted from variable remuneration.
4 Service cost from commitments of pensions and other benefits pursuant to IAS 19
5 The amount stated comprises the current service cost and retrospective service cost.

Pension obligations

	Development in virtual pension accounts			Pension provisions	Allocation to pension provisions	
Euro 000s	Balance at 1 Oct 2020	Pension contribution	**Balance at 30 Sep 2021 [1]**	**Balance at 30 Sep 2021 [2]**	Service cost	Interest expenses
Dr. Georg Müller	3,369	394	3,914	6,986	1,193	37
Verena Amann	120	105	230	702	306	3
Ralf Klöpfer	995	186	1,221	2,338	397	13
Dr. Hansjörg Roll	940	219	1,196	2,252	456	12
Total	**5,424**	**904**	**6,561**	**12,278**	**2,352**	**65**

1 Including interest
2 Equivalent to present value of vested claims

SUPERVISORY BOARD REMUNERATION

Remuneration system

The remuneration of Supervisory Board members is laid down in the Articles of Incorporation of MVV Energie AG, on which the company's Annual General Meeting adopted a resolution pursuant to § 113 (3) AktG most recently in March 2021.

Supervisory Board members accordingly receive fixed annual remuneration payable after the conclusion of the respective financial year, as well as a meeting allowance, the amount of which is determined by the Annual General Meeting. The level of remuneration was most recently adjusted in the 2020 financial year.

The remuneration paid to our Supervisory Board members is commensurate to the responsibility they bear and to the scope of their activities.

In the 2021 financial year, each Supervisory Board member received annual remuneration of Euro 15 thousand. The Supervisory Board Chairman received annual remuneration of Euro 30 thousand and his deputy was paid Euro 22.5 thousand. Prorated remuneration is paid to members joining or leaving the Supervisory Board during the financial year. The Audit Committee Chairman received additional annual remuneration of Euro 10 thousand, while other members of this committee each received Euro 5 thousand.

Moreover, Supervisory Board members received a meeting allowance of Euro 1 thousand for each meeting of the full Supervisory Board or committee meeting attended. The Supervisory Board Chairman receives twice this amount for each meeting of the Supervisory Board, as does the Audit Committee Chairman for each Audit Committee meeting.

Total remuneration of Supervisory Board

Remuneration totalling Euro 541 thousand was paid to Supervisory Board members in the year under report (previous year: Euro 525 thousand).

Supervisory Board remuneration FY 2021

Euro	Annual remuneration	Meeting allowances
Dr. Peter Kurz, Chairman	30,000	19,000
Johannes Böttcher	15,000	6,000
Angelo Bonelli (since 12 March 2021)	11,055	8,000
Timo Carstensen	15,000	6,000
Sabine U. Dietrich	15,000	5,000
Ralf Eisenhauer (until 12 March 2021)	6,750	5,000
Peter Erni (until 12 March 2021)	9,000	–
Detlef Falk	20,000	11,000
Gabriele Gröschl-Bahr (until 12 March 2021)	6,750	2,000
Martin F. Herrmann (since 12 March 2021)	11,055	6,000
Barbara Hoffmann	15,000	9,000
Heike Kamradt	27,500	14,000
Gregor Kurth	20,000	12,000
Thoralf Lingnau	15,000	6,000
Dr. Lorenz Näger	22,764	14,000
Tatjana Ratzel	15,000	7,000
Thorsten Riehle (since 12 March 2021)	8,292	3,000
Susanne Schöttke (since 12 March 2021)	8,292	2,000
Bernhard Schumacher	15,000	6,000
Dr. Stefan Seipl	15,000	11,000
Christian Specht	15,000	11,000
Prof. Heinz-Werner Ufer (until 12 March 2021)	11,250	8,000
Susanne Wenz	15,000	4,000
Jürgen Wiesner	15,000	8,000
Total	**357,708**	**183,000**

Takeover-Related Disclosures

The combined management report includes takeover-related disclosures as per § 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 2021, 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 aware, the City of Mannheim, as the municipal principal shareholder, and its subsidiaries MKB Mannheimer Kommunalbeteiligungen GmbH and MV Mannheimer Verkehr GmbH on the one hand and FS DE Energy GmbH and its material shareholders, FS Energy TopCo S.à r.l. and First State Investments International Limited, on the other hand, concluded a shareholders' agreement on 2 April 2020 which includes understandings concerning proposals for the composition of the Supervisory Board and, apart from this, excludes any other voting pacts and acknowledges that MVV Energie AG should continue to be a company controlled by the City of Mannheim. Furthermore, the shareholders' agreement includes understandings concerning the transfer of shares. In particular, certain MVV shares may only be sold by FS DE Energy GmbH prior to 1 January 2029 with the approval of the City of Mannheim. There are no shares with special rights conferring powers of control.

Direct or indirect shareholdings exceeding 10 % of voting rights

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

Control of voting rights

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

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

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

Amendments to the Articles of Incorporation must be undertaken in accordance with § 133 and § 179 AktG in conjunction with § 19 of the 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 respective 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 clause). 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

» Changes foreseeable in energy and climate policy framework
» Increased volatility on energy and procurement markets
» Significant sales growth and moderate rise in earnings expected for 2022 financial year
» Investments set to remain high

OUTLOOK

Macroeconomic developments

The impact of the coronavirus pandemic on society and the economy, and in particular its indirect implications, can still only be forecast to a limited extent. In their autumn survey for the 2021 calendar year, Germany's leading economic research institutes expect gross domestic product to rise by 2.4 %. They note that the economic situation is still being adversely affected by the coronavirus pandemic, with manufacturing output additionally held back by supply bottlenecks for upstream products. The German economy is only expected to regain normal capacity levels during 2022. The researchers expect economic growth of 4.8 % in the 2022 calendar year.

Business framework

Alongside macroeconomic developments, MVV's future business performance will particularly be determined by the regulatory and competitive framework in Europe and Germany. One key factor on European level will be the fleshing out of the "Fit for 55" package. In Germany, the further amendment to the Climate Protection Act (KSG), reforms to the Renewable Energies act (EEG), the implementation of the Coal Exit Act (KAG) and programmes to promote green heat options will play an important role. Further information about these can also be found in the chapter **Business Framework** **Page 30.**

The energy and procurement markets have become increasingly volatile and witnessed rapid movements in prices in recent months **Pages 35 and 36.** This will create uncertainties for MVV in the 2022 financial year as well. Moreover, competitive pressure remains unrelentingly high.

Executive Board summary of expected business performance

Overall, we expect our operating environment to remain challenging in the 2022 financial year. Key uncertainties relate above all to the direct and indirect impact of the coronavirus pandemic and the energy industry framework within which MVV operates. The national and international climate protection efforts and accompanying legislation, which are largely coherent, nevertheless affirm us in our strategic alignment, which is based on implementing the electricity and heat turnarounds and offering suitable solutions to our customers. This being so, we will invest in further expanding renewable energies, boosting energy efficiency and developing innovative products and services to accelerate decarbonisation. At the same time, we are pursuing measures to enhance our processes and reduce our costs, and that in all areas of our company. This way, we are providing MVV with a foundation for sustainable and profitable growth.

Sales performance

From a current perspective, we expect adjusted sales (excluding energy taxes) in the 2022 financial year to increase significantly compared with the previous year (Euro 4.1 billion). The sales performance will depend above all on developments in prices on the energy markets, on the implementation of photovoltaics and wind projects and on weather conditions and demand from our customers.

Earnings performance

In the Customer Solutions reporting segment, we expect adjusted EBIT at around the previous year's level. Alongside weather conditions, the earnings performance here is particularly dependent on market and competitive conditions, as well as on the start-up costs incurred for new business models.

Operating earnings in the New Energies reporting segment are influenced by the development in waste and biomass prices and volumes, wholesale prices on energy markets, availability levels at our plants and weather conditions, including wind volumes. Due to the nature of the business, volatility is also high in the development and marketing of photovoltaics and wind projects. On this basis, we expect to achieve a significant increase in adjusted EBIT in the New Energies reporting segment in the 2022 financial year.

Earnings in the Supply Reliability reporting segment are determined above all by the development in procurement costs for fuels and CO_2 emission rights, weather conditions and availability levels at our plants. Overall, we expect adjusted EBIT in the Supply Reliability reporting segment to slightly exceed the previous year's figure.

Based on the developments outlined above for the reporting segments, from an operating perspective we expect MVV's adjusted EBIT in the 2022 financial year to show a further moderate increase compared with the previous year's excellent earnings (Euro 278 million). Alongside the factors stated for individual reporting segments, this expectation chiefly depends on the further development in the energy markets and the assumption that neither market conditions nor the effects of the coronavirus pandemic limit the availability of commodities or supply chain integrity.

Performance of MVV Energie AG in separate financial statements

For the 2022 financial year, we expect sales (excluding energy taxes) at MVV Energie AG to significantly exceed the previous year's figure (Euro 1.5 billion). Annual net income after taxes is expected to slightly surpass the previous year's level (Euro 111 million). Weather conditions have a significant influence on sales and sales volumes in the heat business. Earnings in the separate financial statements are also notably influenced by grid operations, the sales business and income from group shareholdings.

Dividend

We aim to pay a dividend to our shareholders that is aligned to our earnings performance in future as well. In view of the significant earnings growth in the 2021 financial year, the Executive Board has therefore decided to propose a dividend of Euro 1.05 per share, corresponding to an increase of Euro 0.10 per share, for approval by the Annual General Meeting on 11 March 2022. The Supervisory Board will decide in December 2021 on its dividend proposal to be submitted to the Annual General Meeting.

Investments

We will significantly increase our investments in the 2022 financial year while maintaining largely unchanged focuses. MVV will therefore be upholding its transformation course.

Capital resources and financing structure

Thanks to our ongoing very good access to the capital markets, we are able to cover our financing and liquidity needs at all times. Our adjusted equity ratio of around 29 %, or around 33 % excluding security deposits for counterparty default risk (margins), enables us to continue making high volumes of investment. We finance our investments in the existing business primarily from depreciation. For growth projects, we draw on retained earnings and on optimised project-based financing facilities. We pool projects with structural similarities and comparable terms and then finance these via the capital market. We draw here on the bank and promissory note loan markets. By adhering to key figures as guidelines for debt-financed growth, we ensure an implicit investment grade rating for MVV.

Forward-looking statements and forecasts

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

OPPORTUNITY AND RISK REPORT

The energy industry has been undergoing a process of fundamental change for years now – and the industry as a whole and MVV still face numerous uncertainties. The opportunities and risks resulting from factors including such changes are an integral part of our entrepreneurial activity. One key task for our corporate management involves identifying both at an early stage of developments, exploiting opportunities and countering risks with suitable measures. We have installed suitable instruments and processes for this purpose. On the one hand, these include our internal control system (IKS) in respect of the financial reporting process, which serves to ensure correct, reliable and uniform companywide financial reporting. On the other hand, they also include our risk management system (RMS), with which we record developments relevant to our company at an early stage, and in particular those relating to competitive, regulatory and technological developments. Systematically managing opportunities and risks enables us to safeguard and extend MVV's competitiveness.

Explanation of internal control system (IKS)

Our financial reporting should be correct, complete, prompt and easily understandable. We safeguard this with our internal control system (IKS) in respect of the financial reporting process. This comprises all principles, procedures, regulations and measures to ensure that all business transactions are promptly, completely and accurately recorded. We deploy the IKS to monitor compliance with legal requirements and our internal regulations, such as the principles of proper accounting, the requirements of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG), international accounting requirements and the supplementary requirements of our Articles of Incorporation and our internal organisational manual. Furthermore, the IKS also helps us to avoid material misstatements resulting from errors or irregularities.

The IKS is a fixed component of our accounting and financial reporting processes at all our major locations. We regularly analyse all processes and interfaces relevant to the preparation of MVV's consolidated financial statements and combined management report, as well as of the annual financial statements of MVV Energie AG. Here, we check whether there are any risks that could contravene our objective of ensuring correct, complete, prompt and easily understandable financial reporting. To minimise such risks, we have introduced suitable organisational safeguards and internal checks, including training for those employees involved and detailed schedules governing the preparation of quarterly statements, interim consolidated financial statements, the half-year financial report, consolidated financial statements, combined management report and the annual financial statements of MVV Energie AG.

The executive board members and managing directors of our subsidiaries are required to submit internal balance sheet oaths on a quarterly basis, as are selected division and group division heads.

Basic principles and organisation of IKS

Our consolidated financial statements are centrally prepared by the commercial division at MVV Energie AG. They comply with International Financial Reporting Standards (IFRS) as adopted by the EU as well as the supplementary requirements of commercial law set out in § 315a (1) HGB. Key accounting matters are processed by employees at the accounting and tax department, who are also available to act as contact partners to our subsidiaries.

The consolidated financial statements are prepared in a multistage process. The individual subsidiaries first prepare their financial statements. These are then audited by the respective auditors. After this, we use consolidation software to aggregate these financial statements into the consolidated financial statements at MVV Energie AG. Our consolidation process is based on in-house guidelines, procedural instructions and processes, compliance with which is checked upon preparation of the financial statements. The consolidated financial statements are prepared by the Executive Board and reviewed by the Audit Committee and the full Supervisory Board before being approved and adopted by the latter and subsequently published by the company in accordance with the relevant requirements.

Our IKS requires consistent application of the dual control principle and the separation of critical functions for all processes involved in preparing the financial statements. Guidelines, procedural instructions and approval processes are supported by an information and communications system. All companies included in our consolidated financial statements are required to base their accounting and reporting for the purposes of annual and interim financial statements on uniform guidelines. These lay down the accounting policies requiring application under IFRS and include requirements as to how we have to meet other reporting obligations, such as industry-specific or regulatory obligations. Moreover, in preparing the financial statements we also aggregate further qualitative and quantitative information that is relevant for this purpose. We regularly discuss this information in specified processes with representatives of the various specialist departments. Within the framework of our quality assurance, we record this information and thus ensure that all relevant data is fully documented. We have subdivided our day-to-day accounting and the preparation of the annual financial statements based on functional perspectives across all hierarchical levels and structured this in individual process steps. We have installed automatic or manual checks in all process steps involving risks.

In our accounting, we work with an integrated enterprise resource planning (ERP) system which enables potential sources of error to be avoided. This way, only complete business transactions with valid data are processed. Not only that, a strict authorisation concept is in place for all users to prevent unauthorised access to accounting data.

Uniform standards across all locations

The commercial division at MVV Energie AG is responsible for preparing the financial statements and for the overall Group's internal control system (IKS) in respect of the financial reporting process. This way, the IKS is subject to uniform standards applicable throughout the Group. We ensure that our IKS is documented and effective in terms of its structure and functionality.

Our IKS managers at all major companies work together with the Group's IKS manager to ensure that local internal control systems are consistent with the Group's uniform requirements. The Group's IKS manager compiles the aggregate IKS report based on annual status reports submitted by local IKS managers, internal audit reports and proprietary information. The results of this report form the basis for our IKS reporting.

Using special software, the processes relevant to financial reporting are documented together with the embedded internal checks and made available for the information of all employees on MVV's intranet. This process documentation has been and continues to be supplemented where necessary to include regulations applicable to individual cases.

Regular reporting

Within the intra-year reporting process, the group controlling department monitors whether and to what extent the targets set by the Executive Board in the business plan and approved by the Supervisory Board are actually met. Variances, whether to planned developments or to the previous year's figures, are documented and included in the quarterly reports provided to the Executive Board. These present the business performance in detail and include comments on all reporting segments and business fields. Based on the insights thereby gained, suitable measures are proposed within the reporting framework. The Executive Board manages MVV's business based on this information.

Explanation of risk management system (RMS)

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

Basic principles and organisation of RMS

The Executive Board determines the company's risk policy and lays down all processes and responsibilities. Responsibility for operative risk management is located with the legal business units and business fields and, more specifically, with the respective risk bearers. These are the employees who are incorporated into 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 in standardised form to our central risk controlling function. The tasks incumbent on risk bearers also include implementing, or monitoring the 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 business and aggregates these into an opportunity/risk profile. This profile represents a net analysis, which means that it already accounts for all countermeasures taken to reduce risks that are already factored into the measurement of the risk. Existing opportunity and risks are aggregated using probability methods.

RISK MANAGEMENT SYSTEM

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

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

Supervision of IKS and RMS

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

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

Presentation of opportunity/risk situation

In what follows, we present the opportunity/risk situation of MVV. We allocate opportunities and risks in each case to one of our total of six categories. We subsequently quantify the opportunity/risk situation for each category and present the potential impact on earnings for each category in terms of the Group's adjusted EBIT. We categorise the respective opportunity/risk situation in three different risk classes: "low", "medium" and "high". These classifications show how high, as a percentage, the expected impact of the category is for the Group's budgeted adjusted EBIT. A detailed explanation of material opportunities and risks is provided within the various categories. Here, we present the potential implications for our reporting segments based on the reporting structure used to manage and report on the business.

EXPECTED RISK SITUATION IN FY 2022

Risk category		Risk class
PRICE RISKS	» Market prices: • Clean dark spread • Clean spark spread » Fluctuations in procurement prices • Waste and biomass prices » Exchange rates » Interest rates	MEDIUM
VOLUME RISKS	» Fluctuations in turnover: • 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 » Personnel » IT risks	MEDIUM
LEGISLATIVE RISKS	» Regulation » Legal risks	MEDIUM
FINANCING RISKS	» Receivables default » Refinancing » Liquidity » Countries	LOW
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

In addition to the opportunities and risks typical to its business, the Group's risk situation is also influenced by uncertainties resulting from the coronavirus pandemic. As from the very start, we are drawing on numerous proactive measures to counter the effects of the pandemic and review these continually to assess their effectiveness. Our close links to the overall economy may nevertheless lead to numerous direct or merely indirect pandemic-related effects which we can only influence to a limited extent. We provide more detailed information about the impact of the associated risks in the explanatory comments below.

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 rate and interest rate movements. We deploy financial instruments to limit interest rate, exchange rate and commodity risks **Notes to Balance Sheet (Note 35), Page 151.**

Fluctuations from marketing our generation positions
The clean dark spread (CDS), clean spark spread (CSS) and the result of marketing electricity generated at our environmental energy plants 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 in the case of the CDS, the costs of gas (for the CSS, in each case including transport costs and currency translation differences) and the costs of substrates in the case of environmental energy plants. We work with suitable hedging strategies to limit potentially negative implications for our generation portfolio.

Since the beginning of the coronavirus pandemic, and especially since summer 2021, we have witnessed sharp fluctuations in wholesale market prices, which have also impacted on the CSS and CDS. Low electricity generation spreads impact negatively, albeit at a later point in time, 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.

Fluctuations in waste and biomass procurement prices
We observe and assess potential opportunities and risks resulting from fluctuating waste prices, and that both in the German and in the British markets. Moreover, we track the development in biomass prices across Europe. Our material and substrate flow management enables us to identify potential risks in the New Energies reporting segment at an early stage and to mitigate these with suitable measures.

Fluctuations in market procurement prices
The energy volumes required by our sales department for customer supplies at various locations are mostly procured on the energy trading market. Here, our energy trading subsidiary MVV Trading concludes futures transactions, some of which several calendar years in advance, taking account of our applicable hedging regulations. We thus raise the consistency of our earnings and act early to improve our planning reliability for future financial years.

The scale of increases recently observed in procurement prices and the speed at which these changes have taken place could create economic difficulties for individual market players and, as a result, threaten the performance of contracts with us. Despite our active management of trading limits with our training and contract partners, a price risk may arise in connection with the potential procurement of replacement resources.

As well as fluctuations in the procurement prices of our energy supply projects, potential supply bottlenecks and delays may give rise to price risks for commodities, materials or supplier products (for example in the fields of photovoltaics systems, batteries, wall boxes, transformers, smart meters, cables). We are also observing a noticeably lower level of availability among plant construction and installation service providers.

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

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 for congruent terms. We already account in our company planning for the expected impact of rising interest rates when projects are refinanced. Changes in interest rates also impact on our project development business. Demand for renewable energies projects 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 heating and gas, particularly during the heating period from September to May. Electricity generation volumes at our wind turbines are dependent on wind volumes. Opportunities arise for our business performance if temperatures are cooler than planned during the heating period and/or should wind volumes exceed our expectations. Reverse developments in these respective factors result in corresponding risks to our business performance.

Fluctuations in volumes due to changes in economic conditions
MVV is affected by macroeconomic developments mainly in indirect ways. If our major industrial and commercial customers cut back their production due to the economic situation or due to supply bottlenecks, then this may lead them to procure lower volumes of energy from us. Conversely, we also face opportunities to generate higher sales volumes if our customers step up their production due to economic developments or their strong competitive positions.

In view of the coronavirus pandemic, our electricity and gas turnover volumes could decrease due to lower demand or the loss of customers.

Fluctuations in turnover due to competition or efficiency measures
Competitive pressure in the energy market is just as high as ever. Should customers decide to switch provider, then this reduces our sales volumes. Similarly, efficiency measures implemented by our customers, such as heat insulation, may also reduce our volumes. When customers switch to generating the energy they consume themselves, we support them with innovative, competitive products and develop services offering substantial customers benefits. We are thus also exploiting the opportunities arising in the market due to climate protection requirements. We accord great value to working with local authorities on a basis of partnership. This way, we create a basis for extending existing concessions and improve our chances of acquiring new concessions.

Procurement of waste and biomass
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.

The further development in the coronavirus pandemic and potential resultant reduction in industrial and commercial production and turnover volumes could impact on waste prices and volumes.

The UK's exit from the European Union (Brexit) has led to greater uncertainty concerning the future development in volumes and prices for waste and waste timber in the UK and EU market regions.

Operating opportunities and risks

MVV's operating opportunities and risks chiefly arise in connection with the construction and operation of energy generation plants and grids, in its renewable energies project development business, as well as at customers with energy-related services for industrial parks and data centre services.

We have considerable experience in building and operating energy from waste and biomass plants and see opportunities for our group of companies in this area. In our assessment, the German market offers potential both to expand organic waste fermentation and to recover resources when incinerating sewage.

Uncertainties in renewable energies project development business
Projects in our project development business field generally have shorter planning and construction stages than large-scale generation plants. Having said that, these projects also involve uncertainties: In general, the development of relevant markets depends both on the further development in political regulation and on levels of public acceptance. Based on our assessment, key opportunities and risks in the onshore wind turbine project development business in Germany involve the scope and structure of future project tenders and the development in market interest rates. When implementing projects, the progress made with the respective projects may be negatively influenced by factors such as any delay in obtaining building or operating permits, or failure to obtain such permits, as well as ever higher approval requirements and related issues. Further factors that cannot be excluded are the downstream impact of supply delays or bottlenecks with supplier products (e.g. for photovoltaics systems batteries, wall boxes, transformers, smart meters, cables) and price increases at upstream suppliers that we cannot pass on to our customers.

We monitor any potential delays to operations launches or projects, especially in the project development business, and this is particularly the case during the coronavirus pandemic. We have taken measures to counter potential supply bottlenecks at upstream suppliers and delays to processes.

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

We are paying particular attention to the impact of the coronavirus pandemic on supply chains and upstream suppliers for construction projects. Any delays to supplies of materials or in the completion of modules or sections could lead to construction delays.

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
In our New Energies, Supply Reliability and Strategic Investments reporting segments, 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 interruptions to supplies. In this context, additional financial outlays may also be incurred to repair the plant, for substitute supplies to our customers or for contractual penalties.

The coronavirus pandemic presents additional challenges in terms of organising operations. We have taken a variety of precautionary measures to safeguard plant availability even if the impact of the pandemic intensifies further.

By performing regular maintenance and monitoring measures, we make every effort to minimise downtime at our plants and the potential resultant risks. This way, we also do justice to our claim to act as a reliable supplier and to avoid any risks to our reputation. Despite this, we cannot entirely exclude the possibility of downtime. To counter this risk in general, we optimise 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 grid operation risks. To limit the financial implications of any potential damages, we have agreed insurance policies. Moreover, we assess the risk and environmental protection aspects of potential clean-up projects on derelict land formerly occupied by our plants.

Personnel developments
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. 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 due to pending demographic changes. The extent of these risks depends on the attractiveness of the respective company and location. To enable us to continue filling key positions where possible with internal candidates, we will keep providing our staff with targeted training. Furthermore, in the 2021 financial year we founded a recruiting unit to enable us to be active in the market and thus reduce this risk.

To date, we have successfully managed the particular challenges presented by the coronavirus pandemic. To protect our employees while simultaneously safeguarding our operating processes, we adopted additional rules governing conduct, contact and absence and adapted the forms of cooperation and communication to work requirements, not least by drawing on digital solutions. These necessary solutions and requirements are implemented and complied with by our staff.

In the pension surveys we have compiled, we have also accounted for those factors involving risks from pension obligations. We have included these factors in our budgets **Notes to Balance Sheet (Note 29), Page 143.**

IT risks
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 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. We make use of security systems and only grant access authorisations to systems and information on a restrictive basis. We have redundant copies for all our key hardware components and permanently reflect data between production systems and geographically separate backup systems. We also have a backup computer centre. To counter the constantly rising IT threats due to blackmail and malware, we are continually developing additional measures to enhance our IT security.

Legislative risks

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

Regulatory risks
Companies operating in the energy industry face the basic risk (and opportunity) that federal and state lawmakers and authorities – such as the Federal Network Agency (BNetzA) or cartel offices– may amend the regulatory framework. In the past, this related, for example, to the grid fees set by the BNetzA. Energy and climate policy decisions may also have implications for our business performance. Examples here include the regulations governing the expansion in renewable energies, subsidies for CHP plants or political considerations on potential new requirements to enable national climate protection targets to be met. This risk applies 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 able to exploit any opportunities that arise.

Legal risks
MVV may be exposed to legal risks in connection with court cases, product liability, or unenforceable contracts or contractual terms. We therefore check, negotiate and draft contracts with the aim of limiting these risks. Our compliance management system **Page 84** helps us to avoid any infringements of the law.

The current legislation governing the coal exit harbours both risks and challenges for MVV. There are risks in connection with potential statutory restrictions on or interventions in our plant decommissioning plans. We see the transition to sustainable energy generation as posing challenges. We are actively tackling these by offering innovative products, such as with our extensive efforts to develop green heat supply structures.

MVV's business performance is also exposed to risks and opportunities which result from legal pronouncements on energy industry-related matters or other topics. These could, for example, limit or enhance our ability to structure contracts.

Financing opportunities and risks

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

Receivables default risks
There is the risk that customers or business partners may fail to settle our invoices, or settle them only in part. This risk may arise in our OTC trading activities in the Customer Solutions reporting segment, for example, or in our long-term supply relationships. Moreover, the sharp increases recently seen in energy product prices, which arose at short notice, have increased the risk that individual trading partners may encounter financial difficulties, threatening the fulfilment of their contractual obligations to us. To limit this kind of receivables default risk in all reporting segments, we select our business partners 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 coronavirus pandemic, delays and defaults may arise in the settlement of outstanding receivables by customers. We are proactively countering this risk with our receivables management.

Refinancing and liquidity risks
We refer to the possibility of being unable to obtain necessary liquid funds in future 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 seize related opportunities. Furthermore, our group-internal cash pool also serves to reduce this risk. We are monitoring our liquidity even more closely with regard to those effects which could arise due to the coronavirus pandemic.

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 detailed analyses of potential risks. For our existing activities, we observe the political and economic situation on location and continually monitor alternative courses of action. Should any deterioration arise in the situation and our risk position, we may decide to leave the given market. We are thus monitoring the current development in the UK economy very closely in respect of our future activities.

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 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 liaises closely with the Executive Board to monitor our strategic alignment on an ongoing basis and adjust it to changes in circumstances.

One major component of our corporate strategy **Page 21** is an extensive investment programme **Page 45**. To enable us to achieve our budgeted level of adjusted EBIT, strategically important investments have to deliver the expected level of earnings contributions. Even though we review and plan such investments with great care, erroneous assessments or unexpected changes in the macroeconomic framework may reduce the level of adjusted EBIT generated in future financial years.

Given the transformation in the German energy system and wide-ranging political regulation, our company still has to operate in an environment characterised by a low degree of planning certainty. We are tracking the decision taken by the Federal Government to exit from coal and head for climate neutrality with an ambitious decarbonisation strategy **Pages 51 to 55.** We are pursuing the associated targets by reducing the fossil-based share of our generation activities, as well as with efficiency enhancement measures, with the continued expansion in renewable energies and with CO_2 reduction measures in all the Group's business fields. The framework for withdrawing from our conventional generation capacities will largely be determined by the coal exit legislation. This creates uncertainties for our company.

Furthermore, it is not clear how the UK's exit from the European Union (Brexit) will impact on our business in the UK in the medium and long term. We are closely watching all developments in this regard. A weaker British pound, for example, would reduce our earnings in euros. Other factors that may be relevant are Brexit-related impacts on interest rates, commodities, demand and the regulatory framework.

The energy turnaround and changing or newly emerging markets offer opportunities for innovations, new jobs and profitable growth, particularly in the fields of renewable energies, decentralised energy supply, energy efficiency, digitalisation, building refurbishment and sustainable mobility. By consistently implementing our corporate strategy **Page 21,** we are drawing on these opportunities. We are raising the energy efficiency of our CHP plant in Mannheim, for example, by connecting it to the existing district heating grid. Not only that, this is also making district heating more environmentally friendly, as the link-up will lead to a lower primary energy factor. We will press further ahead with this course of decarbonising heat at all our locations.

For renewable energies, we still see sustainably attractive market potential. We are monitoring current developments in the onshore wind power project development business particularly closely. Most recently, the competitive situation in Germany and the addition of new wind turbines has been significantly influenced by the increased challenges presented by approval processes, particularly in respect of conservation, the interests of local residents and the duration of the processes needed to obtain a basis for planning. Based on our assessment, the German biomass market still offers expansion potential and investment opportunities in the field of organic waste fermentation, not least in view of the ever stricter requirements governing the disposal of organic waste. We see further growth potential abroad and in photovoltaics. However, these areas are subject to dependencies on local subsidy regimes and local clients. Not only that, there is tough competition, particularly in high-growth Asian markets.

We are extending our decentralised energy management business model by offering innovative new solutions and products. We are active in the fields of energy-related services, where we offer energy-saving solutions, data centre services, individually customised photovoltaics solutions for retail and business customers, innovative energy products from renewable sources, and e-mobility products and services, as well as developing an e-mobility charging infrastructure.

Executive Board summary

Current developments in the energy and procurement markets have increased the degree of uncertainty in the energy sector as a whole and thus also for MVV. The company's opportunity/risk profile has therefore changed since the previous year.

At the same time, competitive pressure remains high and changes in energy and climate policy will continue to have significant implications for our business performance, as well as on that of other companies in the energy industry. The Federal Government newly formed after the election can be expected to become active in this area, while implementation of the "Fit for 55" package is expected to involve new requirements. This remains a key source of uncertainty. There is therefore great planning uncertainty, particularly for long-term investments in electricity and heat generation plants and the renewable energies project development business. In Germany, further developments will particularly depend on sufficient space being made available and on processes being accelerated. In our international target markets for renewable energies, we see local subsidy regimes and macroeconomic developments as the key risk factors. Other major factors include the development in political frameworks and market access terms. Moreover, depending on their specific nature the downstream effects of Brexit could influence our business.

One aspect that is still uncertain is how the challenges and risks relating to the coronavirus pandemic will develop in the medium and long term, and that in all business fields. Among other factors, this will depend on the success of vaccination programmes and the scope and duration of any restrictions on public life and the economy. The pandemic also has both direct and indirect impacts on supply chains and the development in material prices and availability levels.

Overall, we expect our industry to be exposed to further fundamental changes and underlying conditions to remain unstable.

We are monitoring all relevant developments very closely and ensuring that our opportunity/risk profile remains well balanced.

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.

Consolidated Financial Statements

Income Statement

Income statement

Euro 000s	**1 Oct 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020	Notes
Sales	4,400,508	3,583,790	
Less electricity and natural gas taxes	166,720	151,696	
Sales less electricity and natural gas taxes	**4,233,788**	**3,432,094**	1
Changes in inventories	27,829	5,483	2
Own work capitalised	23,216	22,167	3
Other operating income	1,330,146	206,344	4
Cost of materials	3,320,010	2,506,252	5
Employee benefit expenses	487,301	456,423	6
Other operating expenses	1,100,158	291,021	7
Impairment losses on financial instruments	8,465	11,666	
Income from companies recognised at equity	36,167	21,504	8
Other income from shareholdings	– 1,644	2,563	8
EBITDA	**733,568**	**424,793**	
Depreciation and amortisation	203,900	206,997	9
EBITA	**529,668**	**217,796**	
Goodwill amortisation	–	8,302	
EBIT	**529,668**	**209,494**	
of which result of IFRS 9 derivative measurement	255,415	– 19,768	
of which EBIT before result of IFRS 9 derivative measurement	274,253	229,262	
Financing income	13,614	12,324	10
Financing expenses	53,957	60,676	11
EBT	**489,325**	**161,142**	
Taxes on income	144,293	46,950	12
Annual net income	**345,032**	**114,192**	
of which non-controlling interests	146,255	20,291	
of which earnings attributable to MVV Energie AG shareholders (annual net income after minority interests)	**198,777**	**93,901**	13
Basic and diluted earnings per share (Euro)	**3.02**	**1.42**	

Statement of Comprehensive Income

Statement of income and expenses recognised in group equity		
Euro 000s	**1 Oct 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020
Annual net income	**345,032**	**114,192**
Cash flow hedges	– 44,903	– 14,254
Hedging costs	310	310
Currency translation differences	12,022	– 10,030
Reclassifiable share of companies recognised at equity	– 369	– 366
Items that may subsequently be reclassified to profit or loss	**– 32,940**	**– 24,340**
Actuarial gains and losses	5,750	3,318
Non-reclassifiable share of companies recognised at equity	– 360	– 18,217
Items that will not be reclassified to profit or loss	**5,390**	**– 14,899**
Total comprehensive income	**317,482**	**74,953**
Non-controlling interests	173,755	15,196
Total comprehensive income attributable to MVV Energie AG shareholders	**143,727**	**59,757**

Balance Sheet

Balance sheet			
Euro 000s	**30 Sep 2021**	30 Sep 2020	Notes
Assets			
Non-current assets			
Intangible assets	287,663	283,964	14
Property, plant and equipment	2,888,292	2,726,545	15
Right-of-use assets	154,823	149,144	16
Investment properties	2,451	2,424	17
Interests in companies recognised at equity	201,498	192,331	18, 19
Other financial assets	70,647	77,735	21
Other receivables and assets	1,259,662	101,914	22
Deferred tax assets	103,869	30,344	33
	4,968,905	**3,564,401**	
Current assets			
Inventories	210,880	198,740	23
Trade receivables	376,015	332,939	24
Other receivables and assets	7,965,545	563,602	22
Income tax receivables	30,136	28,465	25
Cash and cash equivalents	1,258,177	343,175	26
	9,840,753	**1,466,921**	
	14,809,658	**5,031,322**	
Equity and debt			
Equity			27
Share capital	168,721	168,721	
Capital reserve	455,241	455,241	
Accumulated net income	929,166	803,101	
Accumulated other comprehensive income	– 161,911	– 107,925	
Capital of MVV	**1,391,217**	**1,319,138**	
Non-controlling interests	367,407	215,162	
	1,758,624	**1,534,300**	
Non-current debt			
Provisions	202,577	208,419	28, 29
Financial debt	1,609,170	1,553,168	30
Other liabilities	1,286,937	290,146	31
Deferred tax liabilities	274,447	140,200	33
	3,373,131	**2,191,933**	
Current debt			
Other provisions	174,289	127,903	28, 29
Tax provisions	1,795	1,259	28
Financial debt	277,106	163,523	30
Trade payables	383,286	336,752	32
Other liabilities	8,805,416	649,247	31
Income tax liabilities	36,011	26,405	33
	9,677,903	**1,305,089**	
	14,809,658	**5,031,322**	

Statement of Changes in Equity

Statement of changes in equity

	Equity contributed		Equity generated						
				Accumulated other comprehensive income					
Euro 000s	Share capital of MVV Energie AG	Capital reserve of MVV Energie AG	Accu-mulated net income	Currency translation differences	Fair value measure-ment of financial instru-ments	Actuarial gains and losses	**Capital of MVV**	Non-controlling interests	**Total capital**
Balance at 1 October 2019	**168,721**	**455,241**	**768,308**	**20,823**	**– 25,982**	**– 67,395**	**1,319,716**	**215,551**	**1,535,267**
Other income and expenses recognised in equity	–	–	–	– 10,113	– 8,185	– 15,846	– 34,144	– 5,095	– 39,239
Result of business operations	–	–	93,901	–	–	–	93,901	20,291	114,192
Total comprehensive income	**–**	**–**	**93,901**	**– 10,113**	**– 8,185**	**– 15,846**	**59,757**	**15,196**	**74,953**
Dividends paid	–	–	– 59,316	–	–	–	– 59,316	– 15,640	– 74,956
Capital increase/reduction at subsidiaries	–	–	151	–	–	–	151	125	276
Change in scope of consolidation/ level of shareholding	–	–	57	– 1,227	–	–	– 1,170	– 70	– 1,240
Balance at 30 September 2020	**168,721**	**455,241**	**803,101**	**9,483**	**– 34,167**	**– 83,241**	**1,319,138**	**215,162**	**1,534,300**
Balance at 1 October 2020	**168,721**	**455,241**	**803,101**	**9,483**	**– 34,167**	**– 83,241**	**1,319,138**	**215,162**	**1,534,300**
Other income and expenses recognised in equity	–	–	–	11,316	– 70,783	4,417	– 55,050	27,500	– 27,550
Result of business operations	–	–	198,777	–	–	–	198,777	146,255	345,032
Total comprehensive income	**–**	**–**	**198,777**	**11,316**	**– 70,783**	**4,417**	**143,727**	**173,755**	**317,482**
Dividends paid	–	–	– 62,611	–	–	–	– 62,611	– 18,477	– 81,088
Capital increase/reduction at subsidiaries	–	–	–	–	–	–	–	–	–
Change in scope of consolidation/ level of shareholding	–	–	– 10,101	–	1,064	–	– 9,037	– 3,033	– 12,070
Balance at 30 September 2021	**168,721**	**455,241**	**929,166**	**20,799**	**– 103,886**	**– 78,824**	**1,391,217**	**367,407**	**1,758,624**

Cash Flow Statement

Cash flow statement [1]

Euro 000s	**1 Oct 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020
Annual net income before taxes on income	489,325	161,142
Amortisation, depreciation and write-ups of intangible assets, property, plant and equipment and investment properties	203,900	206,901
Financial result	40,344	48,352
Interest received	6,770	6,557
Change in non-current provisions	– 5,065	– 432
Other non-cash income and expenses	– 263,377	30,114
Result of disposal of non-current assets	– 4,783	110
Cash flow before working capital and taxes	**467,114**	**452,744**
Change in other assets	– 82,228	– 37,926
Change in other liabilities	833,345	66,069
Change in current provisions	41,968	– 29,870
Income taxes paid	– 56,968	– 68,249
Cash flow from operating activities	**1,203,231**	**382,768**
Payments for investments in intangible assets, property, plant and equipment and investment properties	– 284,769	– 290,483
Proceeds from disposals of intangible assets, property, plant and equipment and investment properties	13,048	23,124
Proceeds from subsidy payments	10,155	11,218
Proceeds from sale of other financial assets	2,052	5,664
Payments for acquisition of fully consolidated companies and other business units	– 4,702	– 3,861
Payments for other financial assets	– 12,627	– 24,011
Cash flow from investing activities	**– 276,843**	**– 278,349**
Proceeds from taking up of loans	463,286	299,150
Payments for redemption of loans	– 343,075	– 291,820
Dividends paid	– 62,611	– 59,316
Dividends paid to non-controlling interests	– 18,477	– 15,640
Change due to changes in capital at minorities	– 8,575	279
Interest paid	– 48,665	– 45,020
Cash flow from financing activities	**– 18,117**	**– 112,367**
Cash-effective changes in cash and cash equivalents	908,271	– 7,948
Change in cash and cash equivalents due to currency translation	6,731	– 6,441
Cash and cash equivalents at 1 October 2020 (2019)	343,175	357,564
Cash and cash equivalents at 30 September 2021 (2020)	**1,258,177**	**343,175**
of which cash and cash equivalents at 30 September 2021 (2020) with restraints on disposal	226	534

1 See further disclosures on cash flow statement in Note 37

Cash Flow Statement

Cash flow – aggregate presentation		
Euro 000s	**1 Oct 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020
Cash and cash equivalents at 1 October 2020 (2019)	**343,175**	**357,564**
Cash flow from operating activities	1,203,231	382,768
Cash flow from investing activities	– 276,843	– 278,349
Cash flow from financing activities	– 18,117	– 112,367
Change in cash and cash equivalents due to currency translation	6,731	– 6,441
Cash and cash equivalents at 30 September 2021 (2020)	**1,258,177**	**343,175**

Notes to MVV's 2021 Consolidated Financial Statements

Information about the company

MVV Energie AG has its legal domicile in Mannheim, Germany (Mannheim District Court: HRB 1789). Its business address is at Luisenring 49, 68159 Mannheim. It is the parent company of the MVV Group, 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 2021.

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 2021 financial year (1 October 2020 to 30 September 2021). The consolidated financial statements are compiled in euros. Unless otherwise indicated, all amounts are stated in thousand euros (Euro 000s).

The income statement has been prepared using the total cost method. In the interests of clarity, individual line items have been presented in summarised form in the income statement and balance sheet and listed and commented on separately in the notes to the consolidated financial statements.

The Executive Board of MVV Energie AG is responsible for the preparation, completeness and accuracy of the consolidated financial statements and the combined management report. The Executive Board prepared the consolidated financial statements and combined management report on 9 November 2021 and subsequently forwarded these to the Supervisory Board for approval.

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 2021 financial year. These standards and interpretations did not have any material implications for MVV:

Newly applied standards and interpretations

	EU endorsement	Effective date [1]
IFRS 3 Business Combinations - Definition of a Business	21 Apr 2020	1 Jan 2020

1 Applicable in financial years beginning on or after the date stated

The IASB and the IFRS IC have published standards and interpretations not yet requiring mandatory application in the 2021 financial year and of which no voluntary premature application has been made. None of the standards and interpretations not listed in the table below is expected to have any material implications for MVV:

Amended standards and interpretations

	EU endorsement	Effective date [1]
IAS 16 Property, Plant and Equipment – Proceeds before Intended Use	2 Jun 2021	1 Jan 2022

1 Applicable in financial years beginning on or after the date stated

Consolidation methods

The financial statements included in consolidation have been prepared on the basis of uniform accounting policies as of 30 September 2021.

Subsidiaries are fully consolidated upon acquisition, i.e. from the time when the Group gains control. Their inclusion in the consolidated financial statements therefore ends when they are no longer controlled by the parent company. Capital consolidation is based on the purchase method. Non-controlling interests held in the earnings and net assets of fully consolidated companies are not attributable to the Group. In the consolidated balance sheet, they are recognised within equity, separately from equity attributable to shareholders in the parent company. Subsidiaries that due to materiality considerations have not been fully consolidated in MVV's consolidated financial statements have been reported under other majority shareholdings.

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

Shareholdings in companies not included by way of full consolidation or by application of the equity method have been accounted for in accordance with IFRS 9.

Receivables and liabilities between consolidated companies are offset against each other, as are income and expenses. Material intercompany results have also been eliminated.

Scope of consolidation and changes in scope of consolidation

In addition to MVV Energie AG, all material German and foreign subsidiaries in which MVV Energie AG directly or indirectly holds a majority of the voting rights have been included in MVV's consolidated financial statements. Furthermore, subsidiaries at which contractual provisions result in control by MVV are included in the consolidated financial statements irrespective of whether MVV holds a majority of voting rights.

Scope of consolidation

	Companies fully consolidated	Companies recognised at equity
1 October 2020	155	36
Additions	9	3
Disposals	31	4
30 September 2021	**133**	**35**

MVV RHE GmbH, Mannheim, a fully consolidated company within the MVV Group, took over the remaining 50 % of Fernwärme Rhein-Neckar GmbH (FRN), Mannheim, as of 14 December 2020. This led to the full consolidation of FRN, which was previously accounted for as a joint venture using the equity method. FRN provides transmission pipelines to safeguard the supply of district heating to customers in the Heidelberg and Schwetzingen areas. As the company's district heating pipeline and business object do not constitute a standalone operation, no goodwill was identified upon allocation of the purchase price.

MVV Alpha drei GmbH, Mannheim, a company fully consolidated within the MVV Group, took over the remaining 25 % of the shares in Zschau GmbH, Mannheim, as of 18 June 2021. Zschau GmbH was previously accounted for as a joint venture using the equity method. The acquisition of the remaining shares in the company led to control and thus to its full consolidation within the MVV Group. Zschau GmbH provides sustainable decentralised infrastructure, installation and other technical services in the fields of cable connections, heat, electrical installation, photovoltaics and storage facilities, e-mobility, cooling, heating and sanitary systems. The company thus helps to broaden the Group's market position. Its existing activities have been taken over and are the reason for the goodwill stated.

The fair values of the assets and liabilities identifiable upon the full consolidation of Zschau GmbH are presented in the following table. At Euro 2,026 thousand, the total purchase price corresponds to the fair value of the acquired net assets and goodwill. The portion for the acquisition of the remaining shares in the 4th quarter of the current financial year amounts to Euro 1,026 thousand and was paid in cash.

Identifiable assets and liabilities

	Zschau GmbH, Mannheim
Euro 000s	Recognised upon acquisition
Intangible assets	161
Property, plant and equipment	74
Right-of-use assets	16
Other financial assets	12
Trade receivables	342
Inventories	187
Other receivables and assets	251
Cash and cash equivalents	277
Deferred tax assets	5
Provisions	415
Trade payables	260
Financial debt	3,222
Other liabilities	261
Deferred tax liabilities	53
Fair value of net assets	**– 2,886**
Acquired share of net assets	**– 2,886**
Goodwill	4,912

Since being fully consolidated Zschau GmbH has contributed sales of Euro 1,127 thousand and earnings of Euro -372 thousand.

Additions to fully consolidated companies otherwise mainly involve companies newly added due to the change in status of other majority shareholdings at project companies in the Juwi subgroup.

Disposals from fully consolidated companies mostly relate to mergers of wind power and biogas companies, as well as to sales of project companies at the Juwi subgroup.

The changes in companies recognised at equity mainly relate to additions of project companies at the Juwi subgroup due to changes in the status of other majority shareholdings. Further changes involve the foundation of Smart City Mannheim GmbH, Mannheim, and the sale of Naunhofer Transportgesellschaft mbH, Parthenstein-Großsteinberg.

The remaining shares were acquired in luminatis S.a.r.l., Luxembourg, and thus indirectly in its subsidiary, luminatis Deutschland GmbH, Landau, which led to a change in status from companies recognised at equity to other majority shareholdings.

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 date rate. Consistent with their 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 exchange rates:

Currency translation

	Reporting date rate		Average rate	
1 Euro	**30 Sep 2021**	30 Sep 2020	**1 Oct 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020
Czech crown (CZK)	25.495	27.233	25.969	26.182
British pound (GBP)	0.861	0.912	0.874	0.879
US dollar (USD)	1.158	1.171	1.195	1.121
South African rand (ZAR)	17.563	19.709	17.731	18.184

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 when preparing MVV's consolidated financial statements are set out below.

Intangible assets

Intangible assets were mainly acquired in return for payment and are carried at cost, reduced where appropriate by subsidies received. They are subject to straight-line amortisation based on their pattern of consumption. Scheduled amortisation is based on the following useful lives which are guided by economic considerations or contractual conditions:

Useful lives in years	
Concessions	2 – 50
Industrial property rights and patents	1 – 25
Customer contracts and customer lists	1 – 23
Software and software licenses	1 – 40
Other intangible assets	1 – 40

With the exception of goodwill, there are no intangible assets with useful lives classified as indefinite. Where MVV has to purchase CO_2 emission rights with holding periods longer than one year, these are recognised as intangible assets at cost. Rights allocated free of charge are recognised at Euro 0. As the CO_2 emission rights constitute non-amortisable assets, they are not subject to amortisation but, pursuant to IAS 36, nevertheless reduced by any impairment losses arising.

Property, plant and equipment

Property, plant and equipment is stated at cost, less proportionate depreciation to account for the decline in value of the assets. In the case of internally generated property, plant and equipment, the costs of manufacture are based on allocable direct costs and a commensurate share of directly allocable overhead expenses. Borrowing costs are recognised as a component of costs when they can be directly attributed to the acquisition or manufacture of a qualifying asset. Such costs are recognised as soon as the asset in question requires a significant period of time to be prepared for its intended use or sale. During the commissioning phase the net balance of income and expenses incurred is capitalised. Income in excess of the expenses incurred is recognised not as a reduction to cost, but through profit or loss.

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 undertaken pro rata temporis in the year of addition. Scheduled depreciation is based on the following useful lives:

Useful lives in years	
Buildings	5 – 100
Technical equipment and machinery	2 – 55
Transmission grids	2 – 69
Plant and operating equipment	1 – 40

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.

Recoverability review 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.

Where 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 should be stated for which an independent third party would acquire the cash generating unit at the balance sheet date. The fair values/values in use of the cash generating units are determined based on the cash flow forecasts approved by the management and supervisory bodies of MVV Energie AG. Such cash flow forecasts are based on experience and results in previous financial years, as well as on expectations as to future market developments. They refer to the expected development in key macroeconomic figures derived from economic and financial studies. Key assumptions used in the forecasts concern the development in the price of crude oil, natural gas and coal on the 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. Where the recoverable amount exceeds the carrying amount in subsequent periods, the assets are written up to a maximum of amortised cost.

Goodwill is not written up. Should the carrying amount of a cash generating unit to which goodwill has been allocated exceed its recoverable amount, then the goodwill thereby allocated is written down first. Any further write-down requirement is then accounted for by means of a prorated reduction in the carrying amounts of the other assets at the cash generating unit. However, assets are not written down below their respective present values.

Receivables and other assets

Receivables and other assets include trade receivables, other receivables and assets and tax receivables.

Apart from derivative financial instruments, these are measured at amortised cost. Initial measurement is carried out as of the performance date. Any write-downs required are based on the expected level of default risk. The values of receivables are generally corrected by means of an allowance schedule.

Trade receivables mainly comprise receivables from contracts with customers. These are recognised when the respective goods are delivered or services performed. Should consideration be conditional on something other than the passage of time, then a contract asset is capitalised and recognised under other assets. Trade receivables include accruals/deferrals to cover energy and water sales not yet read or invoiced as of the balance sheet date. Part-payments made in the context of annual consumption invoicing are deducted from the receivables.

Default risks existing at the balance sheet date are covered by adequate write-downs. Receivables are derecognised immediately upon becoming uncollectible. The carrying amounts reported are basically equivalent to their respective fair values.

CO_2 emission rights with remaining terms of less than a year and requiring purchase or exchange by MVV are recognised at cost as other assets, while rights allocated free of charge have been recognised at Euro 0.

Inventories

Inventories consist of raw materials and supplies, unfinished and finished products and services and project rights, advance payments made for such and commodity trading assets. They are measured at the lower of cost or net sale value. Costs of acquisition or manufacture for raw materials and supplies are calculated using the average cost method. The manufacturing costs of unfinished and finished products and services and project rights comprise production-related full costs. These consist of allocable direct costs and a commensurate share of the material and production overheads required based on normal capacity utilisation rates. Risks resulting from impairment in utility are accounted for with suitable deductions.

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and credit balances at banks with original terms of less than three months.

Non-current assets and liabilities held for sale

Non-current assets which can be sold in their current state and whose sale is highly probable are recognised as non-current assets held for sale. Liabilities due to be dispensed with in a transaction together with assets are reported separately as liabilities held for sale.

Unless the relevant specific standards are applicable, non-current assets held for sale are no longer subject to scheduled depreciation and amortisation. Unless stipulated in another standard, they are measured at fair value less expected disposal costs, where this is lower than the carrying amount. Gains or losses resulting from the measurement of individual non-current assets held for sale or disposal groups are recognised under earnings from continuing operations until their ultimate disposal. Any losses resulting from the measurement of discontinued operations at fair value less disposal costs are recognised under earnings from discontinued operations.

Deferred taxes

Deferred taxes are stated for temporary differences between the tax balance sheets and IFRS balance sheets at individual companies arising from the measurement of assets and liabilities for tax purposes on the one hand and for external IFRS accounting on the other, as well as from consolidation processes impacting on earnings. 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 capitalised if the utilisation of these losses carried forward is certain with a forecast horizon of a maximum of five years based on existing business plans. Deferred taxes are calculated based on 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 performance 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 results.

All non-current provisions are recognised at their expected performance amounts as of the balance sheet date. Non-current provisions are discounted.

Leasing

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 relates to 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 permitted to be 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.

The lease liabilities refer to buildings, various items of technical equipment and plant and operating equipment and 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 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 a residual value guarantee 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: All primary financial instruments, 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 the bid prices listed on the stock market on 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, with minimal exceptions, 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. Should they be 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 risk and rewards incidental to ownership of the asset are transferred and the power to dispose over the asset has been ceded.

Financial debt, trade payables and other financial liabilities are measured at amortised cost, with application of the effective interest method where appropriate. In the case of financial debt, cost is equivalent to the amount disbursed. In the case of trade payables and other liabilities, cost is equivalent to the fair value of the consideration received.

Financial liabilities are retired when the underlying obligation has been met, terminated or has expired.

No use is made of the option of recognising financial assets and liabilities at fair value through profit or loss upon initial recognition (fair value option).

Derivative financial instruments: Derivative financial instruments particularly include interest rate and currency derivatives, as well as commodity derivatives, in this case mainly for electricity, gas, coal and CO_2. Derivative financial instruments are measured at fair value both upon initial recognition and in subsequent periods and are reported under other assets or other liabilities. The amounts recognised are derived from market values or using recognised valuation methods (present value method or option pricing models based on current market parameters). In particular, certain long-term energy contracts and interest rate derivatives are, where no market prices are available, measured using recognised valuation methods based on internal fundamentals. Changes in the value of currency derivatives relating to operations are recognised as income or expenses under earnings from operations, while changes in the value of interest and currency derivatives not relating to operations are recognised as income or expenses in the financial result. Changes in the value of all other derivative financial instruments are recognised as income or expenses under other operating income and expenses. Derivatives deployed in cash flow hedges have to be treated separately. Where 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.

Pending transactions intended to secure market prices in the field of energy trading are within the scope of IFRS 9 and are recognised as derivative financial instruments, while the hedged items (sales contracts) are generally not covered by IFRS 9. The accounting treatment under IFRS 9 relates in particular to commodities futures transactions. Where possible, the own use exemption is applied for these energy trading transactions. Other energy trading transactions are recognised as cash flow hedges or as standalone derivatives.

For closed foreign currency positions, fair value hedges are designated and recognised in accordance with fair value hedge accounting requirements.

Interest rate risks are limited by drawing in particular on interest swaps. These instruments secure the cash flow from financial liabilities with floating interest rates by means of cash flow hedges.

Developments in the fair value of those components of a hedging transaction 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 the accounting policies. This has not had any material influence on 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. In order 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.

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 date during 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 payables already incurred but not yet invoiced.

When assessing measurement uncertainties, reference is always made to the best information available concerning circumstances at the balance sheet date. Actual amounts may differ from estimates. The carrying amounts recognised in the financial statements which are subject to these uncertainties have been stated in the balance sheet and the accompanying information provided in the notes.

NOTES TO INCOME STATEMENT

1. Sales less electricity and natural gas taxes

Sales include all revenues generated by the Group's typical business activities. MVV's main products are electricity, heat, gas, water and waste treatment and disposal. The Group also generates significant revenues from services and solar and wind power project development. Revenues from contracts with customers are generally recognised upon delivery to the customer or upon performance of the services for the customer. Delivery is deemed complete when control has been transferred to the customer and consideration is unconditional except for the passage of time. If consideration is conditional on something other than the passage of time, the respective claims are recognised as contract assets. If consideration received is higher than the services performed, a contract liability is recognised.

If one party is mainly responsible for performing the contract, no inventory and default risks are assumed, MVV cannot influence the pricing and remuneration takes the form of a commission payment, then MVV acts as an agent. In this context, the respective sales and cost of materials are netted, leading to an equivalent reduction in income and expenses. The impact of netting is dependent on the future market premium and compensation paid under renewable energies legislation.

A material share of revenues from contracts with customers is performed over a period of time. The percentage of completion is generally determined using the output method. In some cases, application is also made of the input method. Here, however, it is necessary to document that this method also corresponds to the transfer of control.

Revenues from contracts with customers result from the transaction prices allocated to the respective products and services. These correspond to the value of units delivered, including estimated deferrals for units not yet read or billed as of the balance sheet date.

The average payment target usually amounts to between 14 and 30 days.

The composition of sales broken down into individual segments can be found in Segment Reporting in Note 36.

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 2021**	FY 2020
Electricity	2,086,418	1,596,210
Heat	390,820	374,743
Gas	774,875	585,743
Water	90,064	89,458
Other sales	891,611	785,940
	4,233,788	**3,432,094**

Timing of sales recognition

Euro 000s	**FY 2021**	FY 2020
Sales recognised at a point in time	3,937,301	3,156,188
Electricity	2,086,418	1,596,210
Heat	390,820	374,743
Gas	774,875	585,743
Water	90,064	89,458
Other sales	595,124	510,034
Sales recognised over time	296,487	275,906
Project development	240,670	225,102
Operations management services	55,817	50,804
	4,233,788	**3,432,094**

Other sales (sales by product group) mainly include revenues from waste incineration and consulting services, as well as other sales in business fields that do not form part of MVV's core business.

Sales of Euro 78,344 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 31,075 thousand).

In group currency, sales at our foreign subsidiaries came to Euro 348,217 thousand (previous year: Euro 262,857 thousand). The increase in this share of sales is chiefly due to the 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. Other operating income

Other operating income

Euro 000s	FY 2021	FY 2020
Income from IFRS 9 derivatives	1,223,996	110,797
Reversal of provisions	23,612	17,668
Operating taxes (including energy taxes)	21,428	3,133
Reimbursements	19,636	21,810
Agency agreements and personnel supplies	8,572	10,234
Rental income	5,874	4,880
Exchange rate gains	3,747	4,021
Income from sales of assets and write-ups	3,566	14,047
Miscellaneous	19,715	19,754
	1,330,146	**206,344**

Other operating income particularly includes measurement items for those energy trading transactions which require measurement under IFRS 9. This valuation-dependent income is countered by other operating expenses.

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

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

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 an interest rate.

Future income from operating lease payments

Euro 000s	FY 2021	FY 2020
Minimum lease payments with maturities < 1 year	2,462	1,857
Minimum lease payments with maturities > 1 year and < 5 years	5,047	3,302
Minimum lease payments with maturities > 5 years	12,805	6,596

5. Cost of materials

Cost of materials

Euro 000s	FY 2021	FY 2020
Raw materials, supplies and purchased goods	2,523,220	1,807,045
Procurement of wind turbines and solar power systems	184,796	141,223
Purchased services	611,994	557,984
	3,320,010	**2,506,252**

Expenses for purchased services mainly relate to expenses for grid utilisation fees, concession duties, maintenance and repair expenses, disposal costs for residual waste and other third-party services.

6. Employee benefit expenses

Employee benefit expenses

Euro 000s	FY 2021	FY 2020
Wages and salaries	396,471	371,480
Social security expenses and welfare expenses	68,015	63,143
Pension expenses	22,815	21,800
	487,301	**456,423**

MVV had an annual average of 6,344 employees (previous year: 6,182). This total includes 10 executives (previous year: 10), 5,990 employees (previous year: 5,851), 308 trainees (previous year: 295) and 35 interns/students (previous year: 26).

The executives are members of the management in key functions, i.e. authorised representatives and division heads at MVV Energie AG.

7. Other operating expenses

Other operating expenses		
Euro 000s	**FY 2021**	FY 2020
Expenses for IFRS 9 derivatives	899,054	122,944
Operating taxes (including energy taxes)	36,419	14,901
Contributions, fees and duties	34,302	32,183
Expenses for advisory services	31,809	26,262
Maintenance, repair and IT services	20,170	19,632
Rental, leasehold and leasing expenses	16,227	13,851
Other services	13,111	14,241
Public relations expenses	9,389	9,720
Other employee-related expenses	8,928	10,426
Exchange rate losses	2,490	4,951
Miscellaneous	28,259	21,910
	1,100,158	**291,021**

Other operating expenses include negative measurement items for those energy trading transactions which require measurement under IFRS 9. These valuation-dependent expenses are countered by other operating income.

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

8. Income from companies recognised at equity and other income from shareholdings

Interests in associates and joint ventures are recognised initially at cost and subsequently at the amortised value of the prorated net assets. The carrying amounts are increased or reduced annually to account for prorated earnings, dividends paid and other changes in equity. Any goodwill thereby recognised is included in the value of the shareholding, 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 2021**	FY 2020
Income from companies recognised at equity	36,167	21,504
Income from other shareholdings	– 2,161	– 106
Expenses/income from sales of financial assets	517	2,669
	34,523	**24,067**

The increase in income from companies recognised at equity is chiefly due to the remeasurement performed on the shares held in Fernwärme-Rhein-Neckar GmbH due to the takeover of all the remaining shares in this company in the financial year under report.

9. Depreciation and amortisation

Depreciation and amortisation		
Euro 000s	**FY 2021**	FY 2020
Depreciation and amortisation	203,900	206,997
of which impairment losses	–	2,161

10. Financing income

Financing income		
Euro 000s	**FY 2021**	FY 2020
Interest income from finance leases	3,900	3,961
Income from currency translation in connection with financing activities	4,663	3,371
Income from IFRS 9 measurement	143	1,254
Interest income from current account, overnight and fixed-term deposits	518	901
Other interest and similar income	4,390	2,837
	13,614	**12,324**

11. Financing expenses

Financing expenses		
Euro 000s	**FY 2021**	FY 2020
Interest expenses from current account, non-current and current loans	42,732	40,462
Expenses for currency translation in connection with financing activities	2,282	9,737
Expenses for IFRS 9 measurement	583	1,466
Compounding of provisions	920	578
Other interest and similar expenses	7,440	8,433
	53,957	**60,676**

The other interest and similar expenses were reduced by Euro 2,287 thousand as a result of the capitalisation of borrowing interest (previous year: Euro 628 thousand). The financing cost rate thereby assumed ranged from 1.8 % to 2.4 % in the financial year under report and from 1.1 % to 2.5 % in the previous year. Expenses for compounding provisions mainly relate to long-term personnel provisions.

12. Taxes on income

Taxes on income

Euro 000s	FY 2021	FY 2020
Actual taxes	64,150	48,405
Deferred taxes	80,143	– 1,455
	144,293	**46,950**

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.

The deferred tax expenses are due on the one hand to tax expenses of Euro 1,202 thousand (previous year: tax expenses of Euro 12,454 thousand) that are attributable to the change in the write-down on losses carried forward and the recognition through profit or loss of losses carried forward, and on the other hand to deferred tax expenses of Euro 78,941 thousand (previous year: tax income of Euro 13,909 thousand) attributable to the arising and/or reversal of temporary differences.

Actual tax expenses were reduced by Euro 10,082 thousand by using tax losses not previously recognised (previous year: Euro 10,522 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 2021	FY 2020
Earnings before taxes (EBT)	**489,325**	**161,142**
Expected tax expenses based on tax rate of 30.3 % (previous year: 30.3 %)	**148,265**	**48,826**
Deviations resulting from trade tax assessment base	1,545	1,171
Deviations from expected tax rate	– 773	– 5,071
Utilisation of losses carried forward, change in write-down for losses and losses for which no deferred taxes are recognised	1,202	12,447
Non-deductible expenses	3,569	10,380
Tax-exempt income	– 5,009	– 12,856
Income from shareholdings recognised at equity	– 937	– 3,299
Permanent differences	– 4,818	4,913
Taxes for previous years	1,815	– 13,223
Goodwill impairments	–	2,517
Miscellaneous	– 566	1,145
Effective tax expenses	**144,293**	**46,950**
Effective tax rate (%)	**29.5**	**29.1**

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

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

	FY 2021	FY 2020
Share of earnings attributable to MVV Energie AG shareholders (Euro 000s)	198,777	93,901
Number of shares (weighted average in 000s)	65,907	65,907
Earnings per share (Euro)	3.02	1.42
Dividend per share (Euro)	1.05	0.95

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

The proposals concerning the level of dividend and the appropriation of profit for the 2020 financial year were accepted by the Annual General Meeting on 12 March 2021. A dividend of Euro 62,611 thousand was distributed.

Given the company's earnings performance, the Executive Board has decided to propose an increase in the dividend of Euro 0.10 per share to Euro 1.05 per share for approval by the Annual General Meeting on 11 March 2022. This would result in a distribution of Euro 69,202 thousand. The Supervisory Board will decide in December 2021 on its dividend proposal to the Annual General Meeting.

NOTES TO BALANCE SHEET

14. Intangible assets

Intangible assets include concessions, industrial property rights, customer lists and similar rights and values, goodwill and advance payments. Concessions, industrial property rights and similar rights and values chiefly consist of software, rights eligible for capitalisation and customer lists. As in the previous year, no intangible assets are subject to restrictions on disposal.

MVV performs only a low volume of research and development. The volume of research and development expenses qualifying under IFRS amounted to Euro 659 thousand in the 2021 financial year (previous year: Euro 803 thousand). Development expenses capitalised under IAS 38 came to Euro 236 thousand (previous year: Euro 257 thousand). These mainly involve the development of a global project database for solar and wind power projects at the Juwi subgroup.

The goodwill impairment tests performed in the 2021 financial year were based on determining the recoverable amounts of the cash generating units to which goodwill was allocated. These still correspond to the legal subgroups.

As no market prices or other binding indicators for the value of the units were available, their fair values less costs to sell were 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 were extrapolated over a forecast period of three to five years and discounted using discount rates (weighted costs of capital) of 4.6 % to 11.3 % (previous year: 4.3 % to 10.2 %). A growth rate of 0.5 % was assumed for the perpetuity included in the calculation.

A sensitivity analysis varying the discount rate referred to by 0.5 % in most cases did not produce any changes in the findings of the impairment test. A reduction in the discount rate by – 0.5 % raises the recoverable amount by + 14.8 %. An increase in the discount rate by + 0.5 % lowers the recoverable amount by – 12.0 %.

The carrying amounts stated for goodwill are structured as follows:

Goodwill carrying amounts

Euro 000s	**30 Sep 2021**	30 Sep 2020
Juwi subgroup	75,144	74,970
Energieversorgung Offenbach subgroup	75,894	75,894
MVV Enamic subgroup	36,596	36,233
Windwärts subgroup	3,910	3,910
MVV Energie CZ subgroup	6,346	5,885
MVV Umwelt subgroup	3,082	3,080
Other subgroups	7,935	3,023
	208,907	**202,995**

The addition to goodwill at other subgroups is due to the full consolidation of a provider of technical services for heating, sanitary facilities, photovoltaics and electrical installation. The increase in goodwill at the MVV Enamic subgroup results from the acquisition of assets and takeover of staff at IRK DCI GmbH, Hachenburg, by DC-Datacenter-Group GmbH, Wallmenroth, in the 2nd quarter of the 2021 financial year.

Intangible assets

Euro 000s	Concessions, industrial property rights and similar rights and values	Goodwill	Advance payments	**Total**
Gross value at 1 October 2019	335,885	255,750	8,322	599,957
Change in scope of consolidation	2,413	2,471	–	4,884
Currency adjustments	– 727	– 497	– 9	– 1,233
Additions	7,536	–	3,631	11,167
Disposals	– 11,375	–	–	– 11,375
Reclassifications	6,791	–	– 6,610	181
Gross value at 30 September 2020	**340,523**	**257,724**	**5,334**	**603,581**
Amortisation at 1 October 2019	– 243,911	– 46,552	–	– 290,463
Currency adjustments	230	125	–	355
Scheduled amortisation	– 23,284	–	–	– 23,284
Impairment losses	–	– 8,302	–	– 8,302
Disposals	2,077	–	–	2,077
Amortisation at 30 September 2020	**– 264,888**	**– 54,729**	**–**	**– 319,617**
Net value at 30 September 2020	**75,635**	**202,995**	**5,334**	**283,964**
Gross value at 1 October 2020	340,523	257,724	5,334	603,581
Change in scope of consolidation	1,362	5,444	–	6,806
Currency adjustments	1,357	624	13	1,994
Additions	3,237	–	10,467	13,704
Disposals	– 20,270	–	– 2	– 20,272
Reclassifications	3,995	–	– 3,466	529
Gross value at 30 September 2021	**330,204**	**263,792**	**12,346**	**606,342**
Amortisation at 1 October 2020	– 264,888	– 54,729	–	– 319,617
Currency adjustments	– 363	– 156	–	– 519
Scheduled amortisation	– 14,582	–	–	– 14,582
Disposals	16,198	–	–	16,198
Reclassifications	– 159	–	–	– 159
Amortisation at 30 September 2021	**– 263,794**	**– 54,885**	**–**	**– 318,679**
Net value at 30 September 2021	**66,410**	**208,907**	**12,346**	**287,663**

15. Property, plant and equipment

Property, plant and equipment

Euro 000s	Land, leasehold rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other assets, plant and operating equip-ment	Advance payments and construction in progress	**Total**
Gross value at 1 October 2019	900,839	4,593,915	183,787	473,522	6,152,063
Change in scope of consolidation	–	–	8	–	8
Currency adjustments	– 10,549	– 16,452	– 352	– 3,096	– 30,449
Additions	6,549	102,683	7,769	170,638	287,639
Subsidy payments received	– 144	– 10,885	– 150	– 39	– 11,218
Disposals	– 7,640	– 51,663	– 4,433	– 2,515	– 66,251
Reclassifications	68,000	253,721	1,289	– 316,865	6,145
Gross value at 30 September 2020	**957,055**	**4,871,319**	**187,918**	**321,645**	**6,337,937**
Depreciation at 1 October 2019	– 459,791	– 2,921,362	– 136,957	– 82	– 3,518,192
Change in scope of consolidation	–	–	1	–	1
Currency adjustments	4,235	8,509	260	4	13,008
Scheduled depreciation	– 22,511	– 132,146	– 9,686	–	– 164,343
Write-ups	2,266	6,131	–	–	8,397
Impairment losses	– 68	– 1,994	–	–	– 2,062
Disposals	5,903	41,910	3,986	–	51,799
Reclassifications	158	– 158	–	–	–
Depreciation at 30 September 2020	**– 469,808**	**– 2,999,110**	**– 142,396**	**– 78**	**– 3,611,392**
Net value at 30 September 2020	**487,247**	**1,872,209**	**45,522**	**321,567**	**2,726,545**
Gross value at 1 October 2020	957,055	4,871,319	187,918	321,645	6,337,937
Change in scope of consolidation	157	21,350	– 1,971	–	19,536
Currency adjustments	16,480	26,434	371	4,104	47,389
Additions	10,869	87,348	8,581	173,647	280,445
Subsidy payments received	– 1,704	– 6,877	– 18	– 1,557	– 10,156
Disposals	– 2,441	– 24,136	– 9,183	– 4,477	– 40,237
Reclassifications	60,405	203,488	2,166	– 244,815	21,244
Gross value at 30 September 2021	**1,040,821**	**5,178,926**	**187,864**	**248,547**	**6,656,158**
Depreciation at 1 October 2020	– 469,808	– 2,999,110	– 142,396	– 78	– 3,611,392
Change in scope of consolidation	–	–	694	–	694
Currency adjustments	– 5,910	– 11,883	– 284	– 8	– 18,085
Scheduled depreciation	– 22,966	– 138,995	– 9,579	–	– 171,540
Disposals	2,015	21,428	8,855	–	32,298
Reclassifications	6	138	158	– 143	159
Depreciation at 30 September 2021	– 496,663	– 3,128,422	– 142,552	– 229	– 3,767,866
Net value at 30 September 2021	**544,158**	**2,050,504**	**45,312**	**248,318**	**2,888,292**

The property, plant and equipment presented mainly relates to internally used property, plant and equipment.

Property, plant and equipment up to an equivalent value of Euro 9,832 thousand (previous year: Euro 9,452 thousand) has been provided as security for financial debt. This involves land and buildings, technical equipment and machinery. Property, plant and equipment of Euro 92,303 thousand is subject to restrictions on disposal (previous year: Euro 101,291 thousand).

Subsidy payments received involve government grants received in the 2021 financial year chiefly in connection with urban planning measures for water and district heating pipelines and for combined heat and power generation. There are no conditions that have not been met or other performance uncertainties in connection with these subsidy payments.

Advance payments account for an immaterial share of advance payments and construction in progress. The largest additions to advance payments and construction in progress in the 2021 financial year include the takeover of a windfarm in Kiel, the extension and renewal of transmission grids in Kiel and Mannheim and the construction of biogas plants in Dresden and Bernburg.

Property, plant and equipment also include assets leased by MVV as the lessor within operating leases. The carrying amounts attributable to these assets as of 30 September 2021 were divided into land and buildings of Euro 3,110 thousand and technical equipment and machinery of Euro 4,646 thousand.

16. Leases as lessee

The development in right-of-use assets recognised in connection with leased items is presented in the table below:

Right-of-use assets

Euro 000s	Land and buildings	IT hardware and software	Vehicles	Technical equipment and machinery	Plant and operating equipment	Other leased items	**Total**
Opening balance at 1 October 2020	116,990	600	4,391	26,819	33	311	149,144
Depreciation and amortisation	– 11,288	– 555	– 2,707	– 3,027	– 17	– 183	– 17,777
Additions	17,477	1,163	4,107	1,435	–	4	24,186
Other changes	– 460	– 33	– 135	– 103	–	1	– 730
Closing balance at 30 September 2021	**122,719**	**1,175**	**5,656**	**25,124**	**16**	**133**	**154,823**

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 2021**	FY 2020
Interest expenses for lease liabilities	4,170	4,289
Outflow of cash for leases	19,325	16,036
Expenses for short-term leases	1,365	1,309
Expenses for low-value leases	721	509
Expenses for variable lease payments	354	311
Income from sub-lease arrangements	–	308

With regard to future lease payments, the windfarms in some cases face risks resulting from variable leasehold payments that are dependent on the amount of feed-in revenues. Further risks involve future developments in consumer price indices, to which lease payments are in some cases linked.

MVV has only one sale and leaseback transaction, which was concluded in the past in order to procure liquidity. The outflow of funds for this transaction, involving the deployment of an ERP system, amounted to Euro 77 thousand in the period under report.

17. Investment properties

Investment properties involve a piece of land let out in the USA. Rental income amounted to Euro 33 thousand in the 2021 financial year (previous year: Euro 32 thousand). As in the previous year, direct operating expenses amounted to Euro 0 thousand. The fair value of investment properties is at least equivalent to the carrying amount.

Investment properties

Euro 000s	**FY 2021**	FY 2020
Gross value at 1 October	2,424	2,606
Currency adjustments	27	– 182
Gross value at 30 September	**2,451**	**2,424**
Depreciation at 1 October	–	–
Depreciation at 30 September	**–**	**–**
Net value at 30 September	**2,451**	**2,424**

18. Joint ventures

MVV operates joint ventures with partners. In view of their size and their influence on the Group, the following companies have been identified as material joint ventures:

Grosskraftwerk Mannheim AG operates what is one of Europe's most efficient hard coal-fired power plants in Mannheim. Overall, MVV owns a 28 % share of the capital in this company. Grosskraftwerk Mannheim AG is a power plant jointly owned by the following shareholders: RWE Generation SE, Essen, EnBW Energie Baden-Württemberg AG, Karlsruhe, and MVV RHE GmbH, Mannheim.

Stadtwerke Ingolstadt is responsible for the energy supply in the Ingolstadt region. MVV Energie AG owns a 48.4 % share of the capital in Stadtwerke Ingolstadt Beteiligungen GmbH which, as the financial holding company, pools several subsidiaries. All significant decisions have to be taken jointly by the shareholders.

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

Statement of comprehensive income for material joint ventures

	Grosskraftwerk Mannheim AG, Mannheim		Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt	
Euro 000s	**Financial year**	Previous year	**Financial year**	Previous year
Sales excluding energy taxes	531,867	585,404	200,640	188,633
Scheduled depreciation and amortisation	– 127,388	– 104,230	– 15,261	– 14,450
Interest income	1	2	88	639
Interest expenses	– 37,868	– 46,670	– 691	– 897
Income tax expenses/income	– 16,229	– 11,291	– 7,747	– 6,967
Annual net income	25,256	26,659	18,624	16,634
Other income and expenses	– 3,211	– 64,618	185	128
Total comprehensive income for period	**22,045**	**– 37,959**	**18,809**	**16,762**
Dividends received from material joint ventures	–	–	7,771	8,576

Further key financial figures for material joint ventures

	Grosskraftwerk Mannheim AG, Mannheim		Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt	
Euro 000s	**Financial year**	Previous year	**Financial year**	Previous year
Assets	**1,795,709**	**1,887,580**	**287,230**	**273,803**
Non-current assets	1,540,530	1,656,133	244,134	236,566
Current assets	255,179	231,447	43,096	37,237
of which cash and cash equivalents	336	7,028	1,483	963
Equity and debt	**1,795,709**	**1,887,580**	**287,231**	**273,803**
Equity	136,203	114,158	68,484	65,731
Non-current provisions	721,605	723,956	11,842	6,517
Non-current debt and other liability items	665,589	727,626	80,457	83,807
of which non-current financial debt	605,000	668,500	16,394	18,747
Current provisions	165,799	150,521	225	60
Current debt and other liability items	106,513	171,319	126,223	117,688
of which current financial debt	69,870	150,403	91,596	87,698

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

	Grosskraftwerk Mannheim AG, Mannheim		Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt	
Euro 000s	**Financial year**	Previous year	**Financial year**	Previous year
Net assets at 1 October	114,158	152,117	65,731	66,689
Profit/loss for period	25,256	26,659	18,624	16,634
Distribution	–	–	– 16,056	– 17,720
Other income and expenses	– 3,211	– 64,618	185	128
Net assets at 30 September	**136,203**	**114,158**	**68,484**	**65,731**
Group share of net assets	38,137	31,964	33,146	31,814
Other items	1,897	1,897	– 154	– 154
Goodwill			53,759	53,759
Carrying amount of interest in joint ventures	**40,034**	**33,861**	**86,751**	**85,419**

Other comprehensive income at material joint ventures includes items resulting from the measurement of pension obligations.

The consolidated joint venture Grosskraftwerk Mannheim AG has a financial year ending on 31 December, and thus deviating from MVV's financial year. Its results have been recognised at the Group accordingly. As this company involves a power plant whose costs are fully reimbursed and whose annual net income and distributions remain constant, the deviating balance sheet date does not have any implications for MVV. As in the previous year, no publicly listed market price is available.

The aggregate profit/loss, total comprehensive income and carrying amounts of non-material joint ventures are presented in the following table:

Summarised key financial figures for non-material joint ventures

Euro 000s	**Financial year**	Previous year
Profit/loss for period	9,501	5,369
Other income and expenses	885	– 360
Total comprehensive income for	10,386	5,009
Carrying amount of interest in non-material joint ventures	**59,857**	**58,835**

19. Associates

The aggregate profit/loss, total comprehensive income and carrying amounts of non-material associates are presented in the following table:

Summarised key financial figures for non-material associates

Euro 000s	**Financial year**	Previous year
Profit/loss for period	4,112	3,007
Total comprehensive income for period	4,112	3,007
Carrying amount of interest in non-material associates	**14,857**	**14,216**

The income from shareholdings collected by MVV from associates amounted to Euro 510 thousand in the 2021 financial year (previous year: Euro 230 thousand).

MVV's share of the contingent liabilities at associates amounted to Euro 1,606 thousand (previous year: Euro 1,690 thousand).

20. Subsidiaries with non-controlling interests of material significance to the Group

Given their size and influence on the Group, the following companies have been identified as material subsidiaries with non-controlling interests: Stadtwerke Kiel AG, Kiel, and Energieversorgung Offenbach AG, Offenbach am Main.

The statements of comprehensive income and further key financial information concerning the non-controlled interests in the companies are presented in the following tables. The figures stated represent amounts prior to consolidation.

Statement of comprehensive income for non-controlled interests in Energieversorgung Offenbach AG

Euro 000s	1 Oct 2020 to 30 Sep 2021	1 Oct 2019 to 30 Sep 2020
Sales excluding energy taxes	381,082	354,896
Annual net income	85,292	11,380
Other income and expenses	38,111	– 8,411
Total comprehensive income for period	**123,403**	**2,969**
Total comprehensive income attributable to non-controlling interests	61,700	1,484
Dividends paid (to non-controlling shareholders)	8,605	6,633

Statement of comprehensive income for non-controlled interests in Stadtwerke Kiel AG

Euro 000s	1 Oct 2020 to 30 Sep 2021	1 Oct 2019 to 30 Sep 2020
Sales excluding energy taxes	993,666	712,670
Annual net income	218,784	25,936
Other income and expenses	907	1,375
Total comprehensive income for period	**219,691**	**27,311**
Total comprehensive income attributable to non-controlling interests	107,649	13,382
Dividends paid (to non-controlling shareholders)	7,142	6,270

Further key financial figures for non-controlled interests in Energieversorgung Offenbach AG

Euro 000s	30 Sep 2021	30 Sep 2020
Assets	**575,465**	**415,889**
Non-current assets	410,778	333,301
Current assets	164,687	82,588
of which cash and cash equivalents	8,851	21,892
Equity and debt	**575,465**	**415,889**
Equity	245,249	139,056
Non-current provisions	30,432	32,487
Non-current debt and other liability items	177,243	163,554
of which non-current financial debt	128,467	130,227
Current provisions	5,876	4,932
Current debt and other liability items	116,665	75,860
of which current financial debt	15,741	7,815

Further key financial figures for non-controlled interests in Stadtwerke Kiel AG

Euro 000s	30 Sep 2021	30 Sep 2020
Assets	**1,276,894**	**711,181**
Non-current assets	772,273	656,770
Current assets	504,621	54,411
of which cash and cash equivalents	181,697	1,976
Equity and debt	**1,276,894**	**711,181**
Equity	429,222	224,105
Non-current provisions	32,979	32,774
Non-current debt and other liability items	344,498	299,617
of which non-current financial debt	257,187	263,626
Current provisions	25,982	15,343
Current debt and other liability items	444,213	139,342
of which current financial debt	36,351	56,621

Total non-controlled interests in subsidiaries amounted to Euro 367,407 thousand in the period under report, of which Euro 202,667 thousand related to Stadtwerke Kiel AG, Kiel, Euro 103,954 thousand to Energieversorgung Offenbach AG, Offenbach am Main, and Euro 60,786 thousand to non-material subsidiaries.

21. Other financial assets

Write-downs and the development in other financial assets are presented in the line items "Income from companies recognised at equity and other income from shareholdings (Note 8) and "Financial instruments" (Note **35**).

Other financial assets comprise other majority shareholdings, other shareholdings, receivables from finance leases and loans. These items are measured and categorised as follows:

Other majority shareholdings are measured at amortised cost. Other shareholdings are measured at fair value. The other shareholdings recognised under other financial assets involve minority shareholdings.

The loans included in this line item are measured at amortised cost. Lease receivables are classified under leases, with finance leases recognised as receivables in the amount of the present value of minimum lease payments (net investment value). Loans and lease receivables have fixed interest rates, with an average interest rate of 4.4 % (previous year: 4.8 %). The average period for which interest rates remain fixed amounts to 4.1 years in the case of fixed-interest loans (previous year: 2.1 years) and 6.6 years in the case of finance leases (previous year: 6.5 years).

Default risks identifiable for financial assets are accounted for by way of adjustments recognised under income from shareholdings.

Further information about financial instruments can be found in Note **35**.

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

Other financial assets also include the non-current share of finance leases. In several contracting projects and housing concepts for data centres, MVV acts as the lessor in the context of 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 2021**	30 Sep 2020
Minimum lease payments with maturities < 1 year	12,607	13,909
Minimum lease payments with maturities > 1 years and < 5 years	44,079	44,550
of which minimum lease payments with maturities > 1 year and < 2 years	10,930	13,785
of which minimum lease payments with maturities > 2 years and < 3 years	11,152	10,110
of which minimum lease payments with maturities > 3 years and < 4 years	11,143	10,332
of which minimum lease payments with maturities > 4 years and < 5 years	10,854	10,323
Minimum lease payments with maturities > 5 years	25,352	32,297
Total minimum lease payments	**82,038**	**90,756**
Less financing income not yet realised	– 16,759	– 18,657
Net investments in finance leases	**65,279**	**72,099**

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 2021**	FY 2020
Financing income from net investment in lease	3,900	3,961
Profit on sale	16	91

22. Other receivables and assets

Other receivables and assets have been broken down into their respective contents and counterparties in the following tables. The hedging relationship has also been stated in the case of derivative financial instruments.

Financial and non-financial receivables and assets

	30 September 2021			30 September 2020		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Financial receivables and assets						
Derivative financial instruments	1,240,355	7,757,340	8,997,695	81,246	367,308	448,554
Receivables from security deposits for energy trading transactions	–	–	–	–	21,763	21,763
Receivables from finance leases	–	9,397	9,397	–	10,476	10,476
Suppliers with debit balances	–	11,619	11,619	–	7,730	7,730
Loans	–	2,220	2,220	–	1,245	1,245
Receivables from employees	–	252	252	–	269	269
Escrow accounts	–	35	35	–	35	35
Miscellaneous other financial assets	8,612	16,203	24,815	6,752	18,346	25,098
Non-financial receivables and assets						
Project development contract assets	–	47,992	47,992	–	6,019	6,019
Other contract assets	3,289	43,106	46,395	3,098	49,411	52,509
Other tax receivables	–	63,563	63,563	–	66,893	66,893
Deferred expenses and accrued income	3,995	7,873	11,868	6,250	7,422	13,672
Emission rights	–	2,632	2,632	–	2,462	2,462
Miscellaneous other non-financial assets	3,411	3,313	6,724	4,568	4,223	8,791
	1,259,662	**7,965,545**	**9,225,207**	**101,914**	**563,602**	**665,516**

Derivative financial instruments (financial receivables and assets)

	30 September 2021			30 September 2020		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	1,240,355	7,757,340	8,997,695	81,246	367,308	448,554
of which not involving IFS 9 hedges	762,334	6,204,528	6,966,862	52,935	295,415	348,350
of which involving IFRS 9 hedges	478,021	1,552,812	2,030,833	28,311	71,893	100,204

Derivative financial instruments increased sharply in value compared with the previous year. This was due in particular to the significant changes in market prices and the resultant rise in fair values of energy trading transactions recognised under IFRS 9. Derivative financial instruments relate to interest, currency and commodity derivatives for electricity, gas, coal, CO_2 and other certificates.

Further information about financial instruments can be found in Note **35**.

The current portion of lease receivables is reported under current miscellaneous other financial assets. Measurement of these items is based on the same principles as for the non-current portions. These principles are outlined under other financial assets.

Due to projects which have not yet been settled, project development contract assets showed a significant increase of Euro 41,897 thousand. By contrast, other contract assets decreased by Euro 6,038 thousand, with this reduction being mainly due to an investment project in which a subsidiary is acting as general contractor.

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

Miscellaneous other non-financial assets include expenses of Euro 6,416 thousand for the past extension and renewal of infrastructure assets for British generation positions. These assets are not within MVV's control but are essential for the supply of electricity and steam. The outlays thereby incurred are being deferred over the corresponding contractual terms. Furthermore, this item also includes input taxes that are not yet deductible.

The costs of acquiring contracts (customer acquisition costs) form part of the miscellaneous other financial assets line item, which are capitalised pursuant to IFRS 15. Costs relating to contract terms of less than one year are directly expensed.

These costs are amortised over the average contractual term and developed as follows:

Customer acquisition costs pursuant to IFRS 15

Euro 000s	**FY 2021**	FY 2020
Balance at 1 October	1,071	444
Balance at 30 September	1,697	1,071

Other receivables and assets

	30 September 2021			30 September 2020		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Other receivables and assets						
from third parties	1,259,230	7,930,424	9,189,654	101,120	509,809	610,929
from other majority shareholdings	–	1,139	1,139	–	919	919
from companies recognised at equity	432	33,982	34,414	794	52,857	53,651
from other shareholdings	–	–	–	–	17	17
	1,259,662	**7,965,545**	**9,225,207**	**101,914**	**563,602**	**665,516**

The write-downs and maturity structures for other receivables and assets have been presented in Note **35**.

To reduce the counterparty risk involved in highly fluctuating fair values of energy trading derivatives, security deposits are exchanged with external trading partners. These involve margins. To reduce these counterparty risks, payments are made to the European Energy Exchange (EEX) and the Intercontinental Exchange (ICE). These are included in the receivables from security deposits for energy trading transactions line item. Receivables from security deposits decreased year-on-year to Euro 0 thousand (previous year: Euro 21,763 thousand).

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

Contract assets

Euro 000s	**FY 2021**	FY 2020
Balance at 1 October	58,528	67,835
Balance at 30 September	94,387	58,528

23. Inventories

Inventories

Euro 000s	**30 Sep 2021**	30 Sep 2020
Raw materials and supplies	90,441	91,247
Finished and unfinished products and services (project rights)	55,321	44,437
Finished and unfinished products and services (other) and merchandise	50,797	48,038
Advance payments	5,654	7,137
Commodity trading assets	8,667	7,881
	210,880	**198,740**

Write-downs of Euro 5,368 thousand were recognised for inventories (previous year: Euro 1,695 thousand). Write-ups of Euro 3,464 thousand were included due to higher net disposal prices (previous year: Euro 1,475 thousand).

The commodity trading assets item includes inventories relating to special gas storage transactions.

24. Trade receivables

Trade receivables

Euro 000s	**30 Sep 2021**	30 Sep 2020
Trade receivables	376,015	332,939
of which due from other majority shareholdings	122	238
of which due from companies recognised at equity	10,698	15,081
of which due from other shareholdings	876	387

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 mainly arise in connection with contracts with customers.

The write-downs and maturity structures for trade receivables have been presented in Note **35**.

25. Income tax receivables

The income tax receivables of Euro 30,136 thousand (previous year: Euro 28,465 thousand) mainly relate to corporate income tax and trade tax refund claims. These have been recognised at nominal value.

26. Cash and cash equivalents

Cash and cash equivalents predominantly comprise credit balances at banks. The inflows of security deposits for counterparty default risk (margins) in the year under report increased cash and cash equivalents by Euro 843 million (previous year: outflow of Euro 8 million). The acquisition of fully consolidated companies and other business units resulted in the addition of cash and cash equivalents of Euro 8,771 thousand (previous year: Euro 1,595 thousand). The disposal of fully consolidated companies and other business units led to the retirement of cash and cash equivalents of Euro 1,508 thousand (previous year: Euro 198 thousand).

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

27. Equity

The structure and development of equity are presented in the statement of changes in equity.

Share capital: The share capital of MVV Energie AG amounts to Euro 168,721 thousand and is divided into 65,906,796 individual registered shares with an arithmetic value of Euro 2.56 each. All registered shares are paid up in full. The City of Mannheim directly and indirectly owned 50.10 % of the shares at 30 September 2021, 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 70,783 thousand were recognised directly in equity in the financial year under report in connection with the fair value measurement of financial instruments (previous year: expenses of Euro 8,185 thousand).

28. Provisions

Provisions

Euro 000s	Balance at 1 Oct 2020	Change in scope of consolida-tion	Currency adjust-ments	Utilised	Reversed	Added	Reclassi-fied	Interest compo-nent	**Balance at 30 Sep 2021**
Non-current provisions									
Pensions and similar obligations	**100,258**	**–**	**–**	**– 2,825**		**– 2,003**	**–**	**614**	**96,044**
Other provisions									–
Personnel-related obligations	39,709	–	6	– 2,516	– 97	1,887	– 2,662	– 38	36,289
Refurbishment, dismantling and warranty obligations	43,068	15	189	– 835	– 1,742	11,316	– 1,522	1	50,490
Provisions for litigation and con-tract risks	1,012	–	–	– 161	–	753	– 15	–	1,589
Miscellaneous contingencies	24,372	6	–	– 37	– 6,291	38	–	77	18,165
Total other provisions	**108,161**	**21**	**195**	**– 3,549**	**– 8,130**	**13,994**	**– 4,199**	**40**	**106,533**
Total non-current provisions	**208,419**	**21**	**195**	**– 6,374**	**– 8,130**	**11,991**	**– 4,199**	**654**	**202,577**
									–
Current provisions									**–**
Tax provisions	**1,259**	**–**	**–**	**– 130**	**–**	**666**	**–**	**–**	**1,795**
Other provisions									–
Personnel-related obligations	40,707	152	70	– 35,481	– 1,480	37,633	2,662	–	44,263
Services not yet invoiced	43,575	25	45	– 38,433	– 2,697	78,198	–	–	80,713
Refurbishment, dismantling and warranty obligations	18,709	–	390	– 3,326	– 9,718	1,173	1,522	–	8,750
Provisions for litigation and contract risks	4,025	39	13	– 719	– 1,143	1,713	15	–	3,943
Miscellaneous contingencies	20,887	–	17	– 8,071	– 2,344	26,131	–	–	36,620
Total other provisions	**127,903**	**216**	**535**	**– 86,030**	**– 17,382**	**144,848**	**4,199**	**–**	**174,289**
Total current provisions	**129,162**	**216**	**535**	**– 86,160**	**– 17,382**	**145,514**	**4,199**	**–**	**176,084**
									–
Total provisions	**337,581**	**237**	**730**	**– 92,534**	**– 25,512**	**157,505**	**–**	**654**	**378,661**

Provisions broken down by maturity

	30 September 2021			30 September 2020		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Provisions for pensions and similar obligations	96,044	–	96,044	100,258	–	100,258
Tax provisions	–	1,795	1,795	–	1,259	1,259
Personnel-related obligations	36,289	44,263	80,552	39,709	40,707	80,416
Services not yet invoiced	–	80,713	80,713	–	43,575	43,575
Refurbishment, dismantling and warranty obligations	50,490	8,750	59,240	43,068	18,709	61,777
Provisions for litigation and contract risks	1,589	3,943	5,532	1,012	4,025	5,037
Miscellaneous contingencies	18,165	36,620	54,785	24,372	20,887	45,259
	202,577	**176,084**	**378,661**	**208,419**	**129,162**	**337,581**

Tax provisions include other tax provisions for value added taxes as of the reporting date.

Provisions are only recognised for uncertain income tax items if the fiscal authorities are unlikely to recognise the respective item.

The provisions for personnel-related obligations category comprises provisions for early retirement expenses and for employee benefit expenses.

The provisions for early retirement expenses mainly relate to legal and constructive obligations towards employees as a result of part-time early retirement agreements. The actuarial assumptions correspond to those used to measure pensions and similar obligations.

The personnel-related obligations mainly include collectively agreed obligations, such as allowances, compensation payments, 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 involves supplies and services from third parties which have already been provided but not yet invoiced. These have been measured on the basis of appropriate estimates.

The provisions for refurbishment, dismantling and warranty obligations category mainly includes dismantling obligations in connection with the construction of a gas storage facility and for wind turbines.

The provisions for warranties relate to solar and wind power projects already completed. These provisions have been recognised on the basis of contractual requirements. Recognition has been based on assessments of individual cases and relevant factors.

The provisions for litigation and contract risks category includes provisions for the litigation risks relating to several individual risks for which the level of utilisation is uncertain. The value is based on the most likely outcome of litigation expected on the basis of the information currently available. Furthermore, this category also includes provisions for onerous contracts.

Miscellaneous contingencies mainly include provisions for risks relating to contractual obligations for completed projects and for the renewal of infrastructure assets.

The provisions recognised are utilised in accordance with the terms to which they are allocated. The provisions for compensation payments recognised in the personnel-related obligations category within other provisions are discounted with a discount rate of 1.0 %. All other personnel-related provisions recognised in this category are discounted with discount rates corresponding to their individual terms. Other provisions in all other categories are discounted with a discount rate of 0 %.

29. Provisions for pension and similar obligations

The company pension plans consist of defined contribution and defined benefit plans.

The pension scheme for MVV employees is largely arranged in line with collective wage and salary agreements specific to the respective companies. This results in indirect pension obligations to employees which are covered almost exclusively by municipal supplementary pension companies (ZVKs). This requires allocations to be made for retirement periods. The payments made in this context serve to finance current pension outlays. According to IFRS requirements, this type of pension plan represents a defined benefit plan as the individual benefits provided by the ZVKs to former employees of member companies are not dependent on the level of contributions paid into the pension funds. Moreover, as the employees of several member companies are insured by the ZVKs, this type of pension plan is considered a multi-employer plan and thus requires the application of special regulations.

Given the redistribution of the benefits provided by ZVKs among member companies and the lack of adequate information about the age structures, personnel turnover rate and salaries of the employees hereby covered, no data is available on the proportion of future payment obligations (economic obligation) accruing to MVV. In view of this, IFRS does not permit recognition of provisions and the amounts therefore have to be treated by MVV as a defined contribution obligation, even though it is actually a defined benefit pension plan. Contributions to the pension plan are measured as a percentage of remuneration subject to the additional pension premium and are borne by employees and employers. The percentage rate of contribution is determined by the ZVKs. MVV expects contributions in the 2022 financial year in the same amount as in the previous year. The contributions are used for the beneficiaries as a collective entity. Should the ZVKs have insufficient funds, then they could increase the mandatory contribution. Should MVV terminate its membership of the ZVKs, then they would be entitled to financial settlement. The amount of settlement is calculated as the present value of beneficiaries' existing entitlement and future claims on the part of their surviving dependants and existing pension entitlements for vested claims at the time at which membership is terminated.

The payments made to municipal supplementary pension companies (ZVKs) and the state pension system are viewed as payments to defined contribution plans. These contributions are recognised as expenses and reported under employee benefit expenses. Payments of Euro 33,734 thousand were made to state pension systems in the 2021 financial year (previous year: Euro 31,603 thousand). Moreover, an amount of Euro 16,195 thousand was paid into defined contribution pension schemes (previous year: Euro 15,749 thousand).

Furthermore, there are direct pension obligations resulting from former collective agreements (measured in terms of duration of company service and employee compensation), as well as individual commitments made to Executive Board members.

Provisions for pensions and similar obligations are recognised exclusively for defined benefit plans.

The principal estimates used when measuring provisions for pensions and similar obligations particularly include the discount factor, biometric probabilities and trend assumptions. Any deviations in the development in these estimates could result in differences between the amounts recognised and the obligations actually arising over time.

Actuarial gains and losses are fully recognised in the period in which they arise. They are recognised outside the income statement in the statement of income and expenses recognised in group equity.

Pursuant to IAS 19, the pension provisions are calculated using the projected unit credit method. As well as pensions and vested claims known of at the balance sheet date, this method also accounts for pay rises and pension increases expected in future. The calculation made application of the 2018 G Heubeck mortality tables.

The main parameters used to calculate the defined benefit plans as of 30 September 2021:

Parameters

	FY 2021	FY 2020
Discount rate	0.9 %	0.6 %
Future pay rises	2.0-2.5 %	2.0-2.5 %
Future pension increases	1.6-3.0 %	1.6-3.0 %

The expenses for these pensions and similar obligations structured as defined benefit plans comprise the following items:

Pension provision expenses

Euro 000s	**FY 2021**	FY 2020
Service cost	4,192	3,491
Interest expenses	614	375
	4,806	**3,866**

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 2021			30 September 2020
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	100,990	732	100,258	104,521	714	103,807
Current service cost	3,775	–	3,775	3,491	–	3,491
Retrospective service cost	418	–	418	–	–	–
Interest expenses (interest income)	614	–	614	375	–	375
Remeasurement						
(i) Income from plan assets (excluding amounts included in interest income from plan assets)	–	5	– 5	–	2	– 2
(ii) Actuarial gains/losses						
of which due to changes in financial assumptions	– 4,623	67	– 4,690	– 3,891	40	– 3,931
of which due to changes in demographic assumptions	–	–	–	12	–	12
of which due to changes in experience adjustments	– 1,479	–	– 1,479	– 849	–	– 849
Payments made to beneficiaries	– 2,825	–	– 2,825	– 2,680	–	– 2,680
Employer contributions	–	22	– 22	11	– 24	35
Balance at 30 September	**96,870**	**826**	**96,044**	**100,990**	**732**	**100,258**

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 2021	FY 2020
Present value of defined benefit obligation	96,870	100,990
Fair value of plan assets	826	732
Provisions recognised at 30 September	**96,044**	**100,258**

The plan assets 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 2021	FY 2020
Accumulated actuarial gains (+) and losses (-) recognised in equity at 1 October	– 24,323	– 26,693
Actuarial gains (+) and losses (-) recognised in equity	3,603	2,370
Accumulated actuarial gains (+) and losses (-) recognised in equity at 30 September	**– 20,720**	**– 24,323**

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 4,641 thousand are forecast for existing pension obligations in the 2022 financial year.

In the financial year, use was made of a discount rate appropriate to the expected weighted remaining term of 16 years.

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

Expected pension payments

Euro 000s	
2022	4,641
2023	3,377
2024	3,467
2025	6,900
2026	11,576
>2026	71,840
	101,801

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 7 %	Increase by 8 %
Future pay rises	0.5	No change	No change
Future pension increases	0.5	Increase by 3 %	Reduction by 3 %
Mortality	1 year	Increase by 4 %	–

30. Financial debt

Financial debt

Euro 000s	**30 September 2021**			30 September 2020		
	Non-current	**Current**	**Total**	Non-current	Current	Total
Liabilities						
to banks	1,456,974	254,062	1,711,036	1,408,149	107,017	1,515,166
in connection with leases	132,971	15,630	148,601	125,744	15,203	140,947
to other majority shareholdings	–	697	697	–	742	742
to companies recognised at equity	–	1,581	1,581	–	36,581	36,581
to other shareholdings	–	1,500	1,500	–	–	–
Other financial debt	19,225	3,636	22,861	19,275	3,980	23,255
	1,609,170	**277,106**	**1,886,276**	**1,553,168**	**163,523**	**1,716,691**

Maturity in years

Euro 000s	**30 September 2021**			30 September 2020		
	< 1 year	**1 - 5 years**	**> 5 years**	< 1 year	1 - 5 years	> 5 years
Liabilities						
to banks	254,062	669,969	787,005	107,017	715,230	692,919
in connection with leases	15,630	46,053	86,918	15,203	44,076	81,668
to other majority shareholdings, companies recognised at equity and other shareholdings	3,778	–	–	37,968	–	–
Other financial debt	3,636	8,001	11,224	3,335	8,051	11,224
	277,106	**724,023**	**885,147**	**163,523**	**767,357**	**785,811**

The fixed-rate liabilities to banks of Euro 1,184,151 thousand (previous year: Euro 1,001,670 thousand) have an average interest rate of 1.8 % (previous year: 2.0 %), while the floating-rate liabilities to banks of Euro 526,884 thousand (previous year: Euro 513,495 thousand) have an average interest rate of 1.5 % (previous year: 1.8 %). This interest rate is influenced by foreign-currency liabilities with higher interest rates. The average remaining period for which the interest rate remains fixed in the case of fixed-rate liabilities amounts to nine years (previous year: seven years). The floating-rate liabilities to banks are hedged.

At 30 September 2021, MVV had undrawn committed credit lines of Euro 1,194,929 thousand (previous year: Euro 1,139,252 thousand).

Lease liabilities have been recognised at the present value of mandatory lease payments over the term of the lease. These refer to the right-of-use assets presented in Note 16 "Leases as lessee".

31. Other liabilities

Other liabilities have been broken down into their respective contents and counterparties and presented in the tables below. The hedge relationship has also been stated for derivative financial instruments. After initial recognition, liabilities other than derivative financial instruments are measured at amortised cost using the effective interest method.

Other financial and non-financial liabilities

	30 September 2021			30 September 2020		
Euro 000s	Non-current	Current	Total	Non-current	Current	Total
Other financial liabilities						
Derivative financial instruments	1,124,653	7,732,791	8,857,444	129,085	368,796	497,881
Liabilities to employees	–	32,476	32,476	–	27,770	27,770
Customer credit balances	–	6,189	6,189	–	6,556	6,556
Interest liabilities	–	6,596	6,596	–	6,875	6,875
Liabilities for security deposits for energy trading transactions	–	821,734	821,734	–	–	–
Concession duties	–	3,443	3,443	–	2,521	2,521
Social security liabilities	–	799	799	–	727	727
Miscellaneous other financial liabilities	28,459	13,030	41,489	30,232	41,569	71,801
Other non-financial liabilities						
Contract liabilities for advance payments received	–	77,326	77,326	–	72,699	72,699
Contract liabilities for building cost grants	115,556	8,172	123,728	109,734	7,394	117,128
Other contract liabilities	11,569	28,630	40,199	15,578	5,645	21,223
Liabilities in connection with German Fuel Emissions Trading Act (BEHG)	707	16,861	17,568	–	–	–
Liabilities for other taxes	–	55,918	55,918	–	102,756	102,756
Miscellaneous other non-financial liabilities	5,993	1,451	7,444	5,517	5,939	11,456
	1,286,937	**8,805,416**	**10,092,353**	**290,146**	**649,247**	**939,393**

Other liabilities

	30 September 2021			30 September 2020		
Euro 000s	Non-current	Current	Total	Non-current	Current	Total
Liabilities	1,286,937	8,728,090	10,015,027	290,146	576,548	866,694
of which to companies recognised at equity	1,187	44,430	45,617	999	92,570	93,569
Advance payments received for orders	–	77,326	77,326	–	72,699	72,699
	1,286,937	**8,805,416**	**10,092,353**	**290,146**	**649,247**	**939,393**

Derivative financial instruments involve interest rate derivatives, currency derivatives and commodity derivatives for electricity, gas, coal, CO_2 and other rights. Further details about financial instruments can be found in Note **35**.

Derivative financial instruments (other financial liabilities)

	30 September 2021			30 September 2020		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	1,124,653	7,732,791	8,857,444	129,085	368,796	497,881
of which not involving IFRS 9 hedges	743,090	5,962,443	6,705,533	52,642	289,477	342,119
of which involving IFRS 9 hedges	381,563	1,770,348	2,151,911	76,443	79,319	155,762

To reduce the counterparty risk involved in highly fluctuating fair values of energy trading derivatives, security deposits (margins) are exchanged with the EEX and the ICE. Liabilities of Euro 821,734 thousand were recognised for security deposits for energy trading transactions as of the balance sheet date on 30 September 2021 (previous year: Euro 0 thousand).

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

As of 30 September 2021, non-financial liabilities for other taxes chiefly include value added tax liabilities.

The recognition of liabilities in connection with the German Fuel Emissions Trading Act (BEHG) was introduced upon the entry into force of this legislation as of 1 January 2021.

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

Contract liabilities

Euro 000s	**FY 2021**	FY 2020
Balance at 1 October	211,050	152,147
Balance at 30 September	**241,253**	**211,050**

Contract liabilities showed a significant year-on-year increase as of 30 September 2021. This chiefly resulted from the planning and construction of photovoltaics systems.

MVV expects that, of the transaction price allocated to unsatisfied performance obligations as of 30 September 2021, an amount of Euro 114,128 thousand (previous year: Euro 85,737 thousand) will be recognised as revenues in the next reporting period. The remaining amount of Euro 127,125 thousand (previous year: Euro 125,311 thousand) will be recognised in subsequent financial years.

32. Trade payables

Trade payables

Euro 000s	**30 Sep 2021**	30 Sep 2020
Trade payables	383,286	336,752
to other majority shareholdings	153	190
to companies recognised at equity	14,905	12,229
to other shareholdings	–	10

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.

33. Income tax liabilities and deferred taxes

This line item includes income tax liabilities of Euro 36,011 thousand (previous year: Euro 26,405 thousand).

The deferred taxes reported for the 2021 financial year relate to the following items:

Deferred taxes

	30 September 2021		30 September 2020	
Euro 000s	**Deferred tax assets**	**Deferred tax liabilities**	Deferred tax assets	Deferred tax liabilities
Intangible assets	2,799	– 12,400	3,077	– 13,416
Property, plant and equipment, including investment properties	20,727	– 179,475	20,760	– 180,319
Right-of-use assets	–	– 41,386	–	– 39,513
Inventories	9,255	– 4,688	9,067	– 3,854
Special item	–	– 12,516	–	– 9,870
Other assets and positive fair values of derivatives	15,466	– 3,178,280	13,250	– 200,933
Provisions for pensions	17,158	–	18,672	–
Non-current other provisions	22,545	–	25,806	–
Current other provisions	9,996	– 24,566	5,143	– 16,354
Liabilities and negative fair values of derivatives	3,125,029	– 25,885	210,456	– 20,607
Lease liabilities	39,580	–	37,204	–
Losses carried forward	46,063	–	31,575	–
Deferred taxes (gross)	3,308,618	– 3,479,196	375,010	– 484,866
Netting	– 3,204,749	3,204,749	– 344,666	344,666
Deferred taxes (net)	**103,869**	**– 274,447**	**30,344**	**– 140,200**

Of the (net) deferred taxes presented above, Euro 18,806 thousand (previous year: Euro 15,089 thousand) relate to non-current deferred tax assets and Euro 60,408 thousand (previous year: Euro 89,477 thousand) to non-current deferred tax liabilities.

No deferred tax assets have been recognised for corporate income tax loss carryovers of Euro 71,504 thousand (previous year: Euro 109,814 thousand), trade tax loss carryovers of Euro 52,359 thousand (previous year: Euro 89,110 thousand) or foreign loss carryovers of Euro 114,369 thousand (previous year: Euro 90,474 thousand).

For temporary differences of Euro 10,220 thousand at shareholdings (previous year: Euro 11,525 thousand), no deferred tax liabilities have been stated for an amount of Euro 3,097 thousand (previous year: Euro 3,492 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 5,667 thousand (previous year: Euro 4,442 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 realisation of the assets is exclusively dependent on the generation of future profits. Based on available budget figures, which mainly assume that renewable energies projects will be marketed promptly, we expect these assets to be realised.

Deferred taxes of Euro 44,851 thousand were recognised directly in other comprehensive income as part of group equity in the 2021 financial year (previous year: Euro 25,045 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 2021		30 September 2020	
Euro 000s	**Income tax**	**Gross**	Income tax	Gross
Actuarial gains and losses	– 2,161	8,046	– 1,450	4,767
Share of total comprehensive income attributable to companies recognised at equity	–	– 360	–	– 18,217
Items that will not be reclassified to profit or loss	**– 2,161**	**7,686**	**– 1,450**	**– 13,450**
Cash flow hedges/hedging costs	21,968	– 66,560	4,622	– 18,566
Currency translation differences	–	12,022	–	– 10,030
Share of total comprehensive income attributable to companies recognised at equity	–	– 369	–	– 366
Items that will be reclassified to profit or loss	**21,968**	**– 54,907**	**4,622**	**– 28,962**

34. Contingent claims, liabilities and financial obligations

The volume of obligations for contingent liabilities, claims and financial obligations stated below corresponds to the scope of liability at the balance sheet date. Contingent claims are treated by analogy with contingent liabilities.

Contingent liabilities involve potential obligations to third parties or existing obligations for which an outflow of resources is unlikely or whose amount cannot be reliably determined. Contingent liabilities are not recognised in the balance sheet.

The company has contingent liabilities of Euro 7.0 million for warranty agreements (previous year: Euro 7.0 million). It has obligations of this nature in the form of guarantees amounting to Euro 9.2 million (previous year: 13.3 million). As in the previous year, no collateral has been provided for third-party liabilities.

MVV has purchase commitments of Euro 116.1 million in connection with investment orders placed and financial obligations (previous year: Euro 65.7 million).

The Group has a contingent claim from the State of Baden-Württemberg and the City of Manheim in connection with a land decontamination measure. This claim has a present value of Euro 2.3 million (previous year: Euro 2.7 million).

35. 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 2021	30 Sep 2020
Assets			
Financial assets			
of which other shareholdings	Fair value through profit or loss	5,909	5,575
	Not applicable	2,162	1,371
of which loans not involving finance leases	Amortised cost	8,505	10,195
of which loans involving finance leases	Not applicable	65,279	72,099
of which securities	Fair value through profit or loss	196	–
Trade receivables < 1 year	Amortised cost	376,015	332,939
Other assets			
of which derivatives outside hedge accounting	Fair value through profit or loss	6,966,862	348,350
of which derivatives within hedge accounting	Not applicable	2,030,833	100,204
of which other financial assets	Amortised cost	36,721	54,895
of which contract assets	Not applicable	94,387	58,528
Cash and cash equivalents	Amortised cost	1,258,178	343,175
		10,845,047	**1,327,331**
Debt			
Financial debt			
of which financial debt involving leases	Not applicable	148,601	140,947
of which other financial debt	Amortised cost	1,737,675	1,575,745
Trade payables < 1 year	Amortised cost	383,286	336,752
Other liabilities			
of which derivatives outside hedge accounting	Fair value through profit or loss	6,705,533	342,119
of which derivatives within hedge accounting	Not applicable	2,151,911	155,762
of which other financial liabilities	Amortised cost	886,520	90,855
	Fair value through profit or loss	26,206	25,395
		12,039,732	**2,667,574**

Given the predominantly short-term remaining terms of trade receivables and payables, other financial assets and liabilities and cash and cash equivalents, their carrying amounts as of the balance sheet date basically correspond to their fair values. The only variances relate to other financial debt items, whose carrying amounts correspond to Euro 1,737,675 thousand (previous year: Euro 1,575,745 thousand) while their fair value amounts to Euro 1,780,290 thousand (previous year: Euro 1,602,914 thousand).

The fair value of other financial debt items is determined as their present value, taking due account of future payments. These items are discounted using the discount rate valid as of the balance sheet date.

Should MVV not have sufficient new information to measure the fair value, then cost is referred to as an approximate estimate of the fair value.

With regard to the fair value measurement of financial instruments, reference is made to the information provided on financial instruments in the accounting policies section of these notes.

The following table presents the key parameters for financial instruments measured at fair value. Pursuant to IFRS 7, the individual levels are defined as follows:

Level 1: Measurement based on prices listed on active markets and taken over without amendment

Level 2: Measurement based on directly or indirectly observable factors other than those in Level 1

Level 3: Measurement based on factors not observable on the market.

Fair value hierarchy at 30 September 2021

Euro 000s	**Level 1**	**Level 2**	**Level 3**
Financial assets			
Other shareholdings	–	–	5,909
Derivatives outside hedge accounting	3,752,931	3,210,472	3,459
Derivatives within hedge accounting	914,332	1,116,490	11
Other financial assets	–	–	–
Financial liabilities			
Derivatives outside hedge accounting	3,385,777	3,319,238	518
Derivatives within hedge accounting	308,060	1,840,470	3,381
Other financial liabilities	–	–	26,206

Fair value hierarchy at 30 September 2020

Euro 000s	Level 1	Level 2	Level 3
Financial assets			
Other shareholdings	–	–	5,575
Derivatives outside hedge accounting	176,132	172,171	47
Derivatives within hedge accounting	34,989	65,179	36
Other financial assets	–	–	–
Financial liabilities			
Derivatives outside hedge accounting	155,257	186,129	733
Derivatives within hedge accounting	52,446	98,892	4,424
Other financial liabilities	–	–	25,395

No items were reclassified between Levels 1 and 2 of the measurement hierarchy in the year under report. Similarly, no items were reclassified into or out of Level 3.

The other shareholdings in Level 3 do not have market prices listed on any active market. The fair value of other shareholdings is determined in a capital value procedure by discounting future cash flows. Discounting is undertaken by reference to the currently valid discount rate 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.

Where no market prices are available, the fair value of long-term energy contracts and interest derivatives in Level 3 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 derivatives of Euro 3,381 thousand in Level 3 hedge accounting include interest swaps with floor (previous year: Euro 4,424 thousand). The fair value of these derivatives amounts to Euro 3,381 thousand (previous year: Euro 4,424 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 36 thousand (previous year: Euro 59 thousand) or reduce it by Euro 35 thousand (previous year: Euro 56 thousand).

Other Level 3 liabilities include variable purchase price components resulting from acquisitions. The discounted cash flow method is used to determine the fair value. This involves discounting the cash flows expected in future with a predetermined discount rate. The input parameters are set with due consideration of contractual requirements and available company data. The fair value thereby determined would increase or decrease depending on the development in future sales and future EBIT.

The following reconciliation presents the development in financial instruments recognised in Level 3:

Development in financial instruments recognised in Level 3

Euro 000s	Balance at 1 Oct 2020	Gains/losses in income statement	Gains/losses in OCI	Additions/ disposals	Balance at 30 Sep 2021
Financial assets					
Other shareholdings	5,575	– 8	–	342	5,909
Derivatives outside hedge accounting	47	3,412	–	–	3,459
Derivatives within hedge accounting	36	–	11	– 36	11
Financial liabilities					
Derivatives outside hedge accounting	733	– 215	–	–	518
Derivatives within hedge accounting	4,424	–	– 1,123	80	3,381
Other financial liabilities	25,395	1,355	–	– 544	26,206

Development in financial instruments recognised in Level 3

Euro 000s	Balance at 1 Oct 2019	Gains/losses in income statement	Gains/losses in OCI	Additions/ disposals	Balance at 30 Sep 2020
Financial assets					
Other shareholdings	6,861	– 36	–	– 1,250	5,575
Derivatives outside hedge accounting	649	– 602	–	–	47
Derivatives within hedge accounting	–	– 36	–	–	36
Financial liabilities					
Derivatives outside hedge accounting	325	408	–	–	733
Derivatives within hedge accounting	5,732	–	– 1,308	–	4,424
Other financial liabilities	21,898	1,237	–	2,260	25,395

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 2021
Other operating income and expenses	2,165	1,825
Income from shareholdings	– 8	– 8
Financial result	107	107
Other comprehensive income	1,134	1,085
	3,398	**3,009**

Gains and losses recognised in statement of comprehensive income for Level 3 financial instruments

Euro 000s	Total	of which still held at 30 Sep 2020
Other operating income and expenses	– 1,010	–
Income from shareholdings	– 36	– 36
Financial result	– 1,237	– 1,237
Other comprehensive income	1,308	1,308
	– 975	**35**

Netting of financial assets and financial liabilities
The financial assets and financial liabilities are netted and presented as a net amount in the balance sheet if MVV currently has a legally enforceable right to set-off the recognised amounts and intends either to settle on a net basis or to realise the assets and settle the liability simultaneously.

Furthermore, agreements have been concluded in which the set-off criteria are not met but which permit set-off of the respective amounts in specific circumstances, such as insolvency.

The amounts of financial assets and financial liabilities netted in the balance sheet are presented in the following table. Financial assets and financial liabilities that are subject to a legally enforceable master set-off agreement but which are not netted for accounting purposes are also presented. The related amounts that are not netted in the balance sheet mainly include margin payments received and paid for market transactions and derivative financial instruments not meeting the set-off criteria of IAS 32.

Netting of financial assets at 30 September 2021

	Gross amount of financial assets reported	Gross amount of financial liabilities reported that are netted in balance sheet	Net amount of financial assets reported in balance sheet	Related amounts not netted in balance sheet		Net amount
Euro 000s				Financial instruments	Cash collateral received/granted	
Loans not involving finance leases	8,505	–	8,505	–	–	8,505
Trade receivables < 1 year	584,130	– 208,115	376,015	–	–	376,015
Derivative financial instruments	8,997,695	–	8,997,695	– 7,653,423	– 1,036,975	307,297
Other financial assets	131,108	–	131,108	–	–	131,108
Cash and cash equivalents	1,258,178	–	1,258,178	– 43,789	–	1,214,389
	10,979,812	**– 208,115**	**10,771,697**	**– 7,697,212**	**– 1,036,975**	**2,037,510**

Netting of financial liabilities at 30 September 2021

	Gross amount of financial liabilities reported	Gross amount of financial assets reported that are netted in balance sheet	Net amount of financial liabilities reported in balance sheet	Related amounts not netted in balance sheet		Net amount
Euro 000s				Financial instruments	Cash collateral received/granted	
Other financial debt	1,737,675	–	1,737,675	43,789	1,023	1,692,863
Trade payables < 1 year	199,737	183,549	383,286	–	–	383,286
Derivative financial instruments	8,857,444	–	8,857,444	7,653,423	215,241	988,780
Other financial liabilities	888,160	24,566	912,726	–	–	912,726
	11,683,016	**208,115**	**11,891,131**	**7,697,212**	**216,264**	**3,977,655**

Netting of financial assets at 30 September 2020

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 not involving finance leases	10,195	–	10,195	–	–	10,195
Trade receivables < 1 year	498,898	– 165,959	332,939	–	–	332,939
Derivative financial instruments	448,554	–	448,554	– 372,482	– 32,544	43,528
Other financial assets	113,440	– 17	113,423	–	–	113,423
Cash and cash equivalents	343,175	–	343,175	– 12,281	–	330,894
	1,414,262	**– 165,976**	**1,248,286**	**– 384,763**	**– 32,544**	**830,979**

Netting of financial liabilities at 30 September 2020

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	1,575,744	–	1,575,744	44,263	914	1,530,567
Trade payables < 1 year	191,102	145,650	336,752	–	–	336,752
Derivative financial instruments	497,881	–	497,881	372,482	54,307	71,092
Other financial liabilities	95,924	20,326	116,250	52	–	116,198
	2,360,651	**165,976**	**2,526,627**	**416,797**	**55,221**	**2,054,609**

Net results by measurement category
Financial instruments have been recognised in the income statement with the following net results pursuant to IFRS 7:

Net results (IFRS 7)

Euro 000s	FY 2021	FY 2020
Financial assets and liabilities measured at fair value through profit or loss	325,628	– 19,655
of which mandatorily measured at fair value	325,628	– 19,655
Financial assets measured at amortised cost	– 8,465	– 10,587

The presentation of net results takes due account of standalone derivatives included in the "at fair value through profit or loss" measurement category. In the case of financial assets and financial liabilities, the net result in the "at fair value through profit or loss" category is largely attributable to fair value measurement under IFRS 9. The net result from financial liabilities in this category is recognised in the income statement.

For financial assets, the net results in the "at amortised cost" category predominantly comprise write-downs.

Total interest income and expenses were recognised in the income statement as follows:

Total interest income and expenses

Euro 000s	FY 2021	FY 2020
Total interest income	8,681	7,840
Total interest expenses	46,585	46,070

The financial result also includes currency translations and the interest components for provisions and lease liabilities not covered by IFRS 7 disclosure requirements, as a result of which the figures published here differ from the financial result. The interest income reported here mainly results from finance leases and loans. The interest expenses mostly relate to loan obligations and interest swaps.

The total interest income and total interest expenses chiefly result from financial assets and liabilities measured at amortised cost, as well as from the reclassification through profit or loss of hedging outcomes for cash flow hedges.

Risk management
Due to its business activities, MVV is exposed to various financial risks. These comprise default, liquidity, interest and exchange rate risks, as well as commodity price risks on both procurement and sales markets. MVV's risk management pursues the objective of identifying developments on financial and commodity markets at an early stage and countering any resultant negative implications. This is stipulated in internal guidelines, discretionary frameworks, responsibilities, separations of functions, checks and processes.

Derivative financial instruments are used to cover against market price risks. For interest rate risks, these mainly involve interest swaps. Currency risks are hedged by concluding forward currency transactions. Commodity derivatives are deployed in the field of energy trading. The use of commodity derivatives for proprietary energy trading is only permitted within narrow limits and is monitored and managed with a separate limit system and robust risk indicators.

The maximum default risk for the assets recognised in the balance sheet, including derivatives with positive fair values, is equivalent to the carrying amounts recognised. The collateral held and other credit collateral available include margin payments received for exchange transactions, particularly in the energy trading business, as well as master set-off agreements.

The risks resulting from financial instruments are unchanged on the previous year, as are the methods used to measure and control risks.

Further information about the risk management system in place at MVV can be found in the Opportunity and Risk Report within the management report.

Default risks: The risk of economic loss arising as a result of a business partner failing to meet its contractual payment obligations is referred to as default risk. This encompasses both the risk of direct default and the risk of reduced creditworthiness. In its trading activities, MVV maintains its business relationships predominantly with banks and other trading partners of good credit standing. Moreover, risks are secured and structured with credit collateral and contractual mitigation mechanisms. Default risks for contractual partners are inspected upon conclusion of the contract and monitored continuously, with efforts being made to secure the credit exposure in the event of significant deteriorations in creditworthiness. This risk is limited by setting trading limits for transactions with business partners and, where appropriate, by demanding cash collateral. Where possible, default risk is already reduced in advance by means of suitable framework agreements with trading partners. In particular, commodity transactions are concluded on the basis of master agreements such as EFET, which ensure that detailed checks are performed on the counterparty's creditworthiness.

For trading transactions concluded with stock 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 recognised at amortised cost. For financial instruments that are recognised at fair value, the receivables default risk is already accounted for in the fair value.

IFRS 9 requires any expected credit loss to be accounted for by way of an impairment upon initial recognition of the respective asset already. These "expected" losses are determined using either the general or the simplified approach.

MVV has applied the simplified approach to determine the expected losses for trade receivables, contract assets and lease receivables. This requires recognition of a loss allowance equivalent to the credit losses expected over the lifetime of the respective 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 partners of default. Our customer segments are based on the business models which are in turn mostly allocable to a similar geographical area.

Any internal or external ratings available for our customers are used as the basis for determining the expected credit losses.

Loss allowances for loans and other financial assets are determined using the general approach. This requires financial assets to be investigated in terms of their credit default risk and allocated to one of three stages of the impairment model in line with their respective development. The creditworthiness of the contract partner forms the basis for assessing credit default risk and is monitored on a regular basis.

All financial assets require allocation to Level 1 upon addition unless they were already impaired upon acquisition or issue. If the credit risk increases significantly after initial recognition, the respective assets are transferred to Level 2. The assessment as to whether credit risk has increased significantly in subsequent periods is made in a defined default risk management process. At MVV, a significant increase is assumed if the internal rating of the contract partner has deteriorated. Assets are transferred to Level 3 should there be any direct indications of impairment or actual default. A financial instrument is assumed to have defaulted when the asset is 720 days overdue. Financial assets are written down in full when, following a detailed review of the individual case, they are classified as being uncollectible.

For trade receivables, contract assets and lease receivables, MVV applies the simplified approach under IFRS 9 to determine the loss allowance. The development in loss allowances is presented in the following table:

Loss allowance (simplified approach)

Euro 000s	FY 2021	FY 2020
Balance at 1 October	19,034	24,140
Net balance of additions/reversals	6,586	5,391
Retirements	– 4,615	– 10,373
Change in scope of consolidation	322	–
Other	228	– 124
Balance at 30 September	**21,555**	**19,034**

Of the above loss allowance, Euro 20,573 thousand is attributable to trade receivables (previous year: Euro 18,023 thousand) and Euro 582 thousand to contract assets (previous year: Euro 400 thousand).

The default risks for financial assets for which no rating is available and the volume of lifetime expected credit losses and credit default rates for such assets are presented broken down by age group in the table below:

Receivables default risks (simplified approach) at 30 September 2021

Euro 000s	Gross carrying amount	Loss allowance	Credit default rate
not overdue	414,017	1,731	0.4%
overdue by			
< 89 days	29,354	502	1.7%
90 to 179 days	8,491	6,078	71.6%
180 to 359 days	3,022	914	30.2%
360 to 719 days	4,681	2,032	43.4%
> 719 days	10,723	10,153	94.7%
	470,288	**21,410**	

Receivables default risks (simplified approach) at 30 September 2020

Euro 000s	Gross carrying amount	Loss allowance	Credit default rate
not overdue	373,074	3,960	1.1%
Overdue			
< 89 days	19,262	524	2.7%
90 to 179 days	3,324	796	23.9%
180 to 359 days	6,008	1,903	31.7%
360 to 719 days	5,524	2,853	51.6%
> 719 days	9,614	8,780	91.3%
	416,806	**18,816**	

Impairments of Euro 145 thousand relate to assets whose loss allowances were determined on the basis of an internal or external rating (previous year: Euro 218 thousand).

Due to retirements of financial instruments, the loss allowances recognised for trade receivables changed by Euro 4,615 thousand in the 2021 financial year. The retirements relate to uncollectible receivables that had already been written down.

In the case of financial assets not eligible for application of the simplified approach provided for by IFRS 9, MVV applies the general approach to determine loss allowances within the expected loss model. This category mainly includes loans and other financial assets. The following reconciliation presents the development in the loss allowance determined using this method:

Loss allowance (general approach) at 30 September 2021

	12-month expected credit loss	**Lifetime expected credit loss**		**Total**
Euro 000s	**Level 1**	**Level 2**	**Level 3**	
Balance at 1 Oct 2020	10,331	–	593	10,924
Additions	3,911	–	4	3,915
Reversals	– 2,036	–	–	– 2,036
Retirements	– 1,643	–	– 3	– 1,646
Reclassifications	270	–	– 270	–
Other	– 101	–	60	– 41
Balance at 30 Sep 2021	**10,732**	**–**	**384**	**11,116**

Loss allowance (general approach) at 30 September 2020

	12-month expected credit loss	Lifetime expected credit loss		Total
Euro 000s	Level 1	Level 2	Level 3	
Balance at 1 Oct 2019	2,729	–	3,381	6,110
Additions	8,156	–	550	8,706
Reversals	– 493	–	– 3,404	– 3,897
Reclassifications	– 39	–	39	–
Other	– 22	–	27	5
Balance at 30 Sep 2020	**10,331**	**–**	**593**	**10,924**

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

Default risk (general approach) at 30 September 2021

Euro 000s	12-month expected credit loss Level 1	Lifetime expected credit loss Level 2	Level 3	Total
Extremely secure contract partner	18,971	–	–	18,971
Secure contract Partner	31,328	–	886	32,214
Acceptable contract partner	4,329	–	–	4,329
Speculative contract partner	102	–	–	102
Balance at 30 Sep 2021	**54,730**	**–**	**886**	**55,616**

Default risk (general approach) at 30 Sep 2020

Euro 000s	12-month expected credit loss Level 1	Lifetime expected credit loss Level 2	Level 3	Total
Extremely secure contract par tner	34,257	–	–	34,257
Secure contract partner	34,250	1,183	–	35,433
Acceptable contract partner	4,847	–	–	4,847
Speculative contract partner	206	–	–	206
Balance at 30 Sep 2020	**73,560**	**1,183**	**–**	**74,743**

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, 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 financial 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 with complied with as of the balance sheet date on 30 September 2021.

Further information about financial debt, its maturities and committed credit lines can be found in Note 30.

Items of security have been provided to banks to limit their risks in connection with loans granted to MVV. These are subdivided into receivables and cash and cash equivalents with a total amount of Euro 2,282 thousand (previous year: Euro 6,048 thousand) and interests in subsidiaries amounting to Euro 11,842 thousand (previous year: Euro 13,364 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 2021			30 September 2020		
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	276,566	732,761	835,101	130,930	785,610	747,814
Lease liabilities	–	59,036	101,831	–	57,406	97,457
Trade payables	383,286	961	2,840	336,752	867	2,842
Other financial debt	7,624	9,543	16,236	41,513	9,593	16,621
Other financial liabilities	913,903	8,392	27,841	91,059	12,303	29,807
Derivative financial liabilities	7,716,265	1,115,275	–	344,986	77,024	–
	9,297,644	**1,925,968**	**983,849**	**945,240**	**942,803**	**894,541**

Market risks: Market risks mainly relate to interest rate, currency and commodity price risks. They arise due to changes in interest rates, exchange rates and commodity prices that could impact on MVV's earnings. Market risk management is charged with limiting any potentially negative impact of fluctuations in interest rates, exchange rates and commodity prices on the company's earnings by implementing a comprehensive hedging strategy and closing risk positions.

Interest rate risks: At MVV, interest rate risks mainly relate to floating-rate liabilities to banks. They result from any potential change in the reference interest rate underlying the hedged item.

MVV's interest rate risk management pursues the objective of minimising the nominal amount and volatility of interest expenses impacting on earnings and liquidity in order to reduce any negative impact of changes in interest rates on the company's performance and ability to pay dividends.

MVV limits its interest rate risks by financing its investment projects, where possible, with facilities with congruent terms and fixed interest rates. Furthermore, financing-related risks are also managed by using interest derivatives. These risks are hedged by working with interest swaps enabling a fixed interest rate to be paid and conversely a floating interest rate to be collected over the term of the instrument.

Hedging transactions are structured and concluded in a manner appropriate to the interest rate risks identified for the hedged item, thus creating a direct economic relationship. The hedging relationship is measured by reference to the scope of the risk thereby hedged. Furthermore, the hedging relationship accounts for specific parameters of the hedged item, such as its term and planning reliability.

The sensitivity analysis below presents the impact of changes in interest rates on annual earnings and equity. In this analysis, it is assumed that there are no changes in any other parameters, such as exchange rates. The analysis only includes financial instruments where interest rate risk could impact on equity or annual earnings. For the calculation, we have assumed that interest rates are 10 % higher or lower throughout the financial year.

Any upward or downward variance in the level of interest rates in the euro area by 10 % as of the balance sheet date on 30 September 2021 would, as in the previous year, not have led to any overall change in annual net income. This variance would have increased/decreased equity by a total of Euro 1,324 thousand/Euro 1,407 thousand (previous year: Euro 481 thousand/Euro 485 thousand).

The aforementioned measures mean that any interest rate risks arising are mainly hedged. The residual risk for MVV is of subordinate significance.

Currency risks: The MVV Group is exposed to currency risks due to its international activities outside the euro currency area. These relate to work performed or received in foreign currencies, as well as to investments and their financing in foreign currencies.

Currency risks are monitored and managed on a decentralised basis by the major subgroups. The objective of currency risk management is to minimise any negative impact of exchange rate movements on the company's performance and ability to pay dividends, as well as to safeguard its solvency in each relevant currency.

Currency risks are hedged by natural hedges in the form of currency-congruent financing and by using derivative financial instruments. In natural hedges, the cash flows and changes in the fair value of the hedged item and the hedging transaction cancel each other out. Derivative financial instruments in the form of forward exchange transactions are deployed to hedge the risks resulting from changes in the respective spot and forward rates.

Hedging transactions are structured and concluded in a manner appropriate to the currency risks identified for the hedged item, thus creating a direct economic relationship. The hedging relationship is measured by reference to the scope of the risk thereby hedged. Furthermore, the hedging relationship accounts for specific parameters of the hedged item, such as its term and planning reliability.

The aforementioned measures mean that currency risks are hedged in such a way that MVV is not exposed to any material risks. Given the subordinate significance of currency risks at the Group, no sensitivity analysis has been performed.

Commodity price risks: In connection with our energy trading activities, energy trading contracts are concluded for the purposes of risk management, adjustments to actual loads and margin optimisation. Price change risks chiefly arise in connection with the procurement and disposal of electricity and gas and the procurement of coal and emission rights. The risks resulting from these trading and portfolio optimisation activities are limited by setting narrow and clearly defined limit structures. Compliance with the set limits is monitored on an ongoing basis. Regular reporting is also provided on limit capacity. Commodity price risks are management by the risk management function at our central trading company MVV Trading. Taking due account of the set limits, commodity price risks are hedged by, among other measures, using suitable derivative financial instruments and hedging strategies consistent with the applicable risk management guidelines. Price change simulations enable the potential impact on trading transactions to be determined. Continuous comparison with the trading limits set out in the risk management guidelines then makes it possible to actively manage the risk with corresponding hedging transactions on the market.

The hedging instruments used mainly involve forwards, futures and swaps. The hedging transactions are structured and concluded in a manner appropriate to the currency risks identified for the hedged item, thus creating a direct economic relationship. The price index for the hedging instruments is always selected in such a way that it is congruent with the hedged item. This means that the hedging instruments are exposed to the same commodity price risk as the hedged item. The objective of MVV's hedging activities is always to optimise and minimise risk across the entire portfolio and the existing underlying risks. In the company's procurement activities, the objective is to hedge purchase prices at the market level at which the respective sales contracts were concluded. To secure the generation capacities available at the Group, marketing prices are hedged, as are the corresponding variable production costs.

The sensitivity involved in measuring commodity derivatives is analysed in the following section. This analysis assumes that there are no changes in any other parameters and that there is mutual dependency between the commodities. The analysis only includes derivatives for which fluctuations in market values could impact on equity or annual earnings. These involve derivatives and energy trading transactions recognised in accordance with IFRS 9. The analysis does not include energy trading contracts earmarked for the physical delivery of non-financial items in line with the company's expected procurement, sale or utilisation ("own use"). These do not require recognition under IFRS 9.

If the market price had been 10 % higher/lower at the balance sheet date on 30 September 2021, this would have increased/decreased annual net income by Euro 55,828 thousand/ Euro 2,063 thousand (previous year: Euro 9,205 thousand/Euro 10,602 thousand). Equity as of the same reporting date would have increased/decreased by Euro 43,524 thousand/Euro 7,682 thousand (previous year: Euro 20,786 thousand/ Euro 22,111 thousand).

The aforementioned reduction and management measures mean that commodity price risks are mainly hedged and the residual risks are of subordinate significance for MVV. The remaining residual risks are nevertheless assessed by MVV Trading, our central energy trading company, and are recorded, aggregated and monitored by the central group controlling function.

Derivative financial instruments and hedging relationships

MVV deploys derivative and currency-congruent financial liabilities to hedge its commodity, interest rate and currency risks. For commodities, the associated risks are hedged using forwards, futures and swaps. Financial risks are hedged with interest swaps, while foreign exchange risks are hedged with forward exchange transactions and by way of currency-congruent financial liabilities.

The risks hedged for the hedged items correspond to the contractual terms of the hedging instruments thereby concluded. For commodity and financing risks, for example, the price risks and interest rate risks of the hedged item respectively correspond to the agreed price and interest rate index of the hedging instrument. Currency risks involved in financing activities are hedged using hedging transactions in the corresponding currency. For all hedging relationships, hedging instruments are concluded with the same nominal volume as the respective hedged item. Risks are thereby hedged at a ratio of 1:1. Selecting this hedging strategy means that hedging relationships can be expected to be highly effective on a prospective basis. The effectiveness of hedging transactions is determined in each case upon the commencement of the hedge and in regular prospective assessments using the critical terms match method. In addition, a retrospective measurement is performed to quantify the effectiveness or ineffectiveness. This is performed using the dollar offset method.

The nominal volumes of derivatives deployed at MVV are presented in the following table:

Nominal volumes by maturity

	30 September 2021			30 September 2020		
Euro 000s	< 1 year	1 - 5 years	> 5 years	< 1 year	1 - 5 years	> 5 years
Interest derivatives	154,194	202,762	169,371	17,443	405,838	181,445
Commodity derivatives	11,529,208	3,664,495	4,311	5,586,936	1,992,294	–
Currency derivatives	59,643	1,039	–	76,894	–	–
	11,743,045	**3,868,296**	**173,682**	**5,681,273**	**2,398,132**	**181,445**

The commodity derivatives deployed at MVV can be broken down as follows:

Commodity derivatives

	30 September 2021		30 September 2020	
Euro 000s	Nominal volumes	Fair values	Nominal volumes	Fair values
Commodity derivatives				
Electricity	10,808,649	– 266,663	5,345,577	– 4,328
Coal	131,427	103,649	20,015	– 12,452
Gas	2,029,159	164,627	1,481,488	– 17,355
CO_2 rights	2,226,882	155,967	730,607	24,693
Other	1,897	– 479	1,543	– 650
	15,198,014	**157,101**	**7,579,230**	**– 10,092**
Commodity derivatives				
Futures	15,068,548	53,452	7,559,216	2,360
Swaps	129,466	103,649	20,014	– 12,452
	15,198,014	**157,101**	**7,579,230**	**– 10,092**

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. Only recognised accounts have been included.

Counterparty risk has been based, where these are available, on external ratings at Standard & Poor's and/or Moody's. Where no external rating is available, an internal rating has been derived using customary market methods.

Counterparty risk at 30 September 2021

Euro 000s	Total		of which < 1 year		of which 1 to 5 years	
Counterparty rating [1]	Nominal value	Counterparty risk	Nominal value	Counterparty risk	Nominal value	Counterparty risk
AAA and Aaa to AA- and Aa3	2,260,723	3,415,395	1,642,067	2,933,964	618,656	481,431
A+ and A1 to A- and A3	136,867	27,452	135,100	24,296	1,767	3,156
BBB+ and Baa1 to BBB- and Baa3	121,332	202,454	95,957	175,857	25,375	26,597
BB+ and Ba1 to BB- and Ba3	143,357	197,013	112,493	175,161	30,864	21,852
Internal rating	4,469,022	4,710,482	3,402,100	4,013,372	1,066,922	697,110
	7,131,301	**8,552,796**	**5,387,717**	**7,322,650**	**1,743,584**	**1,230,146**

1 Most recent available rating

Counterparty risk at 30 September 2020

Euro 000s	Total		of which < 1 year		of which 1 to 5 years	
Counterparty rating [1]	Nominal value	Counterparty risk	Nominal value	Counterparty risk	Nominal value	Counterparty risk
AAA and Aaa to AA- and Aa3	514,587	67,879	340,353	53,147	174,234	14,732
A+ and A1 to A- and A3	132,111	13,973	76,621	10,176	55,490	3,797
BBB+ and Baa1 to BBB- and Baa3	38,694	5,431	18,029	3,189	20,665	2,242
BB+ and Ba1 to BB- and Ba3	62,883	10,435	52,263	9,829	10,620	606
Internal rating	1,694,792	199,592	1,244,880	157,818	449,912	41,774
	2,443,067	**297,310**	**1,732,146**	**234,159**	**710,921**	**63,151**

1 Most recent available rating

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 12 years as of 30 September 2021 (previous year: 13 years). For commodity hedges, the terms of planned hedges amount to up to five years (previous year: up to five years).

Both interest hedging instruments and commodity derivatives require net settlements to be paid at contractually fixed dates mainly corresponding to the hedged items.

In the year under report, MVV concluded hedging transactions with average interest rates of 0.91 % to 3.87 % to hedge against interest risks in its financing activities. The average hedged prices for commodity price risks range from Euro 44.35 to Euro 48.30 in the electricity business, Euro 11.88 to Euro 18.90 in the gas business and Euro 30.74 to Euro 36.65 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 2021

	Carrying amount of hedging instrument		**Nominal volume**	**Changes in fair value of hedging instrument**	**Changes in fair value of hedged item**
Euro 000s	**Other financial assets**	**Other financial liabilities**			
Commodity price risk	2,030,811	2,135,806	2,733,483	– 107,368	– 107,368
Interest rate risk	22	16,104	526,327	12,009	12,429
	2,030,833	**2,151,910**	**3,259,810**	**– 95,359**	**– 94,939**

Hedging relationships involving cash flow hedges at 30 September 2020

	Carrying amount of hedging instrument		Nominal volume	Changes in fair value of hedging instrument	Changes in fair value of hedged item
Euro 000s	Other financial assets	Other financial liabilities			
Commodity price risk	100,204	116,019	1,297,965	– 48,807	– 48,807
Interest rate	–	38,112	604,726	– 5,842	– 6,977
	100,204	**154,131**	**1,902,691**	**– 54,649**	**– 55,784**

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

Impact of cash flow hedges on total comprehensive income at 30 Sep 2021			
Euro 000s	**Hedging gains (+)/ losses (-) recognised in OCI**	**Ineffective-ness recognised through profit or loss**	**Reclassi-fication through profit or loss**
Commodity price risk	– 107,368	–	– 18,189
Interest rate risk	12,009	–	– 10,299
	– 95,359	**–**	**– 28,488**

Impact of cash flow hedges on total comprehensive income at 30 Sep 2020			
Euro 000s	Hedging gains (+)/ losses (-) recognised in OCI	Ineffective-ness recognised through profit or loss	Reclassi-fication through profit or loss
Commodity price risk	– 48,807	–	– 28,899
Interest rate risk	– 6,977	–	– 8,010
	– 55,784	**–**	**– 36,909**

Ineffectivenesses 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 382,198 thousand and of Euro 364,009 thousand were reclassified through profit or loss and recognised under sales and cost of materials respectively in the 2021 financial year (previous year: Euro 112,285 thousand and Euro 364,009 thousand respectively). For interest rate hedges, an amount of Euro 10,299 thousand was reclassified through profit or loss and recognised under financing expenses (previous year: Euro 8,010 thousand). The reclassifications from equity through profit or loss to the income statement refer to hedged items realised in the financial year under report.

The following table shows the development in the cash flow hedge reserve:

Development in hedge reserve		
Euro 000s	**FY 2021**	FY 2020
Balance at 1 October	– 54,440	– 35,875
Unrealised change in reserve for hedging costs		
Interest rate hedges	310	310
Unrealised change in cash flow hedge reserve		
Commodity hedges	– 107,368	– 48,807
Interest rate hedges	12,009	– 6,977
Reclassification through profit or loss		
Commodity hedges	18,189	28,899
Interest rate hedges	10,299	8,010
Balance at 30 September	**– 121,001**	**– 54,440**

Fair value hedges serve to hedge risks relating to changes in fair value. At MVV, the fair value hedge includes foreign-currency payments with hedged items of Euro 179,017 thousand. The hedging instrument deployed involves a bank liability in British pounds. The hedge of a foreign-currency payment in British pounds in place in the previous year expired in the 2021 financial year.

As of 30 September 2021, existing hedged items were included in fair value hedges with terms of up to 11 years (previous year: 12 years).

Other assets include a cumulative amount of Euro 0 thousand for hedging-related adjustments (previous year: Euro 1,020 thousand).

The following table presents the carrying amounts and nominal values, 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 2021					
	Carrying amount of hedging instrument		**Nominal volume**	**Changes in fair value of hedg-ing instrument**	**Changes in fair value of hedged item**
Euro 000s	**Other financial liabilities**	**Other financial debt**			
Currency risk	–	179,017	179,017	10,827	10,819
	–	**179,017**	**179,017**	**10,827**	**10,819**

Hedging relationships involving fair value hedges at 30 September 2020					
	Carrying amount of hedging instrument		Nominal volume	Changes in fair value of hedging instrument	Changes in fair value of hedged item
Euro 000s	Other financial liabilities	Other financial debt			
Currency risk	1,631	178,702	231,702	5,842	6,084
	1,631	**178,702**	**231,702**	**5,842**	**6,084**

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

Impact of fair value hedges on total comprehensive income at 30 Sep 2021	
Euro 000s	**Ineffective-ness recog-nised through profit or loss**
Currency risk	8
	8

Impact of fair value hedges on total comprehensive income at 30 Sep 2020	
Euro 000s	Ineffective-ness recog-nised through profit or loss
Currency risk	1
	1

In the 2021 financial year, income from the ineffectiveness of a currency hedge was recognised in the financial result. The ineffectiveness resulted from slightly different nominal volumes of intragroup loans.

Capital management
MVV Energie AG is not subject to any statutory minimum capital requirements, but pursues its internal objective of using effective financial management to maintain its equity ratio at a level necessary to attain a good implicit rating on the financial market and to boost the company's earnings strength.

The adjusted equity ratio referred to for management purposes presents adjusted consolidated equity as a proportion of adjusted total assets. Adjusted equity comprises all equity items reported in the consolidated financial statements, including non-controlling and minority interests, but excluding non-operating IFRS 9 derivative measurement items and the associated impact on deferred taxes. MVV intends to maintain an adjusted equity ratio of at least 30 %.

Measures to comply with the targeted equity ratio initially take place within the business planning process and within the framework of investment budgeting in the case of major (unplanned) investment measures. By retaining earnings and issuing shares, the company can basically adjust its equity base to requirements.

The key figure used in our value-based corporate management and the capital management thereby required is the value spread. This key figure is calculated as the difference between the period-based adjusted return on capital employed (adjusted ROCE) and the weighted average cost of capital (WACC).

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

36. Segment reporting

Segment report from 1 October 2020 to 30 September 2021

Euro 000s	Adjusted external sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation and amortisation	Impairment losses
Customer Solutions	3,101,020	287,665	21,057	–
New Energies	622,455	131,408	82,190	–
Supply Reliability	310,325	727,522	73,087	–
Strategic Investments	96,585	1,042	12,190	–
Other Activities	1,090	44,875	15,376	–
Consolidation	–	– 1,192,512	–	–
	4,131,475	**–**	**203,900**	**–**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Income from companies recognised at equity	Investments
Customer Solutions	2,935	46,524	13,683	34,117
New Energies	1,420	120,329	7,283	124,038
Supply Reliability	4,818	77,995	5,309	124,641
Strategic Investments	1,463	22,322	9,568	8,436
Other Activities	1,048	10,984	324	14,586
Consolidation	–	–	–	–
	11,684	**278,154**	**36,167**	**305,818**

Segment report from 1 October 2019 to 30 September 2020

Euro 000s	Adjusted external sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation and amortisation	Impairment losses
Customer Solutions	2,553,218	224,594	28,297	10,463
New Energies	591,482	106,735	80,407	–
Supply Reliability	278,026	617,574	68,850	–
Strategic Investments	90,610	921	11,274	–
Other Activities	1,984	44,627	16,008	–
Consolidation	–	– 994,451	–	–
	3,515,320	**–**	**204,836**	**10,463**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Income from companies recognised at equity	Investments
Customer Solutions	11,773	21,191	– 219	39,223
New Energies	4,919	113,162	5,143	104,333
Supply Reliability	– 6,291	66,871	7,064	148,710
Strategic Investments	– 302	23,521	9,425	18,509
Other Activities	– 186	8,489	91	11,382
Consolidation	–	–	–	–
	9,913	**233,234**	**21,504**	**322,157**

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 services methods, activities and marketing processes for the customers are pooled and almost exclusively target external customers (e.g. sales to third parties).

- The energy from waste plants, biomass power plants, photovoltaics systems, wind turbines, biomethane plants and biogas plants are allocated to the **New Energies** reporting segment. Furthermore, this reporting segment also includes the renewable energies project development and operations management activities.

  The business fields aggregated in this segment focus on the provision of services, solutions and products in connection with renewable energies. The activities within this reporting segment involve the planning, approval, development, construction and operation of technical plants to generate electricity and heat from sustainable/partly sustainable commodities such as wind, waste timber, residual forest timber, green cuttings, waste/RDF, biogas and sunshine. The processes are characterised by long planning, approval, construction and operating stages.

- In addition to conventional energy generation, the **Supply Reliability** reporting segment also includes grid facilities for electricity, heat, gas and water. It comprises combined heat and power generation, grid facilities and further infrastructure required to provide our customers with a secure supply of electricity, heat, gas and water.

  The business fields aggregated in this segment serve to provide customers with a reliable and stable supply of various products. All facilities are characterised by high asset intensity, long technical lifecycles and long-term financing structures.

- The **Strategic Investments** reporting segment consists of the Köthen Energie and MVV Energie CZ subgroups and the at-equity results of select shareholdings in municipal utility companies.

- The **Other Activities** reporting segment consists in particular of the 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 includes both the additions apparent in the respective schedules and the change in non-current assets from first-time consolidation. By contrast, additions to securities and loans do not form part of the investment concept in the management perspective and have therefore been excluded.

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 heating 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 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020	+/– change
EBIT as per income statement	529,668	209,494	+ 320,174
Financial derivative measurement items	– 255,415	19,768	– 275,183
Structural adjustment for part-time early retirement	1	11	– 10
Interest income from finance leases	3,900	3,961	– 61
Adjusted EBIT	**278,154**	**233,234**	**+ 44,920**

Reconciliation of external sales excluding energy taxes with adjusted external sales excluding energy taxes

Euro 000s	**1 Oct 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020	+/– change
Sales after electricity and natural gas taxes	4,233,788	3,432,094	+ 801,694
Realisation effects for financial derivatives	– 102,313	83,226	– 185,539
Adjusted sales after electricity and natural gas taxes	**4,131,475**	**3,515,320**	**+ 616,155**

Of adjusted segment sales with external customers, 91.8 % were generated in Germany (previous year: 92.3 %). 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.

37. 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.

After the elimination of non-cash income and expenses, the year-on-year improvement in annual earnings before taxes (EBT) led the cash flow before working capital and taxes to improve by Euro 14 million. Non-cash IFRS 9 measurement items were the largest item within this elimination.

This positive development was significantly amplified in the cash flow from operating activities, which improved year-on-year by Euro 820 million. This exceptional development was due above all to the high inflow of security deposits for counterparty default risks (margins), which amounted to Euro 843 million (previous year: outflow of Euro 8 million). From an operating perspective, the cash flow was positively influenced compared with the previous year above all by the elimination of the significantly higher volume of provisions recognised. The greatest impact was attributable to the provision of CO_2 rights for the power plant Grosskraftwerk Mannheim, as prices rose sharply in the 2021 financial year, and to provisions for risks resulting from changes in market conditions. These factors were mainly countered by a greater increase in receivables due to higher price levels and the expansion in our electricity and gas trading business. The cash flow was also reduced by changes in VAT liabilities; these mainly resulted from pandemic-related deferments in VAT payments due in the 2020 calendar year. By contrast, no deferments were granted for the VAT due for payment in the 2021 financial year.

The development in the cash flow from investing activities was mainly shaped by a lower volume of payments for other financial assets. As well as a lower volume of payments for finance lease projects, the volume of capital increases at joint ventures recognised using the equity method was also lower in the 2021 financial year. An opposing and thus negative effect resulted above all from divestments, which were lower in the period under report than in the previous year. Payments for the acquisition of fully consolidated companies and other business units remained at around the previous year's level. In the 2021 financial year, these related to the acquisition of the remaining shares in Fernwärme Rhein-Neckar GmbH and in Zschau GmbH, as well as to the acquisition of assets and takeover of staff at IRK DCI GmbH in the context of an asset deal. Overall, the cash flow from investing activities was at the previous year's level.

The cash flow from financing activities increased year-on-year by Euro 94 million, a development mainly due to higher net new borrowing.

MVV posted cash and cash equivalents of Euro 1,258 million as of 30 September 2021 (30 September 2020: Euro 343 million).

The reconciliation of liabilities in connection with financing activities is summarised in the following overview:

Liabilities in connection with financing activities

	30 Sep 2020	**Cash-effective changes**	**Non-cash-effective changes**				**30 Sep 2021**
Euro 000s			**Change in scope of consolidation**	**Changes in exchange rates**	**Additions to leases**	**Other adjust-ments**	
Liabilities to banks	1,515,166	169,926	4,761	21,183	–	–	1,711,036
Lease liabilities	140,946	– 15,775	16	508	24,171	– 1,265	148,601
Other financial debt	60,579	– 33,940	–	–	–	–	26,639
	1,716,691	**120,211**	**4,777**	**21,691**	**24,171**	**– 1,265**	**1,886,276**

38. Related party disclosures

Business transactions performed between the parent company and its consolidated subsidiaries, which constitute related parties, are not outlined in this section, as they were eliminated in the course of consolidation.

The City of Mannheim is the sole shareholder in MKB Mannheimer Kommunalbeteiligungen GmbH. This company owns 99.99 % of the shares in MV Mannheimer Verkehr GmbH, which in turn has a 50.1 % shareholding in MVV Energie AG. The City of Mannheim and the companies it controls therefore represent related parties as defined in IFRS.

Numerous contractually agreed legal relationships are in place between the MVV companies and the City of Mannheim and the companies it controls (electricity, gas, water and district heating supply agreements, rental, leasing and service agreements). Moreover, concession agreements are also in place between MVV Energie AG and the City of Mannheim.

The concession duties to the City of Mannheim amounted to Euro 19,958 thousand (previous year: Euro 19,473 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 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020	**1 Oct 2020 to 30 Sep 2021**	1 Oct 2019 to 30 Sep 2020	**30 Sep 2021**	30 Sep 2020	**30 Sep 2021**	30 Sep 2020
City of Mannheim	9,302	12,032	25,674	24,697	885	32	4,147	6,269
Abfallwirtschaft Mannheim	9,912	7,475	1,515	1,724	1,617	1,330	422	348
GBG Mannheimer Wohnungsbaugesellschaft mbH	13,839	14,091	784	66	98	76	–	15
m:con - mannheim:congress GmbH	3,724	3,449	197	431	5,087	5,373	277	24
MKB Mannheimer Kommunalbeteiligungen GmbH	85	63	–	–	3	–	–	–
MV Mannheimer Verkehr GmbH	33	34	–	1	–	–	–	1
Rhein-Neckar-Verkehr GmbH	7,543	7,480	–	236	40	1,254	491	1,182
Stadtentwässerung Mannheim	2,227	1,521	304	438	240	278	–	75
Associates	5,313	32,176	1,277	1,349	1,568	2,663	1,842	1,827
Joint ventures	175,785	161,091	214,207	192,215	45,285	70,948	60,261	91,741
Other related parties	22,019	21,977	5,892	4,023	7,366	5,813	2,776	1,146
	249,782	**261,389**	**249,850**	**225,180**	**62,189**	**87,767**	**70,216**	**102,628**

The income and expenses with other related parties include income of Euro 18 thousand (previous year: Euro 28 thousand) and expenses of Euro 362 thousand (previous year: Euro 477 thousand) for goods and services provided to management staff performing key functions and members of the Supervisory Board.

Pursuant to IAS 24, related parties also include management staff performing key functions. Alongside the Executive Board, this group of persons at MVV also includes active heads of division and authorised company representatives of MVV Energie AG.

Customer contracts concerning the supply of electricity, gas, water and district heating have been concluded between MVV Energie AG and members of its Executive and Supervisory Boards and members of the management (division heads, authorised representatives). 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 2021. As in the previous year, the company also did not issue any guarantees on behalf of Executive or Supervisory Board members.

MVV Energie AG has compiled a dependent company report in accordance with § 312 AktG for the financial year ending on 30 September 2021. 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 Board, the Supervisory Board, division heads and authorised representatives.

In the year under report, Executive Board members received short-term benefits of Euro 3,109 thousand (previous year: Euro 2,812 thousand). Pension provisions of Euro 12,278 thousand were recognised for them (previous year: Euro 10,714 thousand). The company has not concluded any share-based remuneration agreements or comparable instruments. No long-term remuneration targets have been agreed.

The remuneration paid to active division heads and authorised representatives came to Euro 3,353 thousand in the year under report (previous year: Euro 2,955 thousand). Of this total, Euro 3,247 thousand involved short-term benefits (previous year: Euro 2,845 thousand).

Unless they are insured via municipal supplementary pension companies (ZVKs), division heads and authorised representatives receive a defined contribution company pension of up to 8.6 % of their fixed basic remuneration. They can determine which biometric risks should be covered. The expenses incurred for this scheme amounted to Euro 106 thousand in the 2021 financial year (previous year: Euro 110 thousand).

Active Supervisory Board members were remunerated as follows:

Supervisory Board remuneration

Euro 000s	**FY 2021**	FY 2020
Fixed remuneration (including meeting allowances)	541	525

Individualised information and further details concerning the remuneration of Executive and Supervisory Board members can be found in the Remuneration Report, which forms part of the Combined Management Report.

Former members of the Executive Board received benefits of Euro 725 thousand in the year under report (previous year: Euro 630 thousand). Provisions totalling Euro 18,310 thousand have been stated for pension obligations towards former Executive Board members (previous year: Euro 20,288 thousand). A total of Euro 122 thousand was allocated to this item in the year under report (previous year: Euro 64 thousand).

39. MVV's shareholdings

List of MVV's shareholdings at 30 September 2021

	Town/city	Country	Share of capital % [1]	Footnotes
Fully consolidated subsidiaries				
Associates (Germany)				
AVA Abwasser- und Verwertungsanlagen GmbH	Mörfelden-Walldorf	Germany	100.00	4
beegy GmbH	Mannheim	Germany	100.00	
BEG Gernsbacher Höhe UG (haftungsbeschränkt) & Co. KG	Mainz	Germany	0.00	7
BFE Institut für Energie und Umwelt GmbH	Mühlhausen	Germany	100.00	4
Biokraft Naturbrennstoffe GmbH	Offenbach am Main	Germany	100.00	
Cerventus Naturenergie GmbH	Offenbach am Main	Germany	50.00	
Cerventus Naturenergie Verwaltungs GmbH	Offenbach am Main	Germany	100.00	
Dabit Grundstücksverwaltungsgesellschaft mbH & Co. Vermietungs KG	Mainz	Germany	94.00	
DC-Datacenter-Group GmbH	Wallmenroth	Germany	100.00	
econ solutions GmbH	Munich (dom.: Mannheim)	Germany	100.00	4
En/Da/Net GmbH	Erfurt	Germany	100.00	4
Energienetze Offenbach GmbH	Offenbach am Main	Germany	100.00	4
Energieversorgung Dietzenbach GmbH	Dietzenbach	Germany	50.00	
Energieversorgung Offenbach Aktiengesellschaft	Offenbach am Main	Germany	48.42	2
eternegy GmbH	Mannheim	Germany	100.00	
EVO Ressourcen GmbH	Offenbach am Main	Germany	100.00	4
Fernwärme Rhein-Neckar GmbH	Mannheim	Germany	100.00	
FRASSUR GmbH Umweltschutz-Dienstleistungen	Mörfelden-Walldorf	Germany	100.00	
Gasversorgung Offenbach GmbH	Offenbach am Main	Germany	74.90	
Gesellschaft für Hochspannungsbau Offenbach mbH	Offenbach am Main	Germany	100.00	
IGS Netze GmbH	Gersthofen	Germany	100.00	4
Infrastruktur Oberheimbach II GmbH & Co. KG	Wörrstadt	Germany	72.00	
Infrastruktur Waldweiler GmbH & Co. KG	Wörrstadt	Germany	60.40	
Infrastrukturgesellschaft Hungerberg GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Infrastrukturgesellschaft Veldenz GmbH & Co. KG	Wörrstadt	Germany	61.86	
iwo Pellet Rhein - Main GmbH	Offenbach am Main	Germany	100.00	
juwi AG	Wörrstadt	Germany	100.00	
juwi Bestandsanlagen GmbH	Wörrstadt	Germany	100.00	4
juwi Bio Service & Betriebs GmbH	Wörrstadt	Germany	100.00	
juwi Operations & Maintenance GmbH	Wörrstadt	Germany	100.00	4
juwi Verwaltungs GmbH	Wörrstadt	Germany	100.00	
juwi Wind Germany 135 GmbH & Co. KG	Wörrstadt	Germany	75.45	
juwi Wind Germany 162 GmbH & Co. KG	Wörrstadt	Germany	80.00	
juwi Wind Germany 180 GmbH & Co. KG	Wörrstadt	Germany	44.80	
juwi Wind Germany 202 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 203 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 33 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany Verwaltungs GmbH	Wörrstadt	Germany	100.00	
Köthen Energie GmbH	Köthen (Anhalt)	Germany	100.00	
MDW Muldendienst West GmbH	Frankfurt am Main	Germany	100.00	
mobiheat GmbH	Friedberg in Bayern	Germany	74.90	
MVV Alpha drei GmbH	Mannheim	Germany	100.00	4
MVV Alpha fünfzehn GmbH	Mannheim	Germany	100.00	4
MVV Biogas Dresden GmbH	Mannheim (dom.: Dresden)	Germany	100.00	
MVV Biomethan GmbH	Mannheim (dom.: Wanzleb-en-Börde)	Germany	100.00	

List of MVV's shareholdings at 30 September 2021

	Town/city	Country	Share of capital %[1]	Footnotes
MVV decon GmbH	Mannheim	Germany	100.00	
MVV Enamic GmbH	Mannheim	Germany	100.00	4
MVV Enamic Korbach GmbH	Korbach	Germany	100.00	4
MVV Enamic Ludwigshafen GmbH	Mannheim	Germany	100.00	
MVV Enamic Naturenergie GmbH	Mannheim	Germany	100.00	
MVV EnergySolutions GmbH	Mannheim	Germany	100.00	4
MVV 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	97.50	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, 6
New Breeze GmbH	Wörrstadt	Germany	100.00	
RZ-Products GmbH	Wallmenroth	Germany	100.00	
Soluvia Energy Services GmbH	Offenbach am Main	Germany	100.00	
Soluvia IT-Services GmbH	Kiel	Germany	100.00	
Stadtwerke Kiel Aktiengesellschaft	Kiel	Germany	51.00	
SWKiel Netz GmbH	Kiel	Germany	100.00	4
SWKiel Speicher GmbH	Kiel	Germany	100.00	4
Umspannwerk Kirchberg 2 GmbH & Co. KG	Wörrstadt	Germany	51.60	
Windpark Albisheim GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Dirlammen GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Hungerberg I GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Hungerberg II GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windpark Kirchberg GmbH & Co. KG	Offenbach am Main	Germany	100.00	
Windwärts Energie GmbH	Hanover	Germany	100.00	
Windwärts Photovoltaik GmbH	Hanover	Germany	100.00	
Zschau GmbH	Mannheim	Germany	100.00	

List of MVV's shareholdings at 30 September 2021				
	Town/city	Country	Share of capital % [1]	Footnotes
Fully consolidated subsidiaries				
Associates (international)				
Cactus Garden Solar LLC	Delaware	USA	100.00	
Corsoleil EURL i.L.	Saint Florent	France	100.00	
CTZ s.r.o.	Uherské Hradiště	Czech Republic	50.96	
e.services s.r.o.	Děčín	Czech Republic	100.00	
Electaparc S.A.	Montevideo	Uruguay	100.00	
ENERGIE Holding a.s.	Prague	Czech Republic	100.00	
G-LINDE s.r.o.	Prague	Czech Republic	100.00	
G-RONN s.r.o.	Prague	Czech Republic	100.00	
IROMEZ s.r.o.	Pelhřimov	Czech Republic	100.00	
JSI 01 Srl	Verona	Italy	100.00	
JSI Construction Group LLC	Delaware	USA	100.00	
JSI Equipment Purchasing Inc.	Delaware	USA	100.00	
JSI Equipment Solutions LLC	Delaware	USA	100.00	
JSI Milford Realty Company LLC	Delaware	USA	100.00	
JSI O&M Group LLC	Delaware	USA	100.00	
juwi Energie Rinnovabili Srl	Verona	Italy	100.00	
juwi Energii Regenerabile S.R.L.	Bucharest	Romania	99.00	
juwi Energy Services (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Hellas Renewable Energy Sources Single Member S.A.(previously: juwi Hellas Renewable Energy Sources A.E.)	Athens	Greece	100.00	
juwi Holding US LLC	Delaware	USA	100.00	
juwi Inc.	Delaware	USA	100.00	
juwi India Renewable Energies Private Limited	Bengaluru	India	100.00	
juwi Philippines Inc.	Pasay City	Philippines	99.99	
juwi Renewable Energies (Pty) Ltd.	Cape Town	South Africa	100.00	
juwi Renewable Energies Limited	London	UK	100.00	
juwi renewable energies Pvt. Ltd.	Singapore	Singapore	100.00	
juwi Renewable Energies Thai Co., Ltd.	Bangkok	Thailand	100.00	
juwi Renewable Energy Pty. Ltd.	Brisbane	Australia	100.00	
juwi Singapore Projects Pvt. Ltd.	Singapore	Singapore	100.00	
juwi Solar ZA Construction 1 (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Solar ZA Construction 2 (Pty) Ltd.	Cape Town	South Africa	92.00	
juwi Solar ZA Construction 3 (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Solar ZA Construction 4 (Pty) Ltd.	Cape Town	South Africa	60.00	
juwi Solar ZA O&M 1 (Pty) Ltd.	Cape Town	South Africa	49.00	
juwi Solar ZA O&M 2 (Pty) Ltd.	Cape Town	South Africa	100.00	
juwi Viet Nam Company Limited	Hanoi	Vietnam	100.00	
juwi Wind LLC	Delaware	USA	100.00	
mobiheat Schweiz GmbH	Dietlikon	Switzerland	100.00	
mobiheat Österreich GmbH	Sankt Lorenz	Austria	100.00	
MVV Energie CZ a.s.	Prague	Czech Republic	100.00	
MVV Environment Baldovie Energy Limited	Dundee	UK	100.00	
MVV Environment Baldovie Limited	Dundee	UK	100.00	
MVV Environment Baldovie Waste Limited	Dundee	UK	100.00	
MVV Environment Devonport Limited	Plymouth	UK	100.00	
MVV Environment Limited	Plymouth	UK	100.00	
MVV Environment Ridham Limited	Sittingbourne / Iwade	UK	100.00	

List of MVV's shareholdings at 30 September 2021

	Town/city	Country	Share of capital %[1]	Footnotes
MVV Environment Services Limited	Plymouth	UK	100.00	
OPATHERM a.s.	Opava	Czech Republic	100.00	
POWGEN a.s.	Prague	Czech Republic	100.00	
Rocky Mountain Solar LLC	Delaware	USA	100.00	
Teplárna Liberec, a.s.	Liberec	Czech Republic	76.04	
TERMIZO a.s.	Liberec	Czech Republic	100.00	
TERMO Děčín a.s.	Děčín	Czech Republic	96.91	
Zásobování teplem Vsetín a.s.	Vsetín	Czech Republic	100.00	
Ceskolipská teplárenská a.s.	Česká Lípa	Czech Republic	75.00	
Českolipské teplo a.s.	Prague	Czech Republic	100.00	

Unconsolidated other shareholdings				
Associates (Germany)				
Blue Village FRANKLIN Mobil GmbH	Mannheim	Germany	100.00	
Erschließungsträgergesellschaft Weeze mbH	Weeze	Germany	75.00	
EVO Vertrieb GmbH	Offenbach am Main	Germany	100.00	
Grüne Wärme GmbH (previously: MVV Alpha vier GmbH)	Mannheim	Germany	100.00	4, 5
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 190 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 192 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 197 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 204 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 205 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 206 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 212 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 213 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 214 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 215 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 216 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 217 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 218 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 219 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 220 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 221 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 222 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 223 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 224 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 225 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 226 GmbH & Co. KG	Wörrstadt	Germany	100.00	5

List of MVV's shareholdings at 30 September 2021	Town/city	Country	Share of capital % [1]	Footnotes
juwi Wind Germany 227 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 228 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 229 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 230 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 231 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
luminatis Deutschland GmbH	Landau in der Pfalz	Germany	100.00	5
MVV Alpha zwei GmbH	Mannheim	Germany	100.00	4
MVV Insurance Services GmbH	Mannheim	Germany	100.00	
MVV Regioplan GmbH	Mannheim	Germany	100.00	4
MVV Windpark Verwaltungs GmbH	Mannheim	Germany	100.00	
PEJO Elektrotechnik GmbH	Mannheim	Germany	100.00	
Windpark Hellenthal Wiesenhardt GmbH & Co. KG	Wörrstadt	Germany	100.00	
Windpark Mußbach GmbH & Co. KG	Wörrstadt	Germany	100.00	
Windpark Wiebelsheim GmbH & Co. KG	Wörrstadt	Germany	100.00	
Windwärts Betriebs- und Beteiligungsgesellschaft mbH	Hanover	Germany	100.00	
Windwärts Projektmanagement GmbH	Hanover	Germany	100.00	

Unconsolidated other shareholdings				
Associates (international)				
Achab Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Alachua Solar LLC	Delaware	USA	100.00	
Ashdown Solar LLC	Delaware	USA	100.00	
Axial Basin Solar LLC	Delaware	USA	100.00	
Baca Solar LLC	Delaware	USA	100.00	5
Belviworx (Pty) Ltd.	Cape Town	South Africa	100.00	5
Bench Solar LLC	Delaware	USA	100.00	
Bishop Cap Solar LLC	Delaware	USA	100.00	
Black Hollow Solar LLC	Delaware	USA	100.00	
Blue Creek Solar LLC	Delaware	USA	100.00	
Blue Earth Solar LLC	Delaware	USA	100.00	

List of MVV's shareholdings at 30 September 2021

	Town/city	Country	Share of capital % [1]	Footnotes
Cache Valley Solar LLC	Delaware	USA	100.00	
Carlino Srl	Verona	Italy	100.00	5
Castle Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Chapeno Solar LLC	Delaware	USA	100.00	
Chico Creek Solar LLC	Delaware	USA	100.00	
Chino Valley Solar LLC	Delaware	USA	100.00	
Chinquapin Solar LLC	Delaware	USA	100.00	
Coyote Gulch Solar LLC	Delaware	USA	100.00	
Crab Creek Solar LLC	Delaware	USA	100.00	
Curry Hill Solar LLC	Delaware	USA	100.00	
Daisy Canyon 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	
Durbavert (Pty) Ltd.	Cape Town	South Africa	100.00	5
Fairforest Solar LLC	Delaware	USA	100.00	
Gila Solar LLC	Delaware	USA	100.00	
Hartebeest Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Highland Solar LLC	Delaware	USA	100.00	
Hotazel Solar Farm 1 (Pty) Ltd.	Cape Town	South Africa	100.00	
Hotazel Solar Farm 2 (Pty) Ltd.	Cape Town	South Africa	100.00	
Hudsonville Solar LLC	Delaware	USA	100.00	
JSI Procurement Group LLC	Delaware	USA	100.00	
JSI Rockfish Realty LLC	Delaware	USA	100.00	
juwi Devco Pty. Ltd.	Brisbane	Australia	100.00	
juwi Development 01 Srl	Verona	Italy	100.00	
juwi Development 02 Srl	Verona	Italy	100.00	
juwi Development 03 Srl	Verona	Italy	100.00	
juwi Development 04 Srl	Verona	Italy	100.00	
juwi Development 05 Srl	Verona	Italy	100.00	
juwi Development 06 Srl	Verona	Italy	100.00	
juwi Development 07 Srl	Verona	Italy	100.00	
juwi Development 08 Srl	Verona	Italy	100.00	
juwi Development 09 Srl	Verona	Italy	100.00	
juwi Energy Services 2 (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Solar ZA Construction 9 (Pty) Ltd.	Cape Town	South Africa	60.00	
JWT Asset Co., Ltd.	Bangkok	Thailand	49.80	6
Kaip Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Kalahanai Solar LLC	Delaware	USA	100.00	
Kap Vley Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Kenhardt PV1 (Pty) Ltd.	Cape Town	South Africa	100.00	
Kenhardt PV2 (Pty) Ltd.	Cape Town	South Africa	100.00	5
Kenhardt PV3 (Pty) Ltd.	Cape Town	South Africa	100.00	5
Kiowa Community Solar LLC	Delaware	USA	100.00	
Kiowa Creek Solar LLC	Delaware	USA	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	

List of MVV's shareholdings at 30 September 2021				
	Town/city	Country	Share of capital % [1]	Footnotes
La Garita Solar LLC	Delaware	USA	100.00	
Lavaca Solar LLC	Delaware	USA	100.00	
Los Brazos Solar LLC	Delaware	USA	100.00	
luminatis S.à.r.l.	Luxembourg	Luxembourg	100.00	
Marovax (Pty) Ltd.	Cape Town	South Africa	100.00	
Mesquite Solar LLC	Delaware	USA	100.00	
Moffat Solar LLC	Delaware	USA	100.00	
Monarch Solar LLC	Delaware	USA	100.00	
Monaville Solar LLC	Delaware	USA	100.00	
Muleshoe Solar LLC	Delaware	USA	100.00	
Namies Wind Farm (Pty) Ltd.	Cape Town	South Africa	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	
Pacolet Solar LLC	Delaware	USA	100.00	
Palisade Solar LLC	Delaware	USA	100.00	
Paradox Valley Solar LLC	Delaware	USA	100.00	
Piacenza 4 Srl	Verona	Italy	100.00	5
Piacenza 9 Srl	Verona	Italy	100.00	5
Pike Solar LLC	Delaware	USA	100.00	
Pronghorn Solar LLC	Delaware	USA	100.00	
Rattlesnake Flat Solar LLC	Delaware	USA	100.00	
Red Dirt Solar LLC	Delaware	USA	100.00	
Royal Slope Solar LLC	Delaware	USA	100.00	
Saddle Mountain Solar LLC	Delaware	USA	100.00	5
San Carlos Solar LLC	Delaware	USA	100.00	
San Tan Mountain Solar LLC	Delaware	USA	100.00	
Santa Rosa Solar LLC	Delaware	USA	100.00	
Seward Solar LLC	Delaware	USA	100.00	
Sherman Solar LLC	Delaware	USA	100.00	
Sierra Mojada Solar LLC	Delaware	USA	100.00	
Sierra Vista Solar LLC	Delaware	USA	100.00	
Silver Moon Solar LLC	Delaware	USA	100.00	
Silver River Solar LLC	Delaware	USA	100.00	
Skyview Solar LLC	Delaware	USA	100.00	
Spanish Peaks II Solar LLC	Delaware	USA	100.00	
Spanish Peaks Solar LLC	Delaware	USA	100.00	
Squirrel Creek Solar LLC	Delaware	USA	100.00	
Stansburry Solar II LLC	Delaware	USA	100.00	
Stansburry Solar LLC	Delaware	USA	100.00	
Tailwind Solar LLC	Delaware	USA	100.00	
Vredendal Solar Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Wildebeest Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Wolf Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Zingesele Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	

List of MVV's shareholdings at 30 September 2021

	Town/city	Country	Share of capital % [1]	Footnotes
At equity				
Joint ventures (Germany)				
ABeG Abwasserbetriebsgesellschaft mbH	Dietzenbach	Germany	49.00	
Allegro engineering GmbH	Markranstädt-Thronitz	Germany	30.00	
AVR BioGas GmbH	Sinsheim	Germany	41.50	
BEEGY Operations GmbH	Mannheim	Germany	51.00	
Biomasse Rhein-Main GmbH	Flörsheim am Main	Germany	33.33	
enerix Franchise GmbH & Co. KG	Regensburg	Germany	25.10	
enerix Management GmbH	Regensburg	Germany	25.10	
Gemeinschaftskraftwerk Kiel Gesellschaft mit beschränkter Haftung	Kiel	Germany	50.00	
Grosskraftwerk Mannheim Aktiengesellschaft	Mannheim	Germany	28.00	
Infrastruktur Donnersberg GmbH & Co. KG	Wörrstadt	Germany	22.91	
Infrastrukturgesellschaft Rheinhessen II GmbH & Co. KG	Wörrstadt	Germany	48.00	
KommunalWind GmbH & Co. KG	Tübingen	Germany	50.00	
MAIN DC Asset GmbH	Offenbach am Main	Germany	60.00	
MAIN DC Offenbach GmbH	Offenbach am Main	Germany	60.00	
Mainnetz GmbH	Obertshausen	Germany	25.10	
Qivalo GmbH	Mannheim	Germany	42.50	
ReNabi GmbH	Mannheim	Germany	51.00	
Rockenhausen Windenergie-Projektentwicklungs GmbH i.L.	Rockenhausen	Germany	49.00	
sMART City Mannheim GmbH	Mannheim	Germany	50.00	5
Stadtwerke Ingolstadt Beteiligungen GmbH	Ingolstadt	Germany	48.40	
Stadtwerke Sinsheim Versorgungs GmbH & Co. KG	Sinsheim	Germany	30.00	
Umspannwerk Donnersberg GmbH & Co. KG	Wörrstadt	Germany	22.91	
Windpark Biebelnheim-Gabsheim GmbH & Co. KG	Wörrstadt	Germany	100.00	
Windpark Worms Repowering GmbH & Co. KG	Wörrstadt	Germany	100.00	
wärme.netz.werk Rhein-Neckar GmbH	Heidelberg	Germany	33.34	
At equity				
Joint ventures (international)				
juwi Shizen Energy Inc.	Tokyo	Japan	50.00	
At equity				
Associates (Germany)				
ESN EnergieSystemeNord GmbH	Schwentinental	Germany	25.00	
Infrastrukturgesellschaft Erbes-Büdesheim GmbH & Co. KG	Wörrstadt	Germany	22.36	
juwi Wind Germany 100 GmbH & Co. KG	Wörrstadt	Germany	34.32	
Naturenergie Main-Kinzig GmbH	Gelnhausen	Germany	50.00	
Netzgesellschaft Edingen-Neckarhausen GmbH & Co. KG	Edingen-Neckarhausen	Germany	24.00	
Phoenix Energie GmbH	Hanover	Germany	0.05	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 2021

	Town/city	Country	Share of capital % [1]	Footnotes
Other minority shareholdings				
(Germany)				
8KU GmbH	Berlin	Germany	12.50	
GeoHardt GmbH	Schwetzingen	Germany	50.00	5
Infrastruktur Oberheimbach I GmbH & Co. KG	Wörrstadt	Germany	15.00	
Infrastrukturgesellschaft Bischheim GmbH & Co. KG	Wörrstadt	Germany	15.31	
juwi Wind Germany 129 GmbH & Co. KG	Wörrstadt	Germany	16.00	
Klimaschutzagentur Mannheim gemeinnützige GmbH	Mannheim	Germany	40.00	
Main-Kinzig-Entsorgungs- und Verwertungs GmbH	Gelnhausen	Germany	49.00	
Management Stadtwerke Buchen GmbH	Buchen-Odenwald	Germany	25.20	
RIO Holzenergie GmbH & Co. Langelsheim KG	Wörrstadt	Germany	37.55	
Stadtmarketing Mannheim GmbH	Mannheim	Germany	3.09	
Stadtwerke Langen Gesellschaft mit beschränkter Haftung	Langen	Germany	10.00	4
Stadtwerke Schwetzingen GmbH & Co. KG	Schwetzingen	Germany	10.00	
Stadtwerke Schwetzingen Verwaltungsgesellschaft mbH	Schwetzingen	Germany	10.00	
Stadtwerke Sinsheim Verwaltungs GmbH	Sinsheim	Germany	30.00	
Stadtwerke Walldorf GmbH & Co. KG	Walldorf	Germany	25.10	
Stadtwerke Walldorf Verwaltungs GmbH	Walldorf	Germany	25.10	
SWT Regionale Erneuerbare Energien GmbH	Trier	Germany	51.00	
Wasserversorgungsverband Neckargruppe	Edingen-Neckarhausen	Germany	25.00	
WiWi Windkraft GmbH & Co. Westpfalz KG	Wörrstadt	Germany	5.32	
WVE Wasserversorgungs- und -entsorgungsgesellschaft Schriesheim mbH	Schriesheim	Germany	24.50	

1 Share of capital at 30 September 2021 pursuant to § 16 (4) AktG; equity and annual net income pursuant to HGB or local requirements

2 Majority of voting rights

3 No voting right majority

4 Profit transfer/operating profit transfer agreement

5 Added in financial year

6 Control agreement or controlling influence

7 Citizens' energy company at the Group

Further disclosures can be found in the list of shareholdings of MVV Energie AG.

40. Auditor's fee

The following fees were incurred in Germany for the services performed by the auditor of the consolidated financial statements, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, in the 2021 financial year:

Auditor's fee

Euro 000s	FY 2021	FY 2020
Audit services	2,166	1,962
Other audit services	486	230
Tax advisory services	54	41
Other services	333	58
	3,039	**2,291**

The audit services line item relates above all to the fees paid for the audit of the consolidated financial statements and the audit of the separate financial statements of MVV Energie AG and its subsidiaries. The fees paid for other audit services mainly involve audits performed in accordance with energy industry requirements/attestations (EEG, KWKG) and voluntary certification services. The tax advisory services line item particularly involves fees for support provided in the context of external audits and tax advisory services in the field of transfer prices. The fees paid for other services chiefly include fees for market advisory services in connection with obtaining comparative figures.

41. Utilisation of § 264 (3) HGB

The following German subsidiaries will draw on the disclosure exemption provided for under § 264 (3) HGB for the 2021 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 Umwelt GmbH, Mannheim
- MVV Umwelt Ressourcen GmbH, Mannheim

42. Declaration of Compliance (§ 161 AktG)

The Executive and Supervisory Boards of MVV Energie AG refer to the management report in respect of the Declaration of Compliance with the recommendations made by the German Corporate Governance Code.

The complete declaration is published on the internet at [redacted]

43. Information on concessions

In addition to the concession agreements between the City of Mannheim and MVV Energie AG (see Note 38 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 15 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.

44. Events after balance sheet date

We are not aware of any events after the balance sheet date.

Mannheim, 9 November 2021

MVV Energie AG

Executive Board

[redacted]

Dr. Müller   Amann   Klöpfer   Dr. 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, 9 November 2021

MVV Energie AG

Executive Board

[redacted]

Dr. Müller	Amann	Klöpfer	Dr. 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

Dr. Peter Kurz
(Chairman)
Lord High Mayor of City of Mannheim

Heike Kamradt [1]
(Deputy Chair)
Chair of Group Works Council

Johannes Böttcher [1]
Chairman of Works Council
of Energieversorgung Offenbach AG

Angelo Bonelli [1]
Trade Union Secretary
ver.di Baden-Württemberg State District
(since 12 March 2021)

Timo Carstensen [1]
Deputy Chairman of Works Council
of Stadtwerke Kiel AG

Sabine U. Dietrich
Supervisory Board Member, Consultant

Ralf Eisenhauer
Mayor of City of Mannheim
for Construction, Planning, Transport, Sport
(until 12 March 2021)

Peter Erni [1]
Trade Union Secretary at ver.di Rhine-Neckar
(until 12 March 2021)

Detlef Falk [1]
Chairman of Works Council of Stadtwerke Kiel AG

Gabriele Gröschl-Bahr [1]
Head of Social Insurance Division at ver.di, Berlin
(until 12 March 2021)

Martin F. Herrmann
Business Angel, Mentor
(since 12 March 2021)

Barbara Hoffmann
Auditor, Tax Advisor

Gregor Kurth
Partner, Infrastructure Investments, Europe,
First Sentier Investors (FSI), London, UK

Thoralf Lingnau [1]
Member of Works Council

Dr. Lorenz Näger
Former Deputy Chairman of Executive Board and CFO
of HeidelbergCement AG

Tatjana Ratzel
Lawyer, Head of Department
INTER Krankenversicherung AG Mannheim

Thorsten Riehle
Managing Director of Capitol-Betriebs GmbH Mannheim
(since 12 March 2021)

Susanne Schöttke [1]
State District Director, ver.di Nord
(since 12 March 2021)

Bernhard Schumacher [1]
Head of Smart Cities Division at MVV Energie AG

Dr. Stefan Seipl
Businessman, Independent Management Consultant

Christian Specht
First Mayor of City of Mannheim

Prof. Heinz-Werner Ufer
Graduate in Economics
(until 12 March 2021)

Susanne Wenz [1]
Deputy State District Director, ver.di
Baden-Württemberg

Jürgen Wiesner [1]
Chairman of Works Council of MVV Energie AG

Positions held by Executive and Supervisory Board members on supervisory boards or comparable supervisory bodies are listed in detail on the following pages.

1 Employee representative

MEMBERS OF SUPERVISORY BOARD COMMITTEES AT MVV ENERGIE AG

Committee	Name
Audit Committee	• Dr. Lorenz Näger (Chairman since 12 March 2021/previously committee member) • Prof. Heinz-Werner Ufer (Chairman until 12 March 2021) • Heike Kamradt (Deputy Chair) • Angelo Bonelli (since 12 March 2021) • Peter Erni (until 12 March 2021) • Detlef Falk • Martin F. Herrmann (since 12 March 2021) • Gregor Kurth
Personnel Committee	• Dr. Peter Kurz (Chairman) • Heike Kamradt (Deputy Chair) • Angelo Bonelli (since 12 March 2021) • Ralf Eisenhauer (until 12 March 2021) • Peter Erni (until 12 March 2021) • Barbara Hoffmann (since 12 March 2021) • Gregor Kurth • Jürgen Wiesner
Nomination Committee	• Dr. Peter Kurz (Chairman) • Ralf Eisenhauer (until 12 March 2021) • Barbara Hoffmann • Gregor Kurth • Dr. Lorenz Näger (since 12 March 2021) • Tatjana Ratzel • Thorsten Riehle (since 12 March 2021) • Prof. Heinz-Werner Ufer (until 12 March 2021)
Mediation Committee	• Dr. Peter Kurz (Chairman) • Heike Kamradt • Gregor Kurth • Jürgen Wiesner
New Authorised Capital Creation Committee	• Dr. Peter Kurz (Chairman) • Ralf Eisenhauer (until 12 March 2021) • Peter Erni (until 12 March 2021) • Heike Kamradt • Gregor Kurth • Dr. Lorenz Näger (since 12 March 2021) • Tatjana Ratzel • Thorsten Riehle (since 12 March 2021) • Christian Specht • Prof. Heinz-Werner Ufer (until 12 March 2021) • Jürgen Wiesner (since 12 March 2021)

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 (since 28 June 2021) • Energieversorgung Offenbach AG, Offenbach (Chairman) • Grosskraftwerk Mannheim AG, Mannheim • Juwi AG, Wörrstadt (Chairman) • MVV Enamic GmbH, Mannheim (Deputy Chairman) • MVV Insurance Services GmbH, Mannheim (Chairman) • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim • Stadtwerke Kiel AG, Kiel (Chairman)	
Verena Amann	• Energieversorgung Offenbach AG, Offenbach • Juwi AG, Wörrstadt • MVV Enamic GmbH, Mannheim • MVV Netze GmbH, Mannheim • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt • Stadtwerke Kiel AG, Kiel	
Ralf Klöpfer	• Energieversorgung Offenbach AG, Offenbach • IDOS Software AG, Karlsruhe • Juwi AG, Wörrstadt • MVV Enamic GmbH, Mannheim (Chairman) • MVV Trading GmbH, Mannheim (Chairman) • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt (Deputy Chairman) • Stadtwerke Kiel AG, Kiel	• MVV Energie CZ a.s., Prague, Czech Republic (Chairman) • Qivalo GmbH, Mannheim (Chairman) • Soluvia GmbH, Mannheim (until 30 November 2020) • Stadtmarketing Mannheim GmbH, Mannheim
Dr. Hansjörg Roll	• Energieversorgung Offenbach AG, Offenbach • Grosskraftwerk Mannheim AG, Mannheim (Chairman) • Juwi AG, Wörrstadt (Deputy Chairman) • MVV Netze GmbH, Mannheim (Chairman) • MVV Umwelt GmbH, Mannheim (Chairman) • Stadtwerke Kiel AG, Kiel	• MVV Energie CZ a.s., Prague, Czech Republic • Soluvia GmbH, Mannheim (Chairman) (until 30 November 2020)

MEMBERS OF SUPERVISORY BOARD OF MVV ENERGIE AG

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Dr. Peter Kurz (Chairman) Lord High Mayor of City of Mannheim	• Universitätsklinikum Mannheim GmbH, Mannheim (Chairman)	• GBG Mannheimer Wohnungsbaugesellschaft mbH, Mannheim (Chairman) • mg: mannheimer gründungszentren gmbh, Mannheim (Chairman) • MKB Mannheimer Kommunal-Beteiligungen GmbH, Mannheim (Chairman) • MWS Projektentwicklungsgesellschaft mbH, Mannheim (Chairman) • Sparkasse Rhein Neckar Nord, Mannheim (Chairman) • Stadtmarketing Mannheim GmbH, Mannheim
Heike Kamradt (Deputy Chair) Chair of Group Works Council	• MVV Enamic GmbH, Mannheim • MVV Insurance Services GmbH, Mannheim • MVV Netze GmbH, Mannheim • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim	• Soluvia Energy Services GmbH, Offenbach
Johannes Böttcher Chairman of Works Council of Energieversorgung Offenbach AG	• Energieversorgung Offenbach AG, Offenbach (Deputy Chairman)	
Angelo Bonelli Trade Union Secretary at ver.di Rhine-Neckar (since 12 March 2021)	• TransnetBW GmbH, Stuttgart • NetComBW GmbH, Ellwangen (until 4 May 2021)	
Timo Carstensen Deputy Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	
Sabine U. Dietrich Supervisory Board Member, Consultant	• Commerzbank AG, Frankfurt • H&R GmbH & Co. KGaA, Salzbergen	

Name Occupation	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Ralf Eisenhauer Mayor of City of Mannheim for Construction, Planning, Transport, Sport (until 12 March 2021)	• Rhein-Neckar-Verkehr GmbH, Mannheim (until 24 November 2020)	• Sparkasse Rhein Neckar Nord, Mannheim (until 24 November 2020) • BBS Bau und Betriebsservice GmbH, Mannheim (since 1 January 2021) • GBG Mannheimer Wohnungsbaugesellschaft mbH, Mannheim (since 3 March 2021) • MKB Mannheimer Kommunal-Beteiligungen GmbH, Mannheim (since 1 January 2021) • MPB Mannheimer Parkhausbetriebe GmbH, Mannheim (Chairman) (since 1 January 2021) • MWS Projektentwicklungsgesellschaft mbH, Mannheim • (since 3 March 2021)
Peter Erni Trade Union Secretary at ver.di Rhine-Neckar (until 12 March 2021)		
Detlef Falk Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	• Soluvia GmbH, Mannheim (until 30 November 2020) • Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel
Gabriele Gröschl-Bahr Head of Social Insurance Division at ver.di, Berlin (until 12 March 2021)		• Board of Directors of Federal Employment Agency, Nuremberg • Supervisory Board of Federal and State Government Employees Retirement Fund (BVL), Karlsruhe (Chair)
Martin F. Herrmann Business Angel, Mentor (since 12 March 2021)		
Barbara Hoffmann Auditor, Tax Advisor		• Berliner Stadtreinigungsbetriebe, Anstalt des öffentlichen Rechts, Berlin
Gregor Kurth Partner, Infrastructure Investments, Europe, First Sentier Investors (FSI), London, UK		• Utilitas Group, Estonia • Owlcastle Holdings Limited, UK
Thoralf Lingnau Member of Works Council of MVV Energie AG	• MVV Trading GmbH, Mannheim	

Name Occupation	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Dr. Lorenz Näger Former Deputy Chairman of Executive Board and CFO of HeidelbergCement AG	• PHÖNIX Pharma SE, Mannheim	• Cimenteries CBR S.A., Brussels, Belgium (until 31 August 2021) • ENCI Holding N.V., 's-Hertogenbosch, Netherlands (until 31 August 2021) • Hanson Pioneer España, S.L.U., Madrid, Spain (until 31 August 2021) • HeidelbergCement Canada Holding Limited, Maidenhead, UK (until 31 August 2021) • HeidelbergCement Holding S.à.r.l., Luxembourg (until 31 August 2021) • HeidelbergCement UK Holding Limited, Maidenhead, UK (until 31 August 2021) • HeidelbergCement UK Holding II Limited, Maidenhead, UK (until 31 August 2021) • Italcementi Fabbriche Riunite Cemento S.p.A., Bergamo, Italy (until 31 August 2021) • Lehigh B.V., 's-Hertogenbosch, Netherlands (Chairman) (until 31 August 2021) • Lehigh Hanson, Inc., Irving, TX, USA (until 31 August 2021) • Lehigh Hanson Materials Limited, Calgary, Canada (until 31 August 2021) • PHOENIX Pharmahandel GmbH & Co. KG, Mannheim, Germany • PT Indocement Tunggal Prakarsa Tbk., Jakarta, Indonesia
Tatjana Ratzel Lawyer, Head of Sickness Allowance Department at INTER Krankenversicherung AG Mannheim		
Thorsten Riehle Managing Director of Capitol-Betriebs GmbH Mannheim (since 12 March 2021)		• mg: mannheimer gründungszentren gmbH, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Susanne Schöttke State District Director, ver.di Nord (since 12 March 2021)	• Telekom Deutschland GmbH, Bonn	

Name Occupation	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Bernhard Schumacher Head of Smart Cities Division at MVV Energie AG		• Management Stadtwerke Buchen GmbH, Buchen (Deputy Chairman) • Stadtwerke Schwetzingen Verwaltungsgesellschaft mbH, Schwetzingen • Stadtwerke Walldorf GmbH & Co. KG, Walldorf
Dr. Stefan Seipl Businessman, Independent Management Consultant	• Ferngas Netzgesellschaft mbH, Schwaig (Chairman) • Pfisterer Holding AG, Winterbach (since 3 August 2021)	• Nordion Energi AB, Malmö, Sweden
Christian Specht First Mayor of City of Mannheim	• Rhein-Neckar-Verkehr GmbH, Mannheim (Chairman)	• MKB Mannheimer Kommunal-Beteiligungen GmbH, Mannheim (Deputy Chairman) • MV Verkehr GmbH, Mannheim (Chairman) • Verkehrsverbund Rhein-Neckar GmbH (VRN), Mannheim (Chairman)
Prof. Heinz-Werner Ufer Graduate in Economics (until 12 March 2021)	• Amprion GmbH, Dortmund (Chairman) (until 30 November 2020)	
Susanne Wenz Deputy State District Director, ver.di Baden-Württemberg	• Bausparkasse Schwäbisch Hall AG, Schwäbisch Hall (until 31 March 2021)	• PSD Bank Karlsruhe-Neustadt eG, Karlsruhe
Jürgen Wiesner Chairman of Works Council of MVV Energie AG	• MVV Enamic GmbH, Mannheim • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim	• Soluvia GmbH, Mannheim (until 30 November 2020) • Soluvia IT-Services GmbH, Kiel

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 2021, the consolidated statement of comprehensive income, consolidated income statement, consolidated statement of changes in equity and consolidated cash flow statement for the financial year from 1 October 2020 to 30 September 2021, and notes to the 2021 consolidated financial statements of MVV, including 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 2020 to 30 September 2021. 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 accordance with German legal requirements.

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 2021, and of its financial performance for the financial year from 1 October 2020 to 30 September 2021, 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) point (f) of the EU Audit Regulation, we declare that we have not provided 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 2020 to 30 September 2021. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

❶ Recoverability of goodwill
❷ Accounting treatment of energy trading transactions

Our presentation of these key audit matters has been structured in each case as follows:

① Matter and issue
② Audit approach and findings
③ Reference to further information

Hereinafter we present the key audit matters:

❶ Recoverability of goodwill

① Goodwill amounting in total to € 209 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 caried out at 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 using the value in use. The present value of the future cash flows from the respective group of cash-generating units normally serves as the basis of valuation. Present values are calculated using discounted cash flow models. For this purpose, the adopted medium-term business plan of the Group forms the starting point which is extrapolated based on assumptions about long-term rates of growth. Expectations relating to future market developments and assumptions about the development of macroeconomic factors are also taken into account. The discount rate used is the weighted average cost of capital for the respective group of cash-generating units. Based on the results of the regular impairment tests, no impairment losses were recognised in the current financial year.

The outcome of this valuation exercise is dependent to a large extent on the estimates made by the executive directors with respect to the future cash inflows from 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. Against this background and due to 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 things. After matching the future cash inflows used for the calculation against the adopted medium-term business plan of 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. In the knowledge that even relatively small 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. In order to reflect the uncertainty inherent in the projects, 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 are also within the ranges considered by us to be reasonable.

③ The Company's goodwill disclosures are contained in note "14 Intangible assets" of the notes to MVV's 2021 consolidated financial statements.

❷ Accounting treatment of energy trading transactions

① Within the MVV Energie AG Group, the consolidated subsidiary MVV Trading GmbH has primary responsibility for the procurement of energy and emission rights and for hedging energy price risks for the Group companies MVV Energie AG, Stadtwerke Kiel AG, Energieversorgung Offenbach AG and Stadtwerke Ingolstadt GmbH. MVV Trading GmbH trades to a large extent on the spot and futures market for electricity, gas and emission rights on stock exchanges and on the over-the-counter market for these purposes. These contracts are classified as derivative financial instruments in accordance with IFRS 9, which are either accounted for 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 instruments will be received or delivered in future as part of the Company's own expected purchase, sale or usage requirements ("own use exemption"). The accounting treatment for physically settled derivative financial instruments is determined with the aid of the risk management system of MVV Trading GmbH, which allocates these derivative financial instruments to their corresponding purpose and therefore to the appropriate accounting treatment from a Group perspective. Accordingly, physically settled derivative financial instruments that do not form part of the Group's own expected purchase, sale or usage requirements and all financially settled derivative financial instruments are measured at fair value through profit or loss. To some extent these derivative financial instruments for electricity, gas and emission rights are included as hedging instruments in the hedge accounting in accordance with IFRS 9 as cash flow hedges. The underlying transactions are the purchase and sale of electricity, gas and emission rights at variable prices within maximum five years.

The energy trading operations are supported by energy trading systems. These systems 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. In view of the high volume of trading and the complexity of accounting for derivatives in accordance with IFRS 9 and IFRS 13, respectively, as well as its 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 As part of our audit, among other things, we assessed the appropriateness of the internal control system established for the purpose of entering into and settling energy trading transactions, including the trading systems used for this purpose. 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 compliance with IFRS 13 and carried out 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 the data by MVV Trading GmbH – and satisfied ourselves that the own use exemption is applied correctly on the basis of a random sample. We assessed the recognition of cash flow hedges and their accounting. Among other aspects, we evaluated the process used to assess the necessary effectiveness of the cash flow hedges and the correctness of the corresponding amounts recognised in equity as well as the reclassified amounts within the consolidated income statement. In our view, the accounting policies applied by the executive directors and the methodology for accounting for energy trading transactions are appropriate overall.

③ The Company's disclosures relating to energy trading and its effects on the consolidated financial statements are contained in note "35 Financial instruments" in the notes to MVV's 2021 consolidated financial statements.

Other information
The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the corporate governance declaration pursuant to § 289f HGB and § 315d HGB included in the "Corporate Governance Declaration" section of the group management report
- the non-financial declaration contained in the "Combined Non-Financial Declaration" section of the group management report pursuant to § 289b Abs. 1 HGB and § 315b Abs. 1 HGB

The other information further comprises the 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 and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with 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 the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, the executive directors are responsible for such internal controls as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such 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) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with the IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicated with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND OTHER REGULATORY REQUIREMENTS

Report on the assurance review of the electronic reproductions of the consolidated financial statements and of the group management report prepared for disclosure purposes in accordance with § 317 Abs. 3a HGB

Audit opinion

In accordance with § 317 Abs. 3a HGB, we have performed a reasonable assurance review to determine whether the reproductions of the consolidated financial statements and of the group management report contained in the file "MVV_AG_KA_KLB.zip" (hereinafter also referred to as "ESEF documents") and prepared for disclosure purposes comply in all material respects with the electronic reporting format requirements of § 328 Abs. 1 HGB ("ESEF format"). In accordance with German legal requirements, this audit extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore not 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 on the accompanying group management report for the financial year from 1 October 2020 to 30 September 2021 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 Purpose of Disclosure of Electronic Reproductions pursuant to § 317 Abs. 3a HGB (IDW AsS 410) and of the International Standard on Assurance Engagements 3000 (Revised). Accordingly, our responsibilities are further described under "Group auditor's responsibilities for the assurance review of the ESEF documents". Our audit firm has applied the quality assurance system requirements of the IDW Standard for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of executive directors and supervisory board for the ESEF documents
The executive directors of the company are responsible for the preparation of the ESEF documents including the electronic reproduction of the consolidated financial statements and the group management report in accordance with § 328 Abs. 1 Satz 4 Nr. [Number] 1 HGB and the tagging of 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 executive directors of the company are also responsible for the submission of the ESEF documents together with the auditor's report and the attached audited consolidated financial statements and audited group management report as well as other documents to be published to the operator of the German Federal Gazette (Bundesanzeiger).

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 12 March 2021. We were engaged by the supervisory board on 30 September 2021. We have been the group auditor of MVV Energie AG, Mannheim, without interruption since the 2009 financial year.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

REFERENCE TO A FURTHER MATTER – UTILISATION OF AUDITOR'S REPORT

Our auditor's report should always be read in conjunction with the audited consolidated financial statements and the audited group management report, as well as the audited ESEF documents. The consolidated financial statements and the group management report in XHTML format are merely electronic reproductions of the audited consolidated financial statements and the audited group management report and do no 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 ESEF documents appended electronically on a data carrier or in a file or with the disclosure of a storage address from which the ESEF documents can be electronically downloaded.

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Andrea Ehrenmann.

Essen, 9 November 2021

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

[redacted]

Ralph Welter	Andrea Ehrenmann
Wirtschaftsprüfer [German Public Auditor]	Wirtschaftsprüferin [German Public Auditor]

Other Disclosures

Auditor's Report on Combined Non-Financial Declaration

INDEPENDENT PRACTICTIONER'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") compiled pursuant to § (Article) 289 Abs. (paragraph) 1 and § 315 Abs. 1 HGB ("Handelsgesetzbuch": "German Commercial Code") for the period from 1 October 2020 to 30 September 2021 and included in the "Combined Non-Financial Declaration" section of the combined management report (hereinafter the "Non-Financial Declaration").

Responsibilities of executive directors

The executive directors of the Company are responsible for the preparation of the Non-Financial Declaration in accordance with § 315c in conjunction with § 289c to § 289e HGB.

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 which are reasonable in the circumstances. Further, the executive directors are responsible for such internal control as they have considered necessary to enable the preparation of a Non-Financial Declaration that is free from material misstatement whether due to fraud or error.

Independence and quality control of the audit firm

We have complied with the German professional provisions regarding independence and with other ethical requirements.

Our audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Standard on Quality Control 1 published by the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW); Requirements to Quality Control for Audit Firms (IDW Qualitätssicherungsstandard 1: Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis – IDW QS 1) – 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 Non-Financial Declaration based on the assurance engagement we have performed.

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions referred to in the 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 Standard 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 Non-Financial Declaration for the period from 1 October 2020 to 30 September 2021 has not been prepared, in all material aspects, in accordance with§ 315c in conjunction with § 289c to § 289e HGB. In a limited assurance engagement the assurance procedures are less in extent than for a reasonable assurance engagement, and therefore a substantially lower level of assurance is obtained. The assurance procedures selected depend on the practitioner's judgment.

Within the scope of our assurance engagement, we performed amongst others the following assurance procedures and further activities:

- Obtaining an understanding of the structure of the sustainability organisation and of stakeholder engagement
- Enquiries of the executive directors and personnel involved in the preparation of the Non-Financial Declaration regarding the preparation process, the internal control system relating to this process and select disclosures in the Non-Financial Declaration
- Identification of the likely risks of misstatement of the Non-Financial Declaration
- Analytical evaluation of disclosures in the Non-Financial Declaration
- Review of the implementation of central management requirements, processes and regulations for data collection based on an audit of the Kiel location (SWK). Due to coronavirus protection measures, this was performed on a virtual basis
- Comparison of disclosures with corresponding data in the consolidated financial statements and in the group management report
- Evaluation of the presentation of the non-financial information.

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 Non-Financial Declaration for the period from 1 October 2020 to 30 September 2021 has not been prepared, in all material aspects, in accordance with § 315c in conjunction with § 289c to § 289e HGB.

Intended use of the assurance report

We issue this report on the basis of the engagement agreed with the Company. The assurance engagement has been performed for purposes of the Company and the report is solely intended to inform the Company about the result of the limited assurance engagement.

The report is not intended for any third parties to base any (financial) decision thereon. Our responsibility lies only with the Company. We do not assume any responsibility towards third parties.

Munich, 9 November 2021

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

Hendrik Fink ppa. Meike Beenken

Wirtschaftsprüfer
[German Public Auditor]

Five-Year Overview

Five-year overview

	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017
Financial key figures					
Sales and earnings					
Adjusted sales excluding energy taxes (Euro million)	4,113	3,515	3,756	3,903	4,010
Adjusted EBITDA [1] (Euro million)	482	449	409	443	407
Adjusted EBIT [1] (Euro million)	278	233	225	228	224
Adjusted EBT [1] (Euro million)	234	181	168	179	169
Adjusted annual net income [1] (Euro million)	177	128	115	111	107
Adjusted annual net income after minority interests [1] (Euro million)	150	104	98	94	93
Capital structure					
Total assets at 30 September (Euro million)	14,810	5,031	4,822	5,140	4,713
Equity at 30 September (Euro million)	1,759	1,534	1,535	1,625	1,521
Adjusted total assets at 30 September [2] (Euro million)	5,815	4,582	4,472	4,152	4,248
Adjusted equity at 30 September [2] (Euro million)	1,662	1,571	1,544	1,550	1,490
Adjusted equity ratio [2] (%)	28.6	34.3	34.5	37.3	35.1
Net financial debt [3] (Euro million)	628	1,374	1,345	1,075	1,077
Cash flow and investments					
Cash flow from operating activities (Euro million)	1,203	383	238	331	474
Investments (Euro million)	306	322	310	290	194
Value performance					
ROCE [4] (%)	10.2	7.7	7.9	8.5	8.2
WACC [5] (%)	5.9	6.0	6.3	6.3	6.1
Value spread [6] (%)	4.3	1.7	1.6	2.2	2.1
Capital employed [7] (Euro million)	2,715	3,018	2,847	2,674	2,734
Share					
Closing price (Xetra) at 30 September [3] (Euro)	32.00	26.00	26.50	26.30	22.85
Market capitalisation at 30 September (Euro million)	2,109	1,714	1,747	1,733	1,506
Number of shares at 30 September (000s)	65,907	65,907	65,907	65,907	65,907
Dividend per share (Euro)	1.05 [8]	0.95	0.90	0.90	0.90
Dividend total (Euro million)	69.2 [8]	62.6	59.3	59.3	59.3
Payout ratio [9] (%)	46 [8]	60	61	63	64
Dividend yield [10] (%)	3.3 [8]	3.7	3.4	3.4	3.9
Adjusted earnings per share [1] (Euro)	2.28	1.57	1.49	1.43	1.41
Price/earnings ratio [10]	14.1	16.6	17.8	18.4	16.2

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

2 Excluding non-operating measurement items for financial derivatives

3 Non-current and current financial debt less cash and cash equivalents

4 Return on capital employed: adjusted EBIT as percentage of capital employed

5 Weighted average cost of capital

6 Value spread (ROCE less WACC)

7 Adjusted equity plus financial debt plus provisions for pensions and similar obligations less cash and cash equivalents (calculated as annual average)

8 Subject to approval by Annual General Meeting on 11 March 2022

9 Payout ratio based on adjusted annual net income after minority interests (IFRS)

10 Basis: closing price (XETRA) at 30 September

Five-year overview	FY 2021	FY 2020	FY 2019	FY 2018	FY 2017
Non-financial key figures					
Direct CO_2 emissions (Scope 1) [1] (tonnes 000s)	3,440	3,315	3,582	3,869	4,189
Indirect CO_2 emissions (Scopes 2 and 3) [1, 2] (tonnes 000s)	5,432	4,586	5,127	6,932	6,695
Net CO_2 saving [1] (tonnes 000s)	1,002	766	439	438	429
Electricity generation capacity from renewable energies [1] (MW_e)	564	531	491	479	468
Renewable energies as share of proprietary electricity generation [1] (%)	32	34	33	31	27
Electricity generation volumes from renewable energies [1, 2] (kWh million)	1,217	1,274	1,154	1,196	1,118
Green heat generation capacity [1] (MW_t)	793	752	842	801	817
Green heat as share of proprietary heat generation [1, 2, 3] (%)	36	31	29	30	28
Green heat generation volumes [1, 2, 3] (kWh million)	2,541	1,990	1,933	2,053	2,021
Completed development of new renewable energies plants (MW_e)	610	262	460	1,011	411
Operations management for renewable energies plants (MW_e)	3,811	3,729	3,534	3,063	3,009
Number of employees at 30 September (headcount)					
MVV	6,470	6,260	6,113	5,978	6,062
of which women	1,825	1,760	1,756	1,701	1,740
of which men	4,645	4,500	4,357	4,277	4,322
of which full-time employees	5,513	5,324	5,217	5,138	5,249
of which part-time employees	957	936	896	840	813
Number of trainees at 30 September (headcount)	340	341	330	312	324
Share of female managers at 30 September (%)	14	15	15	14	16
Accident frequency rate (LTIF) [4] (number of accidents per 1,000,000 hours of work)	4.1	6.7	7.7	6.7	7.4

1 Fully consolidated and at-equity companies

2 Previous year's figure adjusted

3 Heat from biomass and biogas plants and from energy from waste/refuse-derived fuels (RDF)

4 Figures for 2020, 2019, 2018, 2017 and 2016 calendar years

Financial Calendar

14 December 2021

Annual Report
2021 Financial Year

14 December 2021

Annual Results Press Conference
and Analysts' Conference
2021 Financial Year

14 February 2022

3M Quarterly Statement
2022 Financial Year

11 March 2022

Annual General Meeting

13 May 2022

H1 Interim Report
2022 Financial Year

12 August 2022

9M Quarterly Statement
2022 Financial Year

14 December 2022

Annual Report
2022 Financial Year

14 December 2022

Annual Results Press Conference
and Analysts' Conference
2022 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 2021.

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

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GRAPHICS

HGB Hamburger Geschäftsberichte GmbH & Co. KG, Hamburg