We inspire
with energy.

Annual Report 2020

MVV at a Glance

ADJUSTED SALES

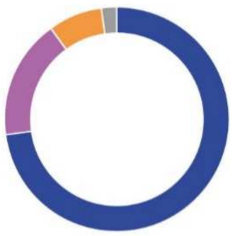
3.5 Euro billion

ADJUSTED EBIT

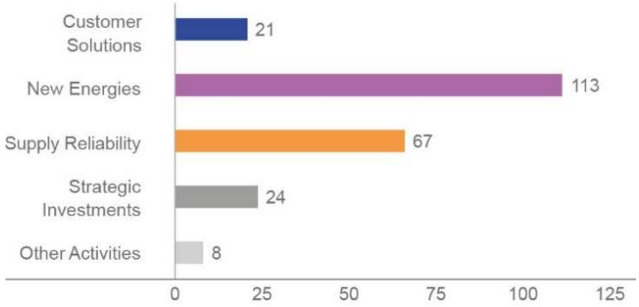
233 Euro million

ADJUSTED SALES EXCLUDING ENERGY TAXES BY REPORTING SEGMENT
Shares %

Customer Solutions	73
New Energies	17
Supply Reliability	8
Strategic Investments	2



ADJUSTED EBIT BY REPORTING SEGMENT
Euro million



INVESTMENTS

322 Euro million

2020

MVV in Figures

	FY 2020	FY 2019	% change
Financial key figures			
Adjusted sales excluding energy taxes [1] (Euro million)	3,515	3,756	– 6
Adjusted EBITDA [2] (Euro million)	449	409	+ 10
Adjusted EBIT [2] (Euro million)	233	225	+ 4
Adjusted annual net income [2] (Euro million)	128	115	+ 11
Adjusted annual net income after minority interests [2] (Euro million)	104	98	+ 6
Adjusted earnings per share [2] (Euro)	1.57	1.49	+ 5
Dividend proposal/dividend per share (Euro)	0.90	0.90	0
Cash flow from operating activities (Euro million)	383	238	+ 61
Cash flow from operating activities per share (Euro)	5.81	3.60	+ 61
Adjusted total assets at 30 September [3] (Euro million)	4,582	4,472	+ 2
Adjusted equity at 30 September [3] (Euro million)	1,571	1,544	+ 2
Adjusted equity ratio at 30 September [3] (%)	34.3	34.5	– 1
Net financial debt at 30 September (Euro million)	1,374	1,345	+ 2
ROCE (%)	7.7	7.9	– 3
WACC (%)	6.0	6.3	– 5
Value spread (%)	1.7	1.6	+ 6
Capital employed	3,018	2,847	+ 6
Investments (Euro million)	322	310	+ 4

1 Previous year`s figure adjusted
2 Excluding non-operating measurement items for financial derivatives, excluding structural adjustment for part-time early retirement and including interest income in connection with finance leases
3 Excluding non-operating measurement items for financial derivatives

	FY 2020	FY 2019	% change
Non-financial key figures			
Direct CO_2 emissions (Scope 1) including companies recognised at equity (tonnes 000s)	3,315	3,582	– 7
Indirect CO_2 emissions (Scopes 2 and 3) (tonnes 000s)	5,267	6,354	– 17
Net CO_2 savings (tonnes 000s)	794	486	+ 63
Electricity generation capacity from renewable energies [1] (MW_e)	512	472	+ 8
Share of renewable energies in proprietary electricity generation (%)	46	63	– 27
Electricity generation volumes from renewable energies (kWh million)	1,220	1,103	+ 11
Concluded development of new renewable energies plants (MW_e)	262	460	– 43
Operations management for renewable energies plants (MW_e)	3,729	3,534	+ 6
Number of employees at 30 September (headcount)	6,260	6,113	+ 2
of which women	1,760	1,756	0
of which men	4,500	4,357	+ 3
Number of trainees at 30 September (headcount)	341	330	+ 3
Share of female managers at 30 September (%)	15	15	0

1 Previous year´s figure adjusted

Contents

To Our Shareholders

Letter from the CEO

Dr. Georg Müller
CEO of
MVV Energie AG

DEAR LADIES AND GENTLEMEN,

Decarbonisation is and will remain one of the key tasks for the future for politicians, businesses and society as a whole. It therefore made sense for the UN Climate Conference to be held under the motto "Time for Action". Europe is taking the lead here: We can see that both the European Commission, which has adopted its ambitious Green Deal, and the European Parliament are taking their international pioneering role seriously when it comes to protecting the climate. They intend to raise the CO_2 reduction targets to be achieved by 2030 to at least 55 %. Europe should be climate neutral by 2050 at the latest. Germany too will have to make greater efforts than those so far formulated in the Climate Protection Act. Among other aspects, current policies provide for raising the share of renewables-based electricity generation to at least 65 % by 2030 and for exiting from coal by 2038 at the latest. It is clear that ambitious climate protection affects us all. It requires all involved to go the extra mile. And this has to be accompanied by rapid action to clarify the relevant laws and regulations in greater detail.

Reaching climate neutrality

For MVV, climate protection has – alongside economic efficiency and supply reliability – been an indispensable component of our corporate strategy for many years now. We are investing just as consistently in expanding renewable energies for electricity and heating energy and in enhancing energy efficiency as we are reducing emissions in our conventional energy generation. To provide these efforts with a tangible framework, at the beginning of the past financial year we further clarified our decarbonisation strategy. Our quantitative interim targets for the years 2026 and 2030 cover all emissions sources and will enable MVV to be measured transparently as it heads for climate neutrality. That is part of how we see ourselves and also shows that we are meeting our responsibility to society. The Climate Protection Agreement just reached with the State of Baden-Württemberg, in which we have committed ourselves to our climate targets, further documents this approach. We will continue with the course already taken in the past with great determination. You can find out more about the progress we are making together with our customers from **Page 48** onwards.

In First Sentier Investors, we have gained a strong shareholder with a sustainable focus

Our sustainability-driven strategy also convinced First Sentier Investors (FSI), which in April acquired the 45.1 % of MVV's shares previously held by EnBW and RheinEnergie. The City of Mannheim remains our majority shareholder with a 50.1 % stake. This means that MVV once again has a stable foundation in terms of its major shareholders. That is an important factor, particularly in times of transformation. FSI is one of the world's leading managers of pension and retirement funds. Both our main shareholders are committed to our stock market listing, to maintaining our free float and to our broad-based business model with its focus on successfully implementing the energy turnaround.

Investments in sustainable growth

One core component of our corporate strategy is a comprehensive investment programme with a long-term horizon. Here, we invested Euro 322 million in the 2020 financial year alone. Alongside three major projects, our investments particularly focused on expanding our proprietary renewable energies generation portfolio:

Our new and highly efficient gas-fired CHP plant in Kiel launched commercial operations at the end of November 2019, i.e. in the 1st quarter of our past 2020 financial year. This plant provides the state capital of Schleswig-Holstein with a climate-compatible and environmentally-friendly supply of heating energy and is making a major contribution to reducing CO_2 emissions compared with its coal-based predecessor. In February 2020, we linked up our energy from waste plant in Mannheim to the regional district heating grid – a first major step as we head for Green Heat. In future, up to 30 % of the annual heating energy needs in Mannheim and the Rhine-Neckar metropolitan region will be covered with renewable energies. Our third current major project is approaching completion in the Scottish city of Dundee, where we are building what is one of Europe's most modern energy from waste plants. The new plant will launch operations in the coming months. We expanded our wind power portfolio with three windfarms developed and built by Juwi and Windwärts. At the end of the 2020 financial year, our renewable energies plant had installed capacities of 512 MW, almost 10 % more than a year ago.

The new green business models for which we bore the start-up and development costs, i.e. in which we invested, in recent years are also to be viewed in this context of future growth. Given increasingly ambitious climate protection targets, these will enable us to offer services to our customers with which they can implement their own customised energy turnarounds.

A special year – for us and for society as a whole

Since the beginning of 2020, society and businesses, and thus MVV as well, have been affected by the implications, rules and regulations resulting from the coronavirus pandemic. We are tackling this challenge with a prudent approach that is shaped by the responsibility we bear for our employees, customers, suppliers and business partners and which focuses in equal measure on health protection and on reliably upholding our business activities. We acted early to take the necessary measures in a targeted manner and are continually adjusting these in line with the latest developments. As a critical infrastructure provider, we are responsible for ensuring a reliable supply of energy and water. It has been clear that our proven control and crisis management processes have worked well, also during the coronavirus pandemic. People can rely on that. Acting with the utmost responsibility and dedication, our employees made it possible for us not only to safeguard our operating processes but also to implement our existing and newly launched projects and plans. On behalf of the whole Executive Board, I would like to take this opportunity as well of expressing my thanks and great appreciation.

Earnings growth despite impact of coronavirus pandemic

The 2020 financial year was a period that presented us with challenges – some of which we were already familiar with and some we had not encountered before. Our adjusted sales showed a moderate reduction of 6 %, while our adjusted EBIT rose by 4 % to Euro 233 million, and that despite the impact of the coronavirus pandemic on our key figures. This growth is attributable to the investments we have made in recent years in sustainable growth and new green services. Overall, our key figures show that we are well positioned in terms of our structures and that we have robust business models that balance and complement each other within the overall portfolio. We will benefit from this stable foundation once again in the 2021 financial year.

Stability, also in uncertain times

Our top priority in future as well will be protecting the health of our employees, customers and partners while at the same time ensuring a reliable supply of electricity, heating energy and water, as well as reliable waste and biomass disposal services. We will consistently press ahead with our strategy, even in these times of the coronavirus pandemic. This way, we are laying long-term foundations for the further profitable development of our group of companies. In terms of the underlying framework, we currently see great macroeconomic uncertainties, particularly due to the coronavirus pandemic, on the one hand and the clear emergence of a more ambitious approach to climate protection on both national and international levels on the other. Against this backdrop, like large sections of the overall economy, we too cannot currently quantify future developments or their impact on our company to the customary extent. Based on the factors referred to above, we are nevertheless confident overall that we will at least match the previous year's figures in terms of our adjusted sales and adjusted EBIT in the 2021 financial year. We see upside chances should the coronavirus pandemic have only a limited impact on MVV.

Higher dividend

Despite momentous changes on the energy markets in recent years, we have upheld our continuity-based dividend policy. We aim to take the same approach in future. Given our operating earnings growth, the Executive and Supervisory Boards will be proposing a dividend of Euro 0.95 per share, corresponding to an increase of Euro 0.05 per share, for approval by the 2021 Annual General Meeting. This corresponds to a dividend yield of 3.7 % (based on the closing price in XETRA trading at the end of the financial year) and represents a respectable return, also when compared with competitors.

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, in many cases for many years. We are working every day to meet your expectations, successfully implement the energy turnaround and achieve our climate neutrality targets. We would be delighted if you were to continue to accompany us on this ambitious course.

Yours faithfully,

Dr. Georg Müller
CEO

Executive Board

Dr. Georg Müller

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

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 as of 1 August 2019.

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 to the Executive Board of MVV Energie AG on 1 October 2013.

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 to the Executive Board of MVV Energie AG on 1 January 2015.

Supervisory Board Report

Dr. Peter Kurz
Supervisory Board Chairman
of MVV Energie AG

DEAR LADIES AND GENTLEMEN,

The situation on the energy market can be summarised in just a few words: It is undergoing a substantial transformation. After all, numerous changes are arising not just on account of the energy turnaround but also due to the ongoing advance of digitalisation in all areas of life and business. Even though the conditions in which it operates remain challenging, MVV asserted itself well once again in the 2020 financial year, and that against the backdrop of the coronavirus pandemic, whose effects also had to be managed. This offers further proof that the right strategic decisions were taken in previous years and that the company has made well-targeted investments. As a result, MVV is sustainably and competitively positioned and will be able to benefit extensively from the opportunities presented by the energy system of the future. This gave us reason to start the 2021 financial year on an optimistic note, even if this also promises to be a challenging time.

Key focuses of Supervisory Board activities

In the 2020 financial year, we once again fulfilled all aspects of our duty to advise the Executive Board in its management of the company and to supervise its activities. To this end, we were in dialogue with the Executive Board throughout the period under report. It provided us with continuous and comprehensive information both about the latest developments in the energy industry and in energy policy and about the Group's strategic alignment, business performance and situation, including information about its risk management and risk situation. Here, the Executive Board explicitly addressed any variances between the business performance and the original planning and substantiated these in detail. Our body held in-depth discussions concerning the company's investment projects. As Supervisory Board Chairman, I was also regularly in contact with the CEO outside the meeting framework. In this ongoing exchange, we shared our views about current topics and events at 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. We always had sufficient time to prepare the meetings. Regrettably, the annual training measure scheduled for June 2020 had to be cancelled due to the coronavirus pandemic.

Supervisory Board meetings and attendance

In the 2020 financial year, the Supervisory Board held four regular meetings and two unscheduled meetings. The Audit and Personnel Committees held five and two regular meetings respectively in the year under report. Consistent with the recommendation made by the German Corporate Governance Code, we disclose the participation of members in the respective meetings.

Participation in committee meetings FY 2020

	Supervisory Board	Audit Committee	Personnel Committee
Dr. Peter Kurz, Chairman	6/6	–	2/2
Johannes Böttcher	6/6	–	–
Timo Carstensen	5/6	–	–
Ralf Eisenhauer	6/6	–	2/2
Peter Erni	4/6	3/5	1/2
Detlef Falk	5/6	5/5	–
Gabriele Gröschl-Bahr	1/6	–	–
Dieter Hassel (until 26 June 2020)	2/4	–	–
Barbara Hoffmann	5/6	–	–
Prof. Dr. Heidrun Kämper	6/6	–	–
Heike Kamradt	6/6	5/5	2/2
Brigitte Kemmer	6/6	–	–
Gregor Kurth (since 3 July 2020)	1/1	–	–
Thoralf Lingnau (since 24 January 2020)	4/5	–	–
Dr. Lorenz Näger	6/6	4/5	–
Steffen Ratzel	6/6	–	2/2
Bernhard Schumacher	6/6	–	–
Christian Specht	5/6	4/5	–
Prof. Heinz-Werner Ufer	6/6	5/5	–
Susanne Wenz	5/6	–	–
Jürgen Wiesner	6/6	–	2/2

Main topics of discussion at Supervisory Board meetings

At our meeting on **2 December 2019,** we prepared the agenda for the Annual General Meeting on 13 March 2020 and voted on the necessary draft resolutions. Further topics addressed at this meeting included the review and approval of the consolidated financial statements (IFRS) and annual financial statements for the 2019 financial year.

At its meeting on **12 March 2020,** the Supervisory Board approved the resolution to restructure the company’s relationships with the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM) and measures to secure the future supply of district heating. We also dealt with the implementation of the EU Shareholder Rights Directive in German law (ARUG II) and thus with the adjustments that will arise at MVV on this account. Among others, these include the requirement for the 2021 Annual General Meeting to adopt a resolution approving the remuneration system for Executive Board members (“say on pay”). Furthermore, we were informed about changes introduced in the new German Corporate Governance Code. A further group of topics addressed at this meeting related to sustainability. In connection with the “Green Deal”, we were informed about the EU’s climate protection targets for the periods to 2030 and 2050. We received information about MVV’s sustainability reporting and discussed ideas as to how this might be developed further. Moreover, we were informed about the current status of the national hydrogen strategy. Further topics addressed included the path towards decarbonisation for the Czech subgroup. The objective here is to implement the coal exit by 2030 and to convert to natural gas and biomass.

At an unscheduled meeting held on **3 April 2020,** the Supervisory Board was informed about the status of the process to change the shareholder structure. We commissioned the preparation of a reasoned opinion in respect of the public takeover offer and appointed a proprietary lawyer to provide the Supervisory Board with legal advice. Moreover, we were informed about the implications of the coronavirus pandemic for MVV. We were advised of the precautions introduced to protect staff and customers and of the measures taken to safeguard the company's liquidity.

At a further unscheduled meeting, in this case on **15 May 2020,** we approved the joint reasoned opinion of the Executive and Supervisory Boards of MVV Energie AG with respect to the voluntary takeover bid made by FS DE Energy GmbH and discussed the fairness opinion and the valuation.

At our meeting on **30 June 2020,** we dealt with the personnel report and key focuses of future HR activities. Further topics discussed included the future positioning of the company's retail business ("Future Retail") and the resolution to acquire the remaining shares in Fernwärme Rhein-Neckar GmbH from EnBW. The Supervisory Board also decided to update the diversity concepts for the Supervisory and Executive Boards. Furthermore, we addressed the progress made with regard to sustainability. On the one hand, we obtained information about how far the company had moved towards climate neutrality. On the other hand, we dealt with key progress in terms of decarbonisation. This is due, among other factors, to the regular operations at the gas-fired CHP plant in Kiel, the linking up of the waste-fired CHP plant in Mannheim to the district heating grid and the new windfarms.

The key focus of our meeting on **28 September 2020** was the approval of the business plan for the 2021 financial year. Based on the corporate strategy and the energy industry framework, our body discussed the three-year plan. A further topic was the Declaration of Conformity with the German Corporate Governance Code, which we approved for the 2020 financial year.

Committee work

The relevant Supervisory Board committees **Page 171** ensure that topics and resolutions due to be discussed and adopted at Supervisory Board meetings are prepared efficiently. The committee chairs keep our full body regularly and promptly informed about committee 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. Consistent with its remit, the committee focused in particular on the annual financial statements of MVV Energie AG, the consolidated financial statements and the combined management report for the 2019 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 2020 financial year. Furthermore, the committee also addressed the company's risk situation and risk management on a quarterly basis.

Together with the Executive Board, the committee also discussed the company's 2021 business plan and its medium-term planning and strategic alignment. Following careful examination, it recommended that the Supervisory Board should approve the budget for the 2021 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 also addressed MVV's decentralised management and control systems in several meetings. Moreover, it determined the key audit focuses for the 2020 financial year. Other topics addressed by the committee included the gas-fired CHP plant in Kiel, key control parameters in the retail and business customer sales activities, advance discussion of the joint opinion by the Executive and Supervisory Boards concerning the takeover bid from FS DE Energy GmbH, as well as of the valuation and fairness opinion, the approval process for guarantees at Juwi and the Combined Non-Financial Declaration requiring submission for the year under report.

The **Personnel Committee** met twice in the 2020 financial year and mainly discussed matters relating to the remuneration of Executive Board members.

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

Composition of Supervisory and Executive Boards

Thoralf Lingnau, a member of the Works Council of MVV Energie AG, has been a new member of the Supervisory Board since 24 January 2020 and has assumed his position as an employee representative. He has succeeded Peter Sattler, who stood down from his position as of the end of the 2019 financial year.

Dieter Hassel, a member of the Executive Board at RheinEnergie AG, Cologne, stood down from his position as of 26 June 2020. A ruling passed by Mannheim District Court appointed Gregor Kurth, Head of Transactions, Infrastructure Investments, Europe, First Sentier Investors (FSI), London, UK, as a member of the Supervisory Board of MVV Energie AG as of 3 July 2020. He has assumed his position as a shareholder representative.

Furthermore, Prof. Dr. Heidrun Kämper, Brigitte Kemmer and Steffen Ratzel stood down from their positions upon the conclusion of the 2020 financial year. A ruling passed by Mannheim District Court on 21 September 2020 and taking effect as of 1 October 2020 appointed Sabine U. Dietrich, supervisory board member and consultant, Tatjana Ratzel, head of the sickness allowance department at INTER Versicherungsgruppe Mannheim, and Dr. Stefan Seipl, businessman and independent management consultant, as members of the Supervisory Board of MVV Energie AG. These changes to the composition of the Supervisory Board were due in part to the amended shareholder structure.

Corporate governance

In the year under report, as in previous years, we dealt closely with the recommendations and provisions of the German Corporate Governance Code (DCGK). We endorsed the Declaration of Conformity 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 Conformity at our meeting on 28 September 2020 **Page 67.**

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. Given the change in the shareholder structure in the year under report, Dieter Hassel did not participate in the unscheduled meetings of the Supervisory Board on 3 April 2020 and 15 May 2020. 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 2020 financial year by the Annual General Meeting on 13 March 2020. The declaration of independence from the auditor has been submitted to the Supervisory Board.

The annual financial statements of MVV Energie AG for the 2020 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 2020 financial year are published in the Federal Gazette (Bundesanzeiger).

Our body received the following documents in good time: 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 2 December 2020, 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.

The Executive Board submitted a Combined Non-Financial Declaration for the 2020 financial year. At meetings of the Audit Committee and the Supervisory Board, we previously discussed both the contents and the respective internal processes and checks. We critically reviewed and assessed the plausibility and expediency of the Non-Financial Declaration in respect of MVV's business model. The Supervisory Board did not raise any objections to the reporting by the Executive Board.

The Executive Board report on relationships with affiliated companies (Dependent Company Report) for the 2020 financial year states that MVV Energie AG was not disadvantaged by the legal transactions performed with affiliated companies outlined therein. The auditor audited the 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." Both the Dependent Company Report and the associated audit report compiled by the auditor were submitted to the Supervisory Board in good time. Based on our own review, we concur with the auditor's assessment and approve its report.

Thanks

MVV can report on another successful financial year, and that despite ongoing difficult conditions in the energy market and the challenges presented by the coronavirus pandemic. This success, which our employees can feel proud of, was the result of everyone's contribution: 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!

Dr. Peter Kurz
Chairman

Mannheim, December 2020

Share

Volatile stock markets

Alongside the impact of numerous political and economic conflicts, the main influence on global stock markets in the period under report was the coronavirus pandemic. The DAX ended 2019 at 13,249 points, 25.5 % higher than one year earlier. Even though Brexit, the trade dispute between the US and China, the overall rise in protectionism, signs of a slowdown in the global economy and subdued global trade meant that underlying conditions were anything but favourable, 2019 was nevertheless one of the best years for the DAX. This was due above all to low central bank base rates. At the beginning of 2020, the upward trend on stock markets continued, driven in particular by the initial agreement reached in the trade dispute between the US and China. This compromise aroused hopes of a better outlook for global growth. On 19 February, the DAX reached a new all-time high at 13,787 points. After this, fears of a setback for the global economy due to the coronavirus weighed on share prices. The rapid spread of the virus outside China unsettled investors and impacted on nearly all markets. This led worldwide stock prices to plummet. By mid-March, the DAX bottomed out at 8,442 points, around 39 % down on its previous all-time high. Politicians and central banks around the world adopted numerous measures to limit the impact on the economy, but experts nevertheless expected to see a recession. Markets began to recover at the beginning of April, a development that turned into a rally lasting several months. Increasing optimism among market participants was based above all on the massive political and monetary measures taken in response to the crisis. Unlike during the financial crisis, when Europe in particular was slow to take action, this time governments reacted quickly and made extensive assistance available to European Union countries and to companies and their employees. The US Fed cut interest rates to zero, while the ECB's bond acquisition programme is virtually unlimited. Having come under renewed pressure due to coronavirus concerns, the DAX closed at 12,761 points at the end of September, 2.7 % up on the previous year's figure.

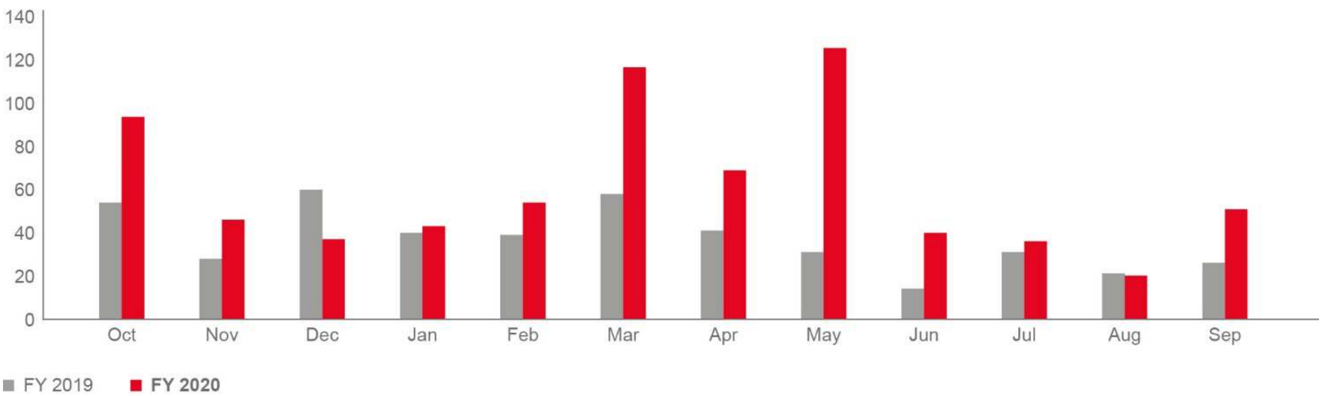
Key figures on share and dividend of MVV Energie AG from 1 October to 30 September

		FY 2020	FY 2019
Closing price at 30 September [1]	Euro	26.00	26.50
Annual high [1]	Euro	29.00	26.70
Annual low [1]	Euro	23.80	23.80
Market capitalisation at 30 September	Euro million	1,714	1,747
Average daily trading volume	No. of shares	2,871	1,754
No. of individual shares at 30 September [2]	000s	65,907	65,907
Dividend per share [3]	Euro	0.95	0.90
Total dividend [3]	Euro million	62.6	59.3
Adjusted earnings per share [4, 5]	Euro	1.57	1.49
Cash flow from operating activities per share [5]	Euro	5.81	3.60
Adjusted carrying amount per share [5, 6, 7]	Euro	20.41	20.11
Price/earnings ratio [8]		16.8	17.8
Price/cash flow ratio [8]		4.5	7.2
Dividend yield [8]	%	3.7 [3]	3.4

1 XETRA trading
2 Number of shares at 30 September corresponds to weighted annual average
3 Pending approval by Annual General Meeting on 12 March 2021
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 2020
(%)

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



Decrease in share price

The MVV Energie AG share was listed at Euro 26.00 on 30 September 2020, corresponding to a 1.9 % reduction compared with its price of Euro 26.50 on 30 September 2019. Including the distribution of a dividend of Euro 0.90 per share in March 2020, our share price rose year-on-year by 1.8 %. The DAXsector Utilities, the comparative sector index for the energy industry, improved by 12.3 % over the same period. We include our dividend payment in the share price performance chart.

Lower market capitalisation and higher trading volumes

Consistent with the lower share price, our market capitalisation also decreased, falling from Euro 1,747 million at the previous year's balance sheet date to Euro 1,714 million at 30 September 2020. The 4.2 % free float share was valued at around Euro 72 million (previous year: Euro 84 million based on a free float share of 4.8 %). A total of around 0.7 million MVV Energie AG shares were traded on all German marketplaces in the 2020 financial year – 65.2 % more than in the previous year. That was also the main reason for the increase in the equivalent value of trading volumes to Euro 20 million (previous year: Euro 11 million). The shares which changed hands in connection with the voluntary takeover bid by First Sentier Investors (formerly First State Investments), totalling around 0.4 million, are not included in the market turnover figures.

Higher dividend

The Annual General Meeting on 13 March 2020 accepted the proposal from the Executive and Supervisory Boards and approved the distribution of a dividend of Euro 0.90 per share for the 2019 financial year. Based on 65.9 million shares, the distribution sum totalled Euro 59.3 million.

We aim to pay a dividend to our shareholders that is aligned to MVV's earnings performance in future as well. In view of this, the Executive Board has decided to propose a dividend of Euro 0.95 per share, corresponding to an increase of Euro 0.05 per share, for approval by the Annual General Meeting on 12 March 2021. The Supervisory Board will decide in December 2020 on its proposal to be submitted to the Annual General Meeting. Should the Annual General Meeting also approve a dividend proposal in this amount, then this would correspond to a dividend yield of 3.7 % based on the closing price of MVV's share in XETRA trading on the balance sheet on 30 September 2020.

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

Our investor relations activities

In the year under report, we outlined the core features of our company and MVV's strategic alignment to institutional and retail investors. We are always available for questions and suggestions from our shareholders. At analysts' conferences, 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 **www.mvv.de/investors.**

MVV Energie AG is currently analysed by one financial institution, namely Landesbank Baden-Württemberg. As of 30 September 2020, this institution recommended holding our share with a target price of Euro 26.50.

Changes in shareholder structure

In June 2020, First Sentier Investors acquired the shares in MVV previously held by EnBW and RheinEnergie (45.1 %). Including the shares tendered within a voluntary takeover bid, the shareholding held by First Sentier Investors stood at 45.7 % as of 30 September 2020. The City of Mannheim still holds an unchanged total of 50.1 % of the shares. The remaining shares are in free float (4.2 %).

Combined Management Report

Group Fundamentals

GROUP STRUCTURE

Company structure and shareholdings

MVV Energie AG, which has its legal domicile in Mannheim, plays a key role as MVV's listed parent company. It directly or indirectly owns shares in the companies which belong to the Group and also has its own operations. Including MVV Energie AG, the MVV Group includes 155 fully consolidated companies and 36 companies recognised at equity. Our group of companies has its largest locations in Mannheim, Kiel, Offenbach and Wörrstadt. We are also present in more than 20 countries. Alongside Germany, these mainly involve the United Kingdom and the Czech Republic.

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.

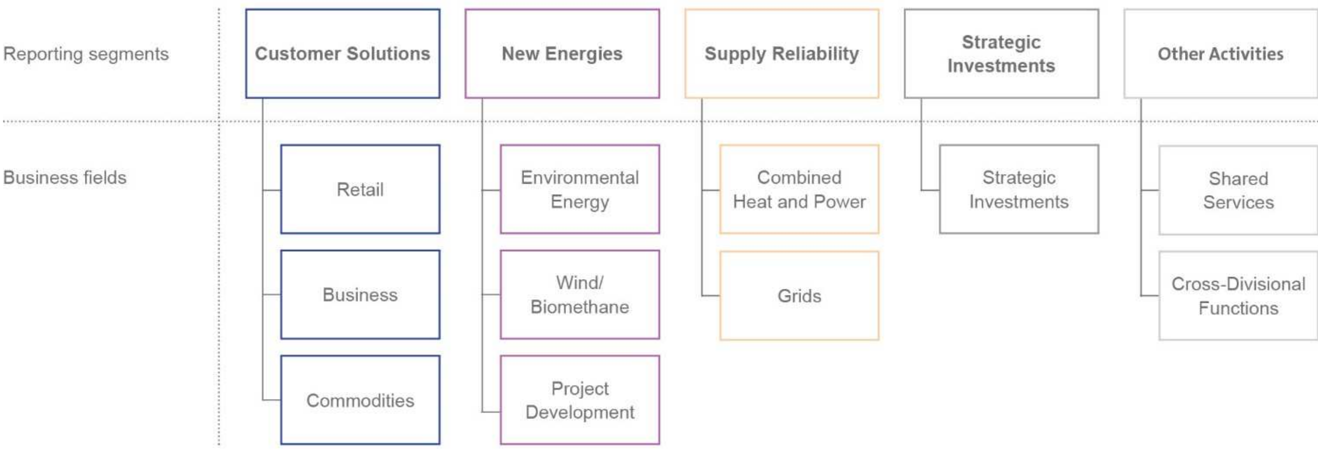
The Environmental Energy, Wind/Biomethane and Project Development business fields are allocated to the **New Energies** reporting segment.

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, as well as 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

Based on calculations compiled by the Association of the German Energy and Water Industries (BDEW), we are one of Germany's leading energy companies. We cover all key stages of the energy industry value chain. We generate energy, trade with it and distribute it via proprietary grid companies. We market energy solutions and operate in the environmental energy business. We also produce and distribute water. We have a special focus on renewable energies, where we are active in project development and operations management for windfarms and solar parks, as well as for biomass power plants, and have these kinds of plant in our own generation portfolio.

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. These also include the portfolio of solutions we offer to retail and business customers for self-generated solar electricity and e-mobility. E-mobility is also 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 combine energy procurement, energy product trading and portfolio management for our group of companies. We also offer 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 existing energy from waste plant two years ago and are building a new plant in the direct vicinity. Furthermore, in Germany we also have biogas and biomethane plants. 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. Solar power is the focal point in the international business, while in Germany we also focus on onshore wind power and free-field photovoltaics systems. We also act as operations managers for windfarms and solar parks.

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 shareholding in the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM). To guarantee a reliable supply of energy and water, high-performing grids are crucial. 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 more than 19,000 kilometres.

CORPORATE STRATEGY

We are making our contribution to climate protection

Our aim is climate neutrality. We are committed to the targets agreed in the Paris Climate Accord and will be climate neutral as a company by 2050 at the latest.

To achieve this, we will

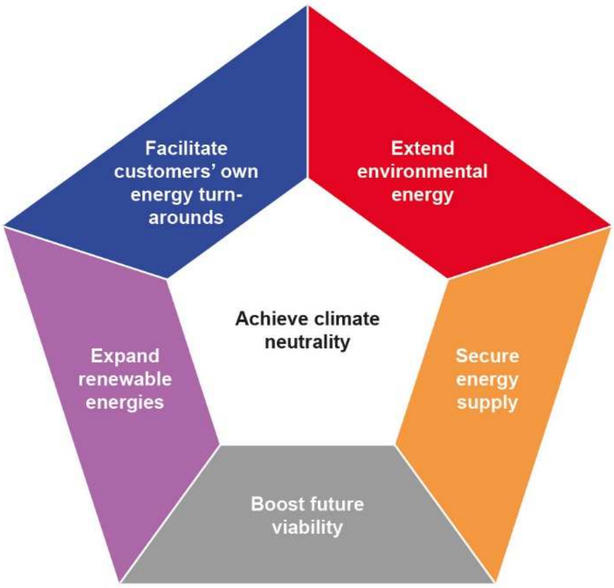
- Continue to press ahead with expanding renewable energies
- Gradually reduce the emissions from our conventional generation positions to zero
- Replace conventional heating energy generation with low-CO_2 and renewable sources
- Offer products and services that facilitate climate neutrality for and at our customers
- Limit unavoidable emissions to a minimum and look into new technologies facilitating the climate-neutral management of unavoidable residual emissions.

We have underpinned this **decarbonisation strategy, Page 48** with specific quantitative CO_2 reduction targets to be achieved by 2030. We have thus complemented the **sustainability targets, Pages 48 and 51** we set in 2016.

We are investing in sustainable growth

One core component of our strategy involves a comprehensive investment programme with a long-term perspective. We are aligning this to our sustainability targets and thus further developing our group of companies. We will continue to act on the opportunities arising in the course of the energy turnaround, and that both in Germany and beyond. We intend to promote our growth in future as well.

We are convinced that by making targeted investments we will tap further potential for MVV.



We are developing solutions for our customers

Our proven expertise and our decades of experience enable us to develop competitive products and services for our customers. We supplement our portfolio of products and services by forging strategic partnerships and acquiring shareholdings.

One key focus in the expansion of our portfolio of solutions relates to e-mobility. As well as charging infrastructure and smart charging management for industrial and commercial customers, we also offer combined products comprising photovoltaics systems, charging stations and e-vehicles to our retail customers. Demand for the charging infrastructure has increased as e-mobility becomes more widespread, as has demand for storage and energy management solutions.

As a partner to local authorities and municipal utility companies, we are developing holistic concepts for towns and cities of the future and decentralised district solutions and putting these into practice.

We are further expanding our activities in our Environmental Energy business field

We also see growth potential for waste and sewage incineration and for organic waste fermentation. Generating electricity and heating energy from waste, an activity which forms part of our Environmental Energy business field, is a key pillar of a modern, resource-efficient, recycling-based economy. Based on analysis performed by the consultancy ecoprog, we are one of Germany’s three largest operators of energy from waste and biomass power plants. Not only that, we have been active in the United Kingdom for several years now with our waste-fired CHP plants in Plymouth and Dundee and our biomass plant at Ridham Dock. We plan to make further investments in this business field.

We are also continually working on the further development of our Mannheim energy location at Friesenheimer Insel. In February 2020, we connected our waste-fired CHP plant to the existing district heating grid. Moreover, we are integrating new and innovative technologies into our plant. We will be recycling phosphorous from municipal sewage and simultaneously generating environmentally-friendly energy. This way, we are drawing on the opportunities arising due to amendments in statutory sewage treatment requirements. The phosphorous thereby recovered is a valuable raw material in the production of manure and thus helps to build a sustainable cycle. At other locations as well, we are working on phosphorous treatment solutions and will integrate waste incineration more closely into district heating concepts.

We supply our customers reliably with energy

The further expansion in energy generation from renewable sources also involves challenges given the volatility in the volumes of electricity fed in by wind turbines and photovoltaics systems depending on the time of day and weather conditions. We have set ourselves the standard of providing our customers with a secure and reliable supply of energy. In this respect, the reliability, intelligence and performance capacity of our grids play a key role.

For us, one major focus of supply reliability relates to the future of the heating energy supply. At our locations, the pipeline-based supply of heating energy is and will remain an indispensable component of a sustainable, forward-looking heating energy supply. This will gradually involve lower levels of CO_2 and ultimately, in the target state, the heating energy supply will be entirely free of CO_2. We have invested, for example, in connecting our CHP plant in Mannheim to the regional district heating grid. Our new modular gas-fired CHP plant in Kiel launched operations at the end of November 2019. We are continually developing our heating energy concept further with the goal of decarbonisation and integrating renewable energies into heating energy generation. This way, we are gradually implementing our vision of a sustainable heating energy supply.

We are building on renewable energies

In expanding our portfolio of renewable energy generation plants, we are focusing in the medium term on onshore wind power and photovoltaics. Furthermore, we are reviewing potential repowering options for our existing plants. With our Juwi and Windwärts subsidiaries, we are focusing in our project development activities on developed international markets that offer growth potential and on Germany.

We are enhancing our fitness for the future

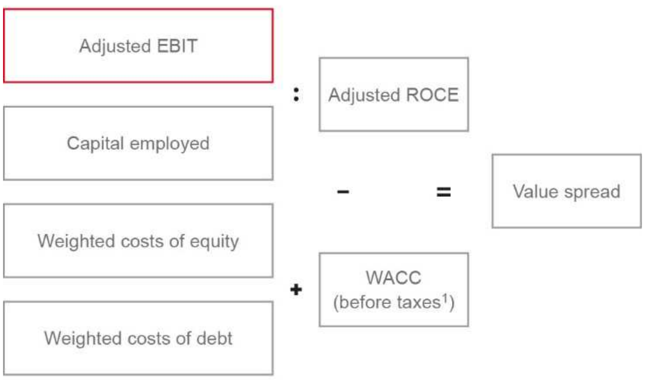
We repeatedly review the suitability for future use of all the technologies, procedures and processes which we deploy. In this, we take due account of the economic, ecological and political framework. To maintain our fitness for the future, we are continually enhancing our corporate culture and retaining and expanding our employees’ skills. To this end, we draw on the possibilities and opportunities offered by digitalisation on all levels and in a variety of ways. We use digital solutions, for example, to foster the exchange of information and cooperation, as well as to structure existing processes more efficiently. On an operating level, we use digital solutions in both our B2C and our B2B segments. In our decentralised energy solutions and energy efficiency activities, digital solutions form the basis for monitoring, controlling and optimising customer plants. 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 minimise downtime. For our customers, we are also developing apps that are easy to use, such as those offered for e-mobility.

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 return on average capital employed (ROCE) exceeds the costs of capital (WACC). The most important key figure in this respect is adjusted operating earnings before interest and taxes (adjusted EBIT), which we refer to in order to assess the medium and long-term success of our business activities. To calculate this key earnings figure, we 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, where applicable, restructuring expenses. We add interest income from finance leases reported below EBIT in the income statement to our adjusted EBIT. This income results from contracting projects and therefore forms part of our operating business.

CALCULATION OF VALUE SPREAD

(simplified presentation)



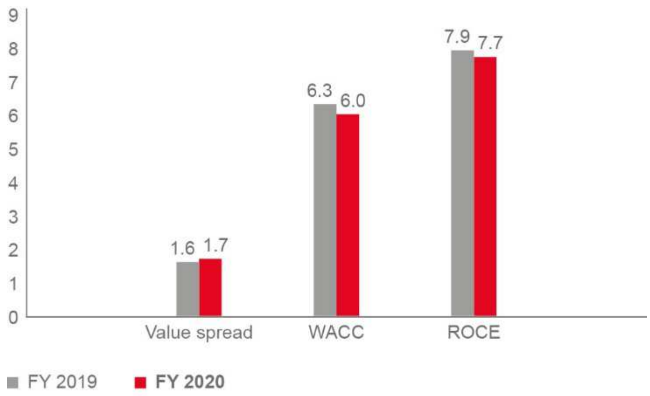
1 WACC before taxes = WACC after taxes/0.7

We reviewed the individual parameters used to calculate MVV's WACC figure for the year under report and updated these in some cases to account for changes in the market.

On this basis, we calculated equity costs of 6.7 % (previous year: 6.5 %) after taxes and debt costs of 1.7 % (previous year: 1.7 %) after taxes. The capital structure of MVV's peer group amounts to 50.1 % for equity (previous year: 55.5 %) and to 49.9 % for debt (previous year: 44.5 %). The Group tax rate stands at 30 % (previous year: 30 %). The WACC calculated on this basis for the 2020 financial year amounts to 4.2 % after taxes (previous year: 4.4 %) and to 6.0 % before taxes (previous year: 6.3 %).

KEY VALUE MANAGEMENT FIGURES

(%)



The ROCE for the 2020 financial year amounted to 7.7 %, as against 7.9 % in the previous year. The lower ROCE figure was due to the fact that, although adjusted EBIT rose, the average volume of capital employed also increased compared with the previous year.

Subtracting the WACC before taxes of 6.0 % (previous year: 6.3 %) from the ROCE of 7.7 % (previous year: 7.9 %) shows that the value spread amounted to 1.7 % in the year under report (previous year: 1.6 %).

TECHNOLOGY AND INNOVATION

Innovative projects

The aim we have set ourselves is to develop smart energy products and innovative solutions that take account of the needs of our customers. Our efforts to reach this objective are driven among others by our Customer Experience and Innovation department. Here, innovation managers and market researchers work together on research and development projects in which colleagues from our operating business fields are also involved. Furthermore, our sales units are also independently involved in forward-looking projects. As a result, the development expenses for technology and innovation are not fully reflected in the research and development expenses reported under IFRS **Notes to Balance Sheet (Note 14), Page 112.**

In what follows, we present some of the projects we continued to pursue or newly initiated in the 2020 financial year.

Decentralised energy management system in FRANKLIN District

The FRANKLIN conversion space in Mannheim is one of nine cells participating in C/sells. This project is developing and demonstrating sample solutions for a digital, secure and environmentally compatible energy supply. It is part of the nationwide “Smart Energy Showcase – Digital Agenda for the Energy Turnaround” initiative promoted by the Federal Ministry for Economic Affairs. The project aims to develop a new smart grid approach with a cellular structure.

At FRANKLIN, we are simulating and testing the energy system of the future by interconnecting the sectors of electricity, heating energy and mobility. The energy system, which is in the planning and execution stage, consists of:

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

By exchanging their electricity, heating energy and water meters for smart meters and a smart meter gateway, district residents play a decisive role. On the one hand, this grants them transparency about their energy consumption. On the other hand, the data acquired helps to provide visibility as to energy flows in the district, a key prerequisite for optimising the entire district across all sectors. One example: this enables anomalies, such as high power peaks, to be detected and reacted to. Moreover, as the project progresses various value-added services can be developed using the data and then tested by the residents. In summer 2020, two photovoltaics systems were completed and linked up to the district energy management system and the market platforms for balancing power and direct marketing. Not only that, by working with simulations we have already identified initial optimisation potential for the local heating energy grid. The aim here is, based on the FRANKLIN heating energy supply concept, to develop a concept for Spinelli, a CO_2-neutral district. That means the heating energy, warm water and electricity used by residents are 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 the local electricity grid. Both grids will be linked to storage facilities and coupled via a district energy management system (sector coupling).

Smart networking at “SynergieQuartier Walldorf”

The three-year research project “SynergieQuartier Walldorf” was launched on 1 July 2020. This is the follow-up project to “Living Lab Walldorf”, its successfully implemented predecessor. Together with Karlsruhe Institute of Technology (KIT), the FZI Research Center for Information Technology, Stadtwerke Walldorf and our subsidiary Beegy, we aim to further promote the energy turnaround.

The aim of the project is to look into ways of structuring flows of information and payments at electricity producers and consumers and to integrate electricity generated on a decentralised basis. Moreover, grid operations are to be investigated to assess the impact of the additional load resulting from e-mobility and sector coupling. Key factors here are IT security, the legal framework and the integration of the smart meter gateway. One part of this “Quartier” entails pilot households and businesses in Walldorf that have the necessary decentralised energy components, such as photovoltaics systems, e-charging stations or heat pumps. Close dialogue aimed at doing justice to the needs of the owners will be the key to success.

Hydrogen and Green Gases: a market is taking shape

The adoption of hydrogen strategies for Europe and for Germany in 2020 has created 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. For Germany, it is planned to add up to 5 GW of electrolyser capacity for producing green hydrogen by 2030 and a further 5 GW by 2040 at the latest. Decarbonised hydrogen will first be launched into the mobility and industry markets, with the energy industry then following suit.

In Green Gases and Hydrogen, a group-wide project which we launched in the 2020 financial year, we are developing MVV's position in the emerging market for hydrogen and green gases. In the first stage, we will assess the impact on existing business activities at our locations, identify new business fields and initiate pilot projects. 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 heating energy supply.

We promote e-mobility 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. By spring 2021, we will implement the third stage of the subsidy programme, with a focus on providing rapid DC charging infrastructure. This will involve installing 50 further modular charging points in Mannheim and the surrounding districts. We will erect HPC charging points with charging capacity of up to 300 kW each at inner-city locations. Thanks to this programme and the new TENK cooperation platform, we can ensure charging infrastructure availability at sites that are broadly distributed across Mannheim and the metropolitan region.

Innovation processes

Company ideas management

The objective of our ideas management is to involve our employees in the continuous improvement process at MVV. By organising topic-specific special campaigns, which in the year under report focused on climate neutrality and decarbonisation, we support our corporate strategy and call on and reward the wealth of ideas available among our staff.

In the 2020 financial year, we completed 310 proposed improvements. The ideas implemented enabled us to save Euro 117 thousand in the first year of implementation alone. We distributed bonuses of Euro 31 thousand to the relevant employees. The multiyear benefit (over 4 years) currently amounts to Euro 229 thousand.

Tapping the entrepreneurial potential of our employees

In “Take-Off”, our internal innovation process, we draw on the creative and entrepreneurial potential available among our employees to develop new products and business models. The winners of the pilot round held in 2018 have since positioned themselves successfully in the market. The MVV start-up project Climap, for example, supports municipalities and homeowners in identifying weak points in buildings where valuable energy is lost. This involves compiling heat maps with the help of thermographic filming. To this end, an airship flew over Schriesheim in mid-March 2020.

Fresh impulses from new companies

Our external innovation process serves to create a transfer of expertise between MVV and newly founded companies, to absorb innovative impulses and to anchor these at our company. Here, we are currently conducting a pilot project with our Beegy subsidiary in which we began by identifying three specific requirements in terms of processes or products. We then compare these with start-ups capable of cooperating with us. Working together with an external service provider, we also regularly look for start-ups which are having a positive influence on the energy turnaround and thus offer added value for MVV.

Group Business Performance

- Adjusted EBIT improves from Euro 225 million to Euro 233 million
- Ongoing high volume of investments
- Expansion in renewables-based generation

MAJOR DEVELOPMENTS AND EXECUTIVE BOARD SUMMARY

Coronavirus pandemic confronts us with challenges

Since early 2020, society as a whole and businesses, and thus also MVV, have been affected by the restrictions, rules and regulations resulting from the coronavirus pandemic. We are addressing this challenge with a cautious approach shaped by our responsibility towards our employees, and towards our customers, suppliers and partners. In this, we are focusing on protecting people's health while upholding our business activities. We introduced targeted measures at an early stage and are continually adapting these in line with the latest developments. As a critical infrastructure operator, we are responsible for ensuring a reliable supply of energy and water: We therefore acted immediately to secure the ongoing functionality of our operating processes. It has become apparent that our proven control and crisis processes have functioned well both before and during the coronavirus pandemic.

Due to the impact of the coronavirus pandemic, we reported a slight reduction in the volume of energy consumed by our customers and postponements in our project development business, particularly for foreign projects. However, we were able to counter these negative effects of the pandemic by implementing targeted measures and cost savings.

Investments in sustainable growth

A comprehensive investment programme has been a firm aspect of our corporate strategy for many years already. In the 2020 financial year, we invested a total of Euro 322 million. Alongside three major projects, our investments particularly focused on expanding our proprietary renewable energy generation portfolio.

Our highly efficient gas-fired CHP plant in Kiel launched its commercial operations at the end of November 2019, i.e. in the 1st quarter of our 2020 financial year. This secures the supply of climate-compatible and environmentally-friendly heating energy to the state capital of Schleswig-Holstein and is helping to significantly reduce CO_2 emissions.

In Mannheim, we linked up our energy from waste plant to the regional heating energy grid in February 2020. In future, this will enable up to 30 % of the annual heating energy needs in Mannheim and the Rhine-Neckar metropolitan region to be covered with renewable energies. In the next stage, we will be integrating new innovative technologies into our plant. We will recycle phosphorous from municipal sewage and simultaneously generate climate-neutral energy. We will invest around Euro 50 million in the new plant, which should launch operations at the end of 2021 already.

The third project is located in the Scottish city of Dundee, where we are building what is one of Europe's most modern energy from waste plants. This new plant is due to start operations in the 1st quarter of 2021.

We took over three windfarms developed and built by Juwi and Windwärts into our proprietary portfolio in the year under report. At the end of the 2020 financial year, our onshore wind turbines thus had total installed capacities of 236 MW, 32 MW more than in the previous year.

Slight increase in adjusted EBIT based on lower sales

We generated adjusted sales of Euro 3.5 billion in the 2020 financial year, as against Euro 3.8 billion in the previous year. This moderate reduction in sales was due above all to delays in our project development business and lower gas trading volumes. These factors were countered by sales growth resulting from, among other aspects, the first-time consolidation of EnDaNet GmbH in the 1st quarter of the year under report and positive developments in our environmental energy business.

At Euro 233 million, adjusted EBIT was slightly higher than in the previous year (Euro 225 million). This earnings performance was driven on the one hand by positive developments in our environmental energy business, where we benefited from good plant availability levels and positive one-off items, and the launch of operations at our new gas-fired CHP plant in Kiel. Moreover, our wind turbines also made higher earnings contributions. On the other hand, earnings were negatively affected by the impact of the coronavirus pandemic, mild weather conditions, initial charges due to the German Coal Exit Act (KAG) and lower income from companies recognised at equity.

Our pre-tax earnings (adjusted EBT) improved year-on-year by Euro 13 million to Euro 181 million. Due to an increase in minority interests, adjusted annual net income after minority interests showed a less marked increase. This key figure rose by Euro 6 million to Euro 104 million in the year under report. Adjusted earnings per share came to Euro 1.57, as against Euro 1.49 in the previous year.

Executive Board summary of business performance and economic position

Our 2020 financial year was shaped not only by challenging conditions in the energy industry and in terms of energy policy. These factors were exacerbated by the measures and restrictions resulting from the coronavirus pandemic. Despite this backdrop, we can look back on a successful year. On the one hand, many of the decisions taken in recent years came to fruition. On the other hand, we launched new projects that will help us to generate further sustainable and profitable growth.

Due above all to the impact of the coronavirus pandemic, we did not quite meet our target for adjusted sales. We expected sales at approximately the same level as in the previous year. At Euro 3.5 billion, sales nevertheless fell 6 % short of the previous year's figure. By contrast, our adjusted EBIT rose by 4 % to Euro 233 million and thus exceeded our most recent forecast, in which we expected earnings at around the same level as in the previous year.

Overall, if we look at MVV's operating performance we can see that we are pursuing the right strategy. Based on our business model and our corporate strategy, we will seize the opportunities presented by the transformation in the energy system in future as well. This will enable us to generate further long-term growth.

COMPARISON OF EXPECTED AND ACTUAL BUSINESS PERFORMANCE AND OUTLOOK

Comparison of expected and actual business performance and outlook

	Forecast FY 2020	Results FY 2020	Outlook FY 2021
Adjusted sales	Forecast adjusted after end of 1st half of 2020: at around previous year's level (Euro 3.8 billion)	Sales of Euro 3.5 billion	At least at previous year's level; subject to considerable uncertainties mainly influenced by further course of coronavirus pandemic
Adjusted EBIT	Forecast adjusted after end of 1st half of 2020: at around previous year's level (Euro 225 million)	Adjusted EBIT of Euro 233 million	At least at previous year's level; subject to considerable uncertainties mainly influenced by 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 34.3 %	Target > 30 %
Adjusted ROCE	At around previous year's level (7.9 %)	Adjusted ROCE of 7.7 %	At around previous year's level
Investments	Forecast adjusted after end of 1st half of 2020: at around previous year's level (Euro 310 million)	Total investments of Euro 322 million	Increase on previous year
Employees	Increase in personnel totals in growth fields; further efficiency measures in existing business	Increase in personnel totals to 6,260 employees at 30 September 2020 (previous year: 6,113)	Increase in personnel totals in growth fields; further efficiency measures in existing business

BUSINESS FRAMEWORK

Impact of coronavirus pandemic

Far-reaching economic implications

Like all other affected nations, Germany has also witnessed a severe impact on business and society due to the coronavirus pandemic. The specific effects of the pandemic on individual economies will depend above all on the duration and scope of restrictions, the extent to which compensation is provided to offset their impact and the pace of economic recovery.

Aid packages from Federal Government and EU

To minimise the economic impact of the pandemic, the Federal and State Governments in Germany have introduced several legislative packages since the end of March 2020. The Federal Government approved aid for consumers, families, employees, the self-employed and companies. Special programmes at KfW are available to companies, for example. These are intended to safeguard liquidity, particularly by way of favourably priced loans. Alongside this, an Economic Stabilisation Fund with a guaranteed framework of up to Euro 400 billion assists companies in obtaining refinancing. On the level of the European Union, a total of around Euro 500 billion should be available for loans provided to companies by the European Investment Bank, as well as extended credit lines within the European Financial Stability Facility for governments whose debt rises sharply due to the pandemic.

Energy policy developments

Coal exit and move to “Green Heat”

By adopting the German Coal Exit Act (KAG) in early July 2020, lawmakers demonstrated their commitment to making an economically sustainable move towards a climate-neutral energy system. The German Coal Exit Act sets out the details for the exit while also providing a new framework for replacement investments. The significance of combined heat and power (CHP) generation is underlined with an extension in the German CHP Act (KWKG) through to the end of 2029 and by raising the basic subsidy and increasing the fuel switching bonus. Furthermore, the German Coal Exit Act provides a support framework for linking CHP plants with green heat sources and calls on the government to submit draft legislation for financing renewables-based heating energy before the end of this year.

The Federal Government has been working on subsidy programmes for climate-neutral heating energy generation for quite some time already. The findings of the specialist surveys commissioned for the preparation of programmes should be presented in autumn 2020. A draft version of the “Federal Subsidy Programme for Efficient Heating Energy Grids” (BEW) is therefore expected in the second half of 2020. This is intended to subsidise both individual investments in green heating energy generation and projects aimed at decarbonising entire district heating grids. We expressly welcome this project. In terms of its structure, it meets the needs of the heating energy industry for which we have long campaigned intensively. Now it will be about ensuring that the BEW is provided with adequate financial resources. The subsidies so far envisaged by the Federal Government, namely of a maximum of Euro 1.8 billion over ten years, fall significantly short of what is needed. The “Federal Subsidy Programme for Efficient Buildings”, which focuses on energy savings in buildings, is already in place.

EU agrees on “Green Deal”

The new EU Commission unveiled its key focuses, which include accelerating decarbonisation by 2030, in December 2019 already. The Climate Target Plan presented by the EU Commission in September 2020 provides for reducing emissions by at least 55 % by 2030 compared with 1990. The EU aims to be climate neutral by 2050. Among other measures, this may involve extending the European emissions trading system to the transport and building sectors. From our perspective, this steep exit route will be necessary to reach the climate targets in the Paris Agreement. We therefore welcome the EU Commission’s plans.

In the energy sector, the EU is relying on a more rapid expansion in renewable energies, greater energy efficiency and new guidelines for state aid. Furthermore, European energy markets are to be interlinked even more closely. Depending on their specific structure, the more ambitious emission reduction targets on EU level could lead Germany to raise its own national targets. European legislation can be expected to provide a tailwind for MVV’s strategy in the years ahead as well, particularly with regard to expanding renewable energies, decarbonising the heating energy supply and facilitating climate neutrality at customers.

German Climate Protection Package adopted

The Federal Government adopted its Climate Protection Package in December 2019. This marks the beginning of CO_2 pricing for the transport and building sectors, which are not included in the existing European emissions trading system. Furthermore, the Federal Government will subsidise energy-related building refurbishment, the replacement of building heating systems and conversion to e-mobility. From our perspective, introducing the national CO_2 price is a positive step as it will make it more attractive to convert from fossil to renewable energies for building heating and mobility. This will create opportunities to supply heating energy from efficient and sustainable generation and to expand e-mobility. This is because the new requirements will make lower-emission electricity applications more competitive compared with fuel-based heating (such as oil) or fuel-based mobility (petrol, diesel).

Future CO_2 pricing for heating energy and transport

National emissions trading has been implemented by way of the German Fuel Emissions Trading Act (BEHG), which was adopted by the Federal Parliament at the end of 2019. This provides for CO_2 rights trading for the heating energy and transport sectors from 2021. Trading will be based on a fixed price that will be raised each year through to 2025.

When negotiating the Climate Package, the Federal and State Governments agreed in December 2019 to increase the previously determined CO_2 rights price. Upon the launch of trading in 2021, this should amount to Euro 25, rather than Euro 10 per tonne of CO_2. By 2025, the price should gradually rise to Euro 55 per tonne of CO_2. Starting in 2026, the CO_2 price is then to be determined by way of national emission rights trading, with the volume of emission rights being reduced year by year. For 2026, a price range of between Euro 55 and Euro 65 per tonne of CO_2 will apply. The additional proceeds are to be used in particular to reduce the charge levied on electricity under the German Renewable Energies Act (EEG). The price increase will be implemented in the first BEHG Amendment Act. The draft version of this legislation was forwarded to the Environmental Affairs Committee after its first reading in the Federal Parliament in June 2020.

As of the end of September 2020, it was still not clear whether the generation of energy from municipal waste would explicitly be covered by the BEHG legislation from 2023 onwards and whether energy from waste plants and municipal waste disposal companies would be obliged to participate in national emissions trading.

Better conditions for renewable energies

In September 2020, the Federal Government approved draft legislation to amend the German Renewable Energies Act (EEG). The amendment includes substantial improvements for expanding and promoting electricity generation from wind and solar power and from biomass and is intended to ensure that Germany reaches its target of 65 % of electricity from renewable sources by 2030. Wind power in southern Germany, where demand for electricity is highest, is to receive preferential treatment by way of a “South Germany Quota”. At the same time, EEG subsidies are to be extended to locations with less wind. MVV has long called for both measures, which may help to meet the urgent need for greater wind power expansion in southern states. The draft legislation is due to be adopted by the end of the year and to take effect at the beginning of 2021.

In June 2020, the Federal Government adopted the German Building Energy Act (GEG), which has pooled the German Energy Saving Ordinance (EneV), the German Energy Saving Act (EnEG) and the German Renewable Energies Heat Act (EEWärmeG). The GEG also included amendments, such as those governing the attribution of electricity from renewable energies for the purpose of meeting building energy efficiency requirements.

Furthermore, upon the adoption of the GEG legislation two major changes affecting the further expansion in renewable energies were introduced. The protracted dispute relating to minimum distance requirements between onshore wind turbines and settlements resulted in a compromise. Federal states will in future have the option of setting distances of a maximum of 1,000 metres to residential areas. Details are governed by legislation on state level. In Bavaria, the rule that the minimum distance must be at least ten times the height of the wind turbine continues to apply. For photovoltaics, lawmakers deleted the so-called 52-gigawatt cap from the EEG legislation. In Baden-Württemberg, the amendment to the State Climate Protection Act has provided a further positive framework for expanding photovoltaics. In future, new non-residential buildings and new larger-scale car parks will be obliged to install PV applications.

Partly in order to offset the gradual reduction in coal-based electricity generation volumes, the German Coal Exit Act provides for raising the expansion target for electricity from renewable energies to 65 % in 2030. This target is anchored in the EEG legislation. The volumes required to be tendered in accordance with the EEG for this target to be met are to be stipulated in the EEG Amendment.

Move to a hydrogen economy

Both the European Commission and the Federal Government have looked into how a future hydrogen economy might be structured. Two strategy documents published by the European Commission on 8 July 2020 contain extensive action plans for integrating the energy system and developing a hydrogen economy. The strategies, which are interlinked, are both intended to help implement the "European Green Deal" and ensure that the target of achieving climate neutrality by 2050 can be met. The measures will provide momentum for increasing sector coupling and decarbonising the gas sector. Furthermore, the planned requirements for a liquid EU hydrogen market are significant for MVV's decarbonisation strategy.

The Federal Government adopted its National Hydrogen Strategy in June 2020 already. This aims to create a home market for hydrogen technologies. Although the long-term objective is "green" hydrogen, the Federal Government also explicitly includes "blue" hydrogen – produced on the basis of natural gas by separating and depositing CO_2 (CCS) – as part of its strategy to build a value chain.

BSI publishes market declaration on installation of smart metering systems

At the beginning of 2020, the Federal Office for Information Security (BSI) presented the so-called market declaration for smart metering systems. This establishes that the rollout of smart metering systems is technically possible in accordance with the German Metering Operations Act (MsbG), as sufficient companies are offering smart metering systems with the necessary attributes on the market. This means that metering point operators responsible for the respective sites are obliged to equip electricity customers and metering points with annual consumption of 6,000 kWh up to a maximum of 100,000 kWh with a smart metering system. Further application cases will follow. Digitalising the energy turnaround is an important aspect of energy and climate policy in Germany, and smart metering systems are viewed as a significant component of this process.

Productivity factor decisions remain disputed

The general sector productivity factor (Xgen) for gas plays a significant role in determining the level of grid fees, and thus earnings at grid operators. In appeal proceedings in July 2019, the Higher Regional Court (OLG) in Düsseldorf already nullified the gas Xgen of 0.49 % stipulated by the Federal Network Agency (BNetzA) for the third regulatory period. In the next instance, the Federal Supreme Court (BGH) will issue a ruling. The Xgen reduces the permissible revenue cap. Its calculation is based on assumed progress in enhancing the productivity of grid operations compared with the overall economy. This effect is countered by inflation, which is expected to remain low for the foreseeable future. In November 2018, the BNetzA had stipulated an Xgen of 0.90 % for electricity supply grid operators, with large numbers of grid operators taking legal action against this as well.

Rates of equity return still important

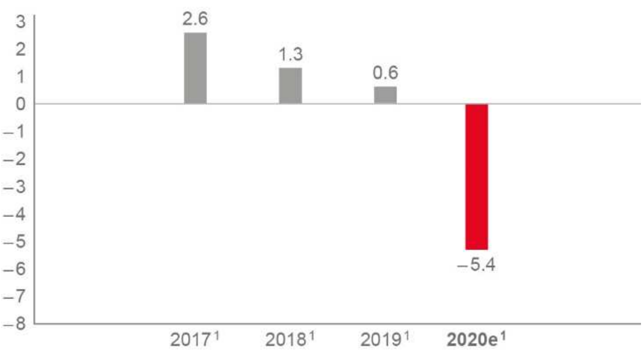
The levels of equity return set by the BNetzA in 2016 for the third regulatory period and since confirmed by the highest courts are among the lowest in Europe, and that even though Germany has some of the greatest grid expansion needs of any EU member state. To master the tasks needed to integrate renewable energies, considerable sums will still have to be invested in energy grids. At the same time, new energy policy objectives, such as sector coupling, e-mobility and digitalisation, also have to be accounted for. Against this backdrop, it is important that the rates of return still to be set for the fourth regulatory period should be measured in such a way that the necessary capital can be mobilised.

Market climate and competition

Pandemic leads German economy to contract

In their autumn survey, experts at Germany's leading economic research institutes forecast a 5.4 % reduction in GDP for the 2020 calendar year, with this being 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 2020)

Reduction in electricity generation in Germany

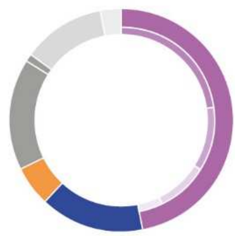
Based on calculations compiled by the Association of the German Energy and Water Industries (BDEW), gross electricity generation volumes totalled 412 billion kWh in the first nine months of 2020 and thus fell around 8 % short of the previous year's figure (447 billion kWh).

Renewables share of German electricity generation rises to 47 %

According to BDEW estimates, the share of gross electricity generation in Germany attributable to renewable energies totalled 47 % in the first nine months of the 2020 calendar year, up from 41 % in the previous year's period. Around half of this relative increase is due to the lower volume of electricity consumption, which fell by 5 % in the first three quarters of 2020 compared with 2019. The increase in the renewables share was significantly due to photovoltaics systems, where electricity generation volumes rose by 13 %. Offshore wind turbines increased their generation by 11 %. Electricity generation volumes from onshore wind turbines were 7 % higher than in the previous year. Biomass and biogenic municipal waste generated around the same amount of electricity as one year earlier. Overall, around 192 billion kWh of electricity was generated from renewable energies.

GROSS ELECTRICITY GENERATION IN GERMANY
Shares (%)

	2020[1]
Electricity from renewable energies	47
Wind power	23
Photovoltaics	11
Biomass, including biogenic municipal waste	9
Water	4
Lignite	15
Hard coal	6
Natural gas	16
Petroleum products	1
Nuclear energy	12
Other	3



1 January to September 2020

Wind power expansion remains at low level

In January 2020, the German Wind Energy Association (BWE) published its "Wind Energy Fact Sheet Germany" for the 2019 calendar year. Overall, gross wind power capacity totalling 2,189 MW, of which 1,078 MW onshore, was newly installed in Germany. Total installed wind power capacities amounted to 61,428 MW, which was around 4 % higher than the previous year's figure.

Gross onshore wind power capacity totalling 591 MW was added in Germany in the 1st half of the 2020 calendar year. This figure therefore remained low compared with the record years between 2014 and 2017. The gross volume of wind power capacity newly added was nevertheless around twice as high as in the first six months of the previous year. Including offshore turbines, newly installed wind power capacity amounted to 810 MW, which also represented an increase of around 50 % compared with the equivalent previous year's period. At 62,178 MW, total installed wind power capacities were around 4 % higher than the previous year's figure.

Positive market expectations confirm our strategic alignment

In its "Paths to a Climate-Neutral Energy System" study, the Fraunhofer Institute for Solar Energy Systems (Fraunhofer ISE) investigated potential developments that would lead to a reduction in energy-related CO_2 emissions by at least 95 % by 2050 compared with the equivalent figure for 1990. The experts concluded that, from a technical and systemic perspective, it should be possible to meet the climate protection targets set for the energy supply by working with renewable energies. Despite a high share of fluctuating renewable energies, a secure supply will be ensured across all consumption sectors. In the scenarios investigated for 2050, total installed wind turbine and photovoltaics system capacities amounted to between just under 500 GW_e and more than 750 GW_e and thus to between slightly less than five times and seven times the current figure. In all the developments considered, these two technologies covered between 50 % and 60 % of primary energy consumption in 2050. In the scenarios investigated, primary energy consumption for energy applications was significantly lower than today, and that despite the increases in useful energy assumed in most scenarios. This is due above all to the more or less marked displacement of combustion-based technologies (heating boilers, thermal power plants, combustion engines) by electricity-based technologies and thus to a parallel improvement in conversion efficiency across all sectors. This sector coupling represents a core aspect of the energy system transformation. The Fraunhofer ISE experts assume that, together with the increased use of electricity and accelerated reduction in specific emissions from electricity generation, the gradual reduction in the use of fossil fuels in heating (buildings, processes) and transport applications will be core components enabling the targeted reductions in CO_2 emissions in the energy supply to be achieved as inexpensively as possible.

Renewable energies are set to cover 65 % of Germany's electricity needs by 2030. In their study "The Green Electricity Gap, its Electricity Market Effects and How it Can be Filled", Agora Energiewende and Wattsight conclude that, if current trends are extrapolated, only around 55 % of electricity needs will be covered by renewable energies. To fill the green electricity gap, by 2030 it will be necessary to increase offshore wind power capacity to at least 25 GW, to add onshore wind power of at least 4 GW a year again and/or to launch a solar power campaign for 10 GW a year. Assuming electricity consumption remains unchanged, two of the three capacity addition routes, namely offshore wind power, onshore wind power and solar power, will be needed to reach the 65 % target. If higher electricity consumption is assumed for 2030 – due to greater e-mobility, more heat pumps, hydrogen production and additional demand for green electricity in energy-intensive industries – then all three measures will have to be implemented. The experts see the current crisis in adding new onshore wind power capacity as even posing a medium to long-term threat to the overall success of the energy turnaround.

Together with the Institute for Applied Ecology (Öko-Institut) and Hamburg Institut, the Frauenhofer ISE has compiled a heating turnaround roadmap. The institutes all agree that decarbonised district heating is essential if the heating turnaround is to be achieved by 2050. On the way there, measures to expand and increase the density of heating energy grids will also have a very significant role to play.

To achieve the climate protection targets, relevant efforts in the transport sector will also have to be massively stepped up. This is the conclusion reached by Agora Verkehrswende in its study "En route to Paris? Implications of the Paris Agreement for the German Transport Sector". Rapid reductions in emissions are possible by taking measures such as significantly accelerating the electrification of personal and freight transport and pressing ahead with the expansion in renewable electricity generation. The target set by the Federal Government for electric cars in Germany, namely of reaching seven to ten million, is highly ambitious. According to the "Alternative Drive Systems in Germany" study published by the German Energy Agency (dena), however, this target is achievable if high growth rates continue to be achieved. A growth rate of around 42 % would be required. In the years from 2016 to 2018, the average growth rate for electric vehicles amounted to around 82 %. To reach the target set by the Federal Government for one million publicly accessible charging points by 2030, the market will have to develop significantly faster than to date. At 43 % the average annual growth rate for charging points would have to be slightly higher than that for the vehicles.

In the long term, we will benefit from the aforementioned trends in our growth fields: our energy generation from renewable energies, our project development and operations management for renewable energies plants and the direct marketing of such, our decentralised energy and heating supply, and our energy efficiency solutions and service offerings.

Weak wholesale prices for fuel and electricity in period under report

Wholesale prices (average) from 1 October to 30 September

	FY 2020	FY 2019	+/– change	% change
Crude oil [1] (US$/barrel)	47.52	65.72	– 18.20	– 28
Natural gas [2] (Euro/MWh)	14.77	20.08	– 5.31	– 26
Coal [3] (US$/tonne)	59.75	75.67	– 15.92	– 21
CO_2 rights [4] (Euro/tonne)	24.45	24.30	+ 0.15	+ 1
Electricity [5] (Euro/MWh)	41.65	48.76	– 7.11	– 15

1 Brent crude oil; front-month
2 Net Connect 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$ 47.52 per barrel in the period under report and were thus US$ 18.20 (– 28 %) down on the previous year's period. As the clearest indicator of global economic developments within the energy complex, the oil price was dominated above all by the downturn in the global economy due to the coronavirus crisis. Compared with its high at the beginning of January 2020, the oil price fell by up to 72 % to its low in April. The historic extent of this collapse in prices became clear when negative oil prices were reported for the first time ever in April, in this case for the May contract due to expire for the US crude oil WTI. The rise in prices from May onwards reflects a recovery in the macroeconomic climate. The oil price subsequently peaked at more than US$ 45 per barrel in August, a level that was nevertheless still lower than the annual average price.

Average natural gas price listings for the front-year product in the NetConnect Germany (NCG) market region came to Euro 14.77/MWh in the period under report, Euro 5.31/MWh lower than in the previous year. Due to a very mild winter in conjunction with very good gas availability levels, the first half of our 2020 financial year witnessed a substantial reduction in prices. Compared with its maximum of around Euro 18.50/MWh, the gas price fell by up to 33 % in March. A further fall in prices was averted in spring 2020, but sideways movement led the gas price to repeatedly touch its low. Only in August, when it was supported by growing global demand on the gas markets, was the German gas price able to report a sustainable increase. It nevertheless remained significantly lower than in autumn 2019.

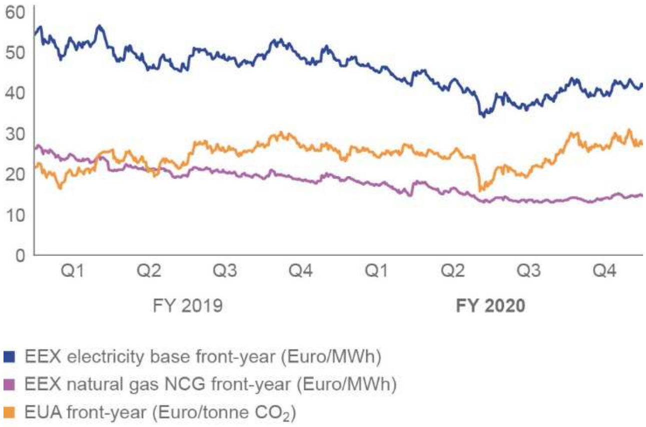
Coal prices also fell significantly compared with the previous year, with average front-year prices per metric tonne of hard coal in the ARA region (Amsterdam, Rotterdam, Antwerp) falling by US$ 15.91 (– 21 %) to US$ 59.75. Unlike in the oil market, prices already slipped in the first quarter of our 2020 financial year, while the downturn subsequently triggered by the coronavirus crisis proved less dramatic. The lowest price, seen in early May, was 17 % lower than that at the beginning of the 2020 calendar year. Due to weak global demand and high volumes of stocks, the coal price nevertheless showed a further sharp reduction in August, before an increase in the share of coal in Germany's electricity mix led it to rise once again in September.

Base load electricity for supply in the following year was priced at an average of Euro 41.65/MWh in the period under report and thus fell by Euro 7.11/MWh compared with the previous year. Having reached their annual high at around Euro 49/MWh in October 2019 already, prices then showed a sharp decline in the first half of our 2020 financial year. The very mild winter with record wind power feed-in volumes in February was followed by an exceptionally sunny spring. Overall, wind and solar power generated a total of around 60 TWh of electricity in the first quarter of the 2020 calendar year, 20 % higher than the previous maximum. With the onset of the coronavirus pandemic, the electricity price fell further, reaching its annual low at Euro 33.20/MWh in March. The recovery in the economy during the second half of our year under report was accompanied by a return to higher prices, which stabilised at pre-crisis levels. Despite the discussions surrounding more ambitious EU emission reduction targets, prices were unable to exceed a level of Euro 43.70/MWh.

Within the energy market, CO_2 emission rights (EUA) were the only commodity that did not witness a year-on-year reduction in average prices in the 2020 financial year. Emission right prices per tonne of CO_2 for supply in the following year averaged Euro 24.45 and thus remained at around the previous year's level of Euro 24.30. Although emission right prices fell dramatically in March 2020, with levels of below Euro 16 being seen, the emissions market showed a clear recovery in the summer, with listed prices reaching a 14-year high in July. Prices of above Euro 30 were also tested again in August and September. Alongside higher electricity demand due to the economic recovery, this rise in prices was driven above all by the discussions and speculation surrounding more ambitious emission reduction targets on the part of the EU Commission.

The margins achieved from generating electricity from hard coal and gas – the clean dark spread (CDS) and the clean spark spread (CSS) – moved in opposite directions in the period under report. Averaging Euro – 1.82/MWh, the CDS fell short of the previous year's level (Euro 0.46/MWh), while the CSS increased by 4.55/MWh to Euro – 0.36/MWh. Due to the low gas price, the CSS reached positive territory for the first time in mid-March 2020 and maintained this until mid-August 2020. Only at the end of September 2020 did the CSS fall back to levels most recently seen in early March. By contrast, having mainly been positive in the first months of our 2020 financial year in July 2020 the CDS fell to the lowest level during the period under report.

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



DEVELOPMENT IN WHOLESALE PRICES FOR OIL AND COAL

DEVELOPMENT IN CLEAN DARK SPREAD AND CLEAN SPARK SPREAD 2021

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 waste and refuse-derived fuels for incineration in the 2020 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 renewable energies plants with total capacities of around 4,100 MW under contract in Germany. Energie & Management, the energy market journal, therefore sees us as one of Germany's largest direct marketers.
- 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 5.6 billion kWh in Germany. According to the report compiled by the AGFW industry association, this makes us Germany's second-largest provider of district heating.
- 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

Unusually mild weather conditions

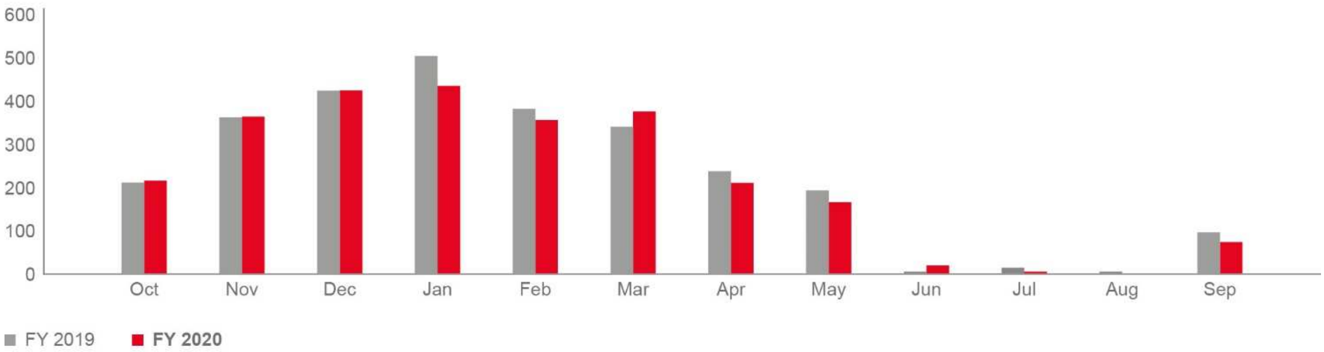
Higher outdoor temperatures lead to lower heating energy requirements at our customers. That is also reflected in lower degree day figures, which are used as an indicator of temperature-based heating energy consumption. Our year under report was the warmest financial year in the past ten years. Overall, degree day figures fell around 4 % short of the already low level already seen in the previous year.

Higher wind volumes than in previous year

Just like our customers' heating energy needs, electricity generation volumes at our renewable energies plants are also influenced by weather conditions. Wind volumes, on which the amount of electricity generated by our turbines depends, are particularly significant in this respect.

In the regions relevant to us, the volume of usable wind power in the 2020 financial year was around 11 % higher overall than the long-term average. The wind yield was ahead of the previous year's figure, which over the same period exceeded the long-term average by around 1%. 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 2020 financial year, which started on 1 October 2019 and ended on 30 September 2020. 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.

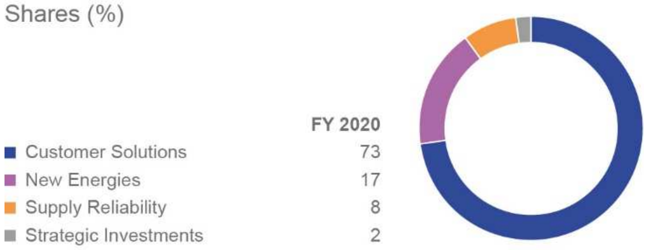
MVV from 1 October to 30 September

Euro million	FY 2020	FY 2019	+/– change	% change
Development in turnover				
Electricity (kWh million)	20,147	20,246	– 99	0
Heating energy (kWh million)	6,249	6,286	– 37	– 1
Gas (kWh million)	24,974	25,719	– 745	– 3
Water (m³ million)	41.4	41.1	+ 0.3	+ 1
Combustible waste delivered (tonnes 000s)	2,388	2,300	+ 88	+ 4
Adjusted sales excluding energy taxes [1]	3,515	3,756	– 241	– 6
of which electricity revenues	1,629	1,668	– 39	– 2
of which heating energy revenues	375	374	+ 1	0
of which gas revenues	635	718	– 83	– 12
of which water revenues	89	89	0	0
Adjusted EBIT	233	225	+ 8	+ 4

1 Previous year`s figure adjusted

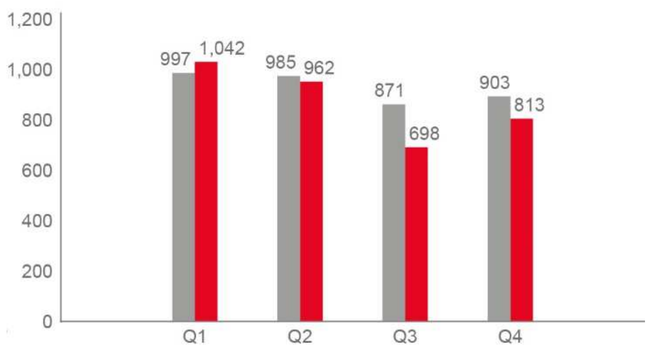
Within sales, we eliminate IFRS 9 measurement items, which stood at a net total of Euro – 83 million at 30 September 2020 and Euro – 17 million at 30 September 2019. At Euro 3.5 billion, adjusted sales fell slightly short of the previous year's figure. This means that we did not quite meet our forecast that adjusted sales would approximately match the previous year's figure. The reduction in sales was due in particular to our project development business, as well as to lower gas trading volumes. These developments were opposed by higher sales resulting from, among other factors, the initial consolidation of EnDaNet in the 1st quarter of the year under report and the positive performance of our environmental energy business. Of MVV's consolidated sales for the 2020 financial year, 92 % were generated in Germany (previous year: 88 %) and 8 % abroad (previous year: 12 %).

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



ADJUSTED SALES EXCLUDING ENERGY TAXES BY REGION
Shares (%)

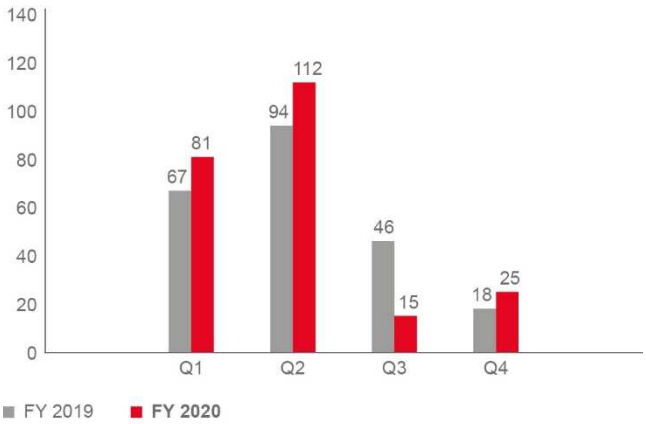
ADJUSTED SALES EXCLUDING ENERGY TAXES BY QUARTER
Euro million



1 Previous year's figures adjusted

At Euro 233 million, adjusted EBIT was slightly higher than in the previous year and thus exceeded our most recent forecast, in which we expected to generate earnings at around the previous year's level. This improvement was mainly driven by the positive performance in our environmental energy business, the launch of operations at our new gas-fired CHP plant in Kiel, positive one-off items and higher revenues from our wind turbines. Earnings were negatively affected, on the other hand, by the impact of the coronavirus pandemic, mild weather conditions, initial charges due to the German Coal Exit Act (KAG) and lower at-equity earnings.

ADJUSTED EBIT BY QUARTER
Euro million



Customer Solutions reporting segment

Customer Solutions from 1 October to 30 September

Euro million	FY 2020	FY 2019	+/– change	% change
Development in turnover				
Electricity (kWh million)	19,496	19,676	– 180	– 1
Heating energy (kWh million)	4,466	4,582	– 116	– 3
Gas (kWh million)	24,661	25,394	– 733	– 3
Water (m^3 million)	40.5	40.2	+ 0.3	+ 1
Combustible waste delivered (tonnes 000s)	152	155	– 3	– 2
Adjusted sales excluding energy taxes [1]	2,553	2,656	– 103	– 4
Adjusted EBIT	21	26	– 5	– 19

1 Previous year`s figure adjusted

Electricity turnover was at approximately the same level as in the previous year while heating energy decreased, with this being due above all to weather conditions. The reduction in gas turnover was due to lower gas trading volumes.

Alongside lower electricity and gas trading volumes, the reduction in sales was also attributable to lower purchase volumes at our business customers on account of weather conditions and the coronavirus pandemic.

The year-on-year reduction in adjusted EBIT was primarily due to lower earnings contributions from our business customers as a result of the coronavirus pandemic, as well as to mild weather conditions.

New Energies reporting segment

New Energies from 1 October to 30 September

Euro million	FY 2020	FY 2019	+/– change	% change
Development in turnover				
Electricity kWh million)	469	409	+ 60	+ 15
Heating energy (kWh million)	1,115	1,014	+ 101	+ 10
Gas (kWh million)	211	218	– 7	– 3
Combustible waste delivered (tonnes 000s)	2,126	2,047	+ 79	+ 4
Adjusted sales excluding energy taxes	591	734	– 143	– 19
Adjusted EBIT	113	109	+ 4	+ 4

Due above all to improved plant availability in our environmental energy business, electricity and waste volumes were both ahead of the previous year's figures. The higher volume of heating energy resulted, among other factors, from the connection of our waste-fired CHP plant in Mannheim to the regional heating energy grid in February 2020.

The reduction in sales was attributable to our project development business and could only be offset in part by the positive performance of our environmental energy business.

The increase in adjusted EBIT was driven on the one hand by the positive performance in our environmental energy business, where we benefited from improved availability at our plants, as well as from one-off items. On the other hand, our wind turbines generated higher earnings contributions. In our project development business, the postponement of projects, some of which due to the coronavirus pandemic, meant that earnings were at the previous year's level.

Supply Reliability reporting segment

Supply Reliability from 1 October to 30 September

Euro million	FY 2020	FY 2019	+/– change	% change
Adjusted sales excluding energy taxes [1]	278	278	0	0
Adjusted EBIT	67	69	– 2	– 3

1 Previous year`s figure adjusted

Adjusted sales were at the previous year's level.

Compared with the previous year, adjusted EBIT benefited from the launch of operations at our new gas-fired CHP plant in Kiel. However, this positive factor was more than offset by initial charges due to the German Coal Exit Act (KAG) and lower at-equity earnings. As a result, adjusted EBIT in the Supply Reliability reporting segment showed a slight overall reduction.

Strategic Investments reporting segment

Strategic Investments from 1 October to 30 September

Euro million	FY 2020	FY 2019	+/– change	% change
Development in turnover				
Electricity (kWh million)	182	161	+ 21	+ 13
Heating energy (kWh million)	668	690	– 22	– 3
Gas (kWh million)	102	107	– 5	– 5
Water (m^3 million)	0.9	0.9	0.0	0
Combustible waste delivered (tonnes 000s)	110	98	+ 12	+ 12
Adjusted sales excluding energy taxes	91	86	+ 5	+ 6
Adjusted EBIT	24	20	+ 4	+ 20

The higher electricity turnover was due to greater generation efficiency at our Czech subgroup, a factor that is also reflected in the development in sales. The earnings performance was influenced, among other factors, by changes in provisions. In the previous year, it had been necessary to recognise new provisions, while in the year under report provisions were reversed. The negative impact of mild weather conditions was offset by positive one-off items.

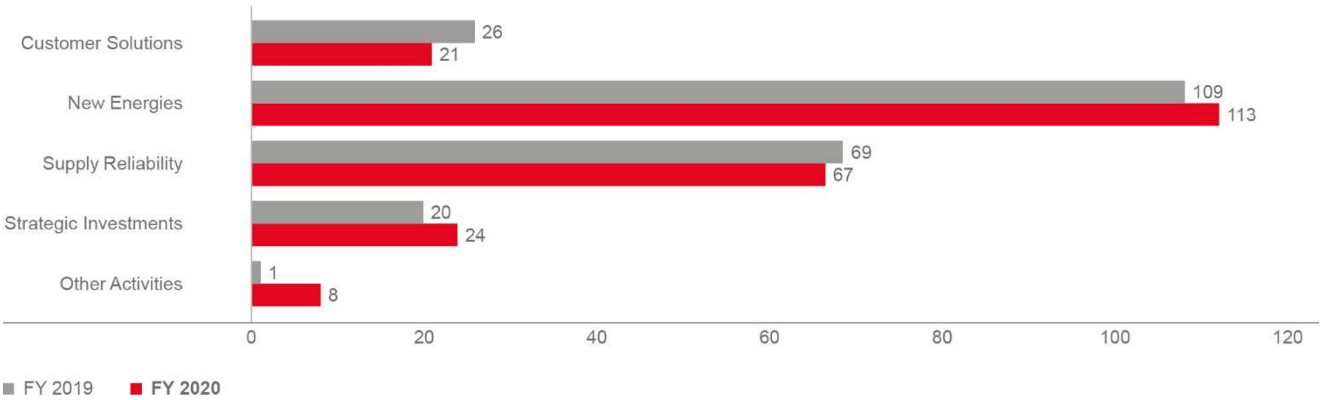
Other Activities reporting segment

Other Activities from 1 October to 30 September

Euro million	FY 2020	FY 2019	+/– change	% change
Adjusted sales excluding energy taxes	2	2	0	0
Adjusted EBIT	8	1	+ 7	>+ 100

The main reasons for the increase in adjusted EBIT were earnings items resulting from a property sale and the positive impact of our cost-cutting efforts.

ADJUSTED EBIT BY REPORTING SEGMENT
Euro million



Reconciliation with adjusted EBIT

In the following table, we show how we reconcile the EBIT reported in the income statement for the 2020 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 2020	FY 2019	+/– change
EBIT as reported in income statement	209	165	+ 44
Financial derivative measurement items	20	56	– 36
Structural adjustment for part-time early retirement	<1	<1	0
Interest income in connection with finance leases	4	4	0
Adjusted EBIT	233	225	+ 8

For our value-based management, we refer to adjusted EBIT and calculate this key operating earnings figure by adjusting our operating earnings before interest and taxes to eliminate, among other items, 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 a net total of Euro – 20 million at 30 September 2020 and Euro – 56 million at 30 September 2019. These measurement items reflect the development in prices on the commodities and energy markets. They have no impact on payments, neither do they affect our operating business or dividend.

Development in key income statement items

Adjusted cost of materials decreased by Euro 277 million to Euro 2,582 million. This reduction particularly reflected developments in our project development business, price items and the reduction in cost of materials resulting from the decommissioning of the coal-fired power joint power plant in Kiel. These factors were opposed by higher cost of materials due to the initial consolidation of EnDaNet GmbH in the 1st quarter of the year under report and the full consolidation of DC-Datacenter-Group in the 3rd quarter of the previous year, meaning that this company was only included in the previous year's figures on a prorated basis.

At Euro 456 million, adjusted employee benefit expenses were Euro 18 million higher than in the previous year. The main reasons for this increase were first-time consolidation effects due to EnDaNet and collectively agreed pay rises.

Excluding IFRS 9 measurement items, the development in adjusted other operating income **Notes to Income Statement (Note 4), Page 108** was shaped by write-ups to property, plant and equipment and repayments in connection with contracts with suppliers. Overall, adjusted other operating income rose year-on-year by Euro 20 million to Euro 96 million.

Also excluding IFRS 9 measurement items, adjusted other operating expenses **Notes to Income Statement (Note 7), Page 109** fell by Euro 18 million to Euro 168 million. This development was mainly attributable to lower additions to provisions.

In the **Income Statement** **Page 91** IFRS 9 measurement items are included under other operating income and other operating expenses. Their net balance led to a negative item of Euro 12 million in the 2020 financial year. The previous year's measurement item was also negative, in this case at Euro 32 million.

Mainly due to the launch of operations at our new gas-fired CHP plant in Kiel, depreciation and amortisation **Notes to Income Statement (Note 14), Page 112** rose by Euro 24 million to Euro 207 million.

The goodwill write-downs relate to an impairment loss on goodwill at MVV Enamic.

Thanks largely to lower interest expenses for provisions and loans, the adjusted financial result improved by Euro 5 million to Euro – 52 million.

Net of the adjusted financial result, the adjusted EBT of Euro 181 million for the 2020 financial year exceeded the previous year's figure (Euro 168 million).

Adjusted annual net income increased by Euro 13 million and amounted to Euro 128 million for the year under report.

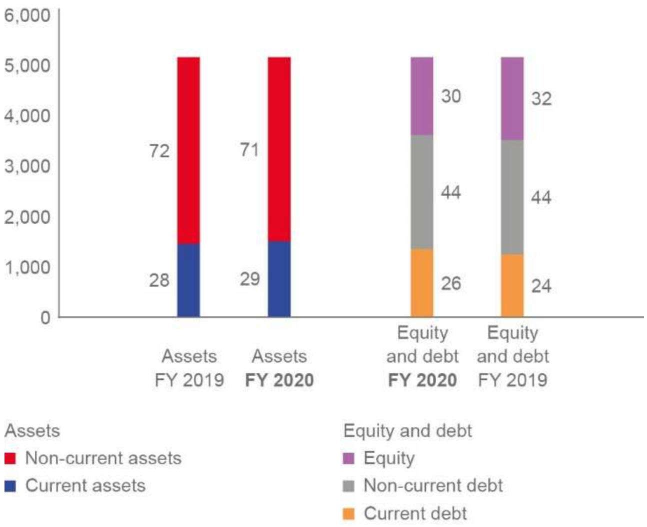
Adjusted minority interests came to Euro 24 million and were thus Euro 7 million higher than in the previous year, a development mainly due to earnings at Energieversorgung Offenbach. Adjusted annual net income after minority interests rose to Euro 104 million (previous year: Euro 98 million). Calculated on this basis, adjusted earnings per share amounted to Euro 1.57 (previous year: Euro 1.49). The number of shares remained unchanged at 65.9 million.

PRESENTATION OF ASSET POSITION

Balance sheet structure

Euro 000s	30 Sep 2020	30 Sep 2019	% change
Assets			
Non-current assets	3,564,401	3,463,827	+ 3
Current assets	**1,466,921**	1,358,370	+ 8
Total assets	**5,031,322**	**4,822,197**	**+ 4**
Equity and debt			
Equity	1,534,300	1,535,267	0
Non-current debt	2,191,933	2,109,348	+ 4
Current debt	**1,305,089**	1,177,582	+ 11
Total equity and debt	**5,031,322**	**4,822,197**	**+ 4**

BALANCE SHEET STRUCTURE
Euro million, shares (%)



Balance sheet development

Total assets amounted to Euro 5,031 million at the balance sheet date and were thus Euro 209 million higher than at 30 September 2019 **Balance Sheet, Page 93.**

On the asset side of the balance sheet, non-current assets rose by Euro 100 million to Euro 3,564 million. Property, plant and equipment grew by Euro 93 million to Euro 2,727 million, a development largely due to investments in the construction of the new gas-fired CHP plant in Kiel and a new energy from waste plant in the Scottish city of Dundee, as well as to the connection of our waste-fired CHP plant in Mannheim to the heating energy grid. Changes also arose in non-current other receivables and assets in particular **Notes to Balance Sheet (Note 22), Page 121**. This line item rose by Euro 31 million to Euro 102 million, as the value of derivative financial instruments grew year-on-year, particularly as a result of more marked changes in market prices and the resultant increase in the fair values of energy trading transactions recognised under IFRS 9.

Current assets rose by Euro 109 million to Euro 1,467 million. On the one hand, current other receivables and assets **Notes to Balance Sheet (Note 22), Page 121** increased by Euro 122 million to Euro 564 million, with this mainly being due to more marked changes in market prices and the resultant increase in the positive fair values of energy trading transactions recognised under IFRS 9. Furthermore, due above all to developments in our project development business inventories grew by Euro 20 million to Euro 199 million. By contrast, as a result of mild weather conditions and lower feed-in volumes in the direct marketing business current other trade receivables **Notes to Balance Sheet (Note 22), Page 121** fell by Euro 32 million to Euro 333 million. Cash and cash equivalents **Notes to Balance Sheet (Note 26), Page 123** fell to Euro 343 million, down Euro 14 million compared with the previous year's balance sheet date. Here, positive effects virtually offset the payments made for investments in current major projects, the payment of the dividend for the 2019 financial year and the substantial rise in inventories.

Our equity including non-controlling interests amounted to Euro 1,534 million at the balance sheet date and thus fell Euro 1 million short of the previous year's figure **Notes to Balance Sheet (Note 27), Page 124.**

For Group management purposes, we adjust our consolidated balance sheet at 30 September 2020 to eliminate cumulative IFRS 9 measurement items. On the asset side, we eliminate positive fair values of derivatives and allocable deferred taxes, which amounted to Euro 450 million in total (30 September 2019: Euro 350 million). On the equity and debt side, we eliminate negative fair values and allocable deferred taxes, in this case Euro 486 million, from debt (30 September 2019: Euro 358 million). In equity, we eliminate the net balance of Euro – 36 million (30 September 2019: Euro – 8 million). This resulted in adjusted equity of Euro 1,571 million at 30 September 2020 (30 September 2019: Euro 1,544 million). As a percentage of adjusted total assets of Euro 4,582 million (30 September 2019: Euro 4,472 million), the adjusted equity ratio came to 34.3 % at 30 September 2020, compared with 34.5 % at 30 September 2019.

Non-current debt increased to Euro 2,192 million, up by Euro 83 million compared with the previous year's balance sheet date. Here, non-current other liabilities **Notes to Balance Sheet (Note 31), Page 131** grew by Euro 70 million to Euro 290 million. This increase was primarily due to more marked changes in market prices and the resultant increase in the negative fair values of energy trading transactions recognised under IFRS 9. Due above all to the taking up of loans, non-current financial debt **Notes to Balance Sheet (Note 30), Page 130** rose by Euro 20 million to Euro 1,553 million.

Current debt increased by Euro 128 million and amounted to Euro 1,305 million in total. This development was notably influenced by current other liabilities **Notes to Balance Sheet (Note 31), Page 131,** which rose by Euro 188 million to Euro 649 million. This increase was in turn chiefly due to a significant movement in market prices. The fall in market prices mainly triggered by the coronavirus crisis led to higher fair values for the energy trading transactions recognised under IFRS 9. Tax provisions **Notes to Balance Sheet (Note 28), Page 125** decreased by Euro 33 million to Euro 1 million. This resulted from a reclassification of income tax items from provisions not meeting IFRIC 23 requirements to tax liabilities. The reduction in trade payables **Notes to Balance Sheet (Note 32), Page 133** by Euro 25 million to Euro 337 million mainly reflects developments in our project development business. Mainly as a result of a lower volume of services not yet invoiced, current other provisions **Note to Balance Sheet (Note 28), Page 125** decreased by Euro 24 million to Euro 128 million.

Investments

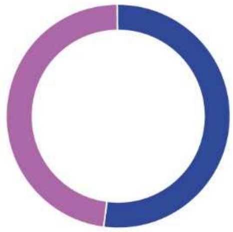
We invested a total of Euro 322 million in the 2020 financial year (previous year: Euro 310 million).

Investments from 1 October to 30 September

Euro million	FY 2020	FY 2019	+/– change	% change
Customer Solutions	39	37	+ 2	+ 5
New Energies	104	119	– 15	– 13
Supply Reliability	149	124	+ 25	+ 20
Strategic Investments	19	16	+ 3	+ 19
Other Activities	11	14	– 3	– 21
Total	**322**	**310**	**+ 12**	**+ 4**
of which growth investments	155	181	– 26	– 14
of which investments in existing business	167	129	+ 38	+ 29

INVESTMENTS
Shares (%)

	FY 2020
Growth investments	48
Investments in existing business	52



Our largest investment projects included:

- Investments relating to our new gas-fired CHP plant in Kiel
- Building a new CHP plant in Dundee/Scotland
- Expanding our Friesenheimer Insel site in Mannheim
- Developing and buying windfarms for our proprietary generation portfolio
- Maintaining and renewing our distribution grids
- Expanding and increasing the density of our district heating grids
- Building two new sewage incineration plants
- Building a data centre at Energieversorgung Offenbach.

PRESENTATION OF FINANCIAL POSITION

Current and non-current financial debt increased by Euro 15 million to Euro 1,717 million. At the same time, cash and cash equivalents fell by Euro 14 million to Euro 343 million. Overall, net financial debt (current and non-current financial debt less cash and cash equivalents) therefore rose by Euro 29 million to Euro 1,374 million. The taking up of new loans for investments, to buy a windfarm and to build our new plant in Scotland was countered by repayments of existing loans.

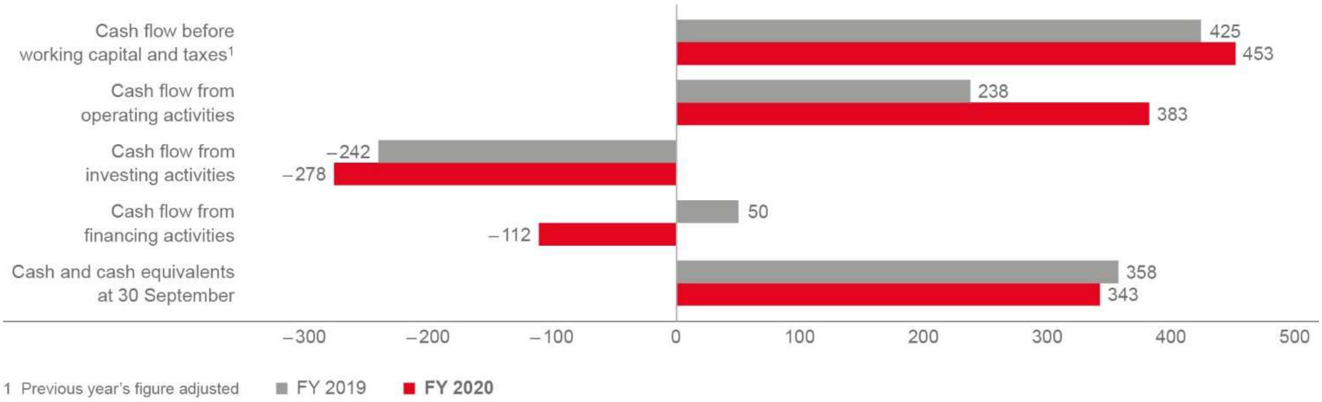
After the elimination of non-cash income and expenses, the improvement in earnings before taxes (EBT) compared with the previous year led cash flow before working capital and taxes to increase by Euro 27 million. The largest item in this elimination related to non-cash IFRS 9 measurement.

This positive development is significantly amplified in the cash flow from operating activities, which showed a year-on-year improvement of Euro 145 million. The largest positive item relates to the settlement of project development activities at Juwi. Further items that significantly increased the cash flow on the one hand include the reduction in trade receivables and on the other hand relate to the receipt of prepayments, mainly for a project in the Customer Solutions segment. The depositing of securities for counterparty default risk (margins) also led to a significantly less marked outflow of funds in the 2020 financial year than in the previous year and thus also contributed to the improvement in the cash flow from operating activities.

The development in the cash flow from investing activities was mainly influenced by significantly higher investments in property, plant and equipment, particularly in connection with our new gas-fired CHP plant in Kiel. The cash flow was also reduced year-on-year by the payments made for other financial assets. One major item in this respect related to the capital increases at joint ventures recognised using the equity method. An opposing positive factor resulted from lower payments for the acquisition of fully consolidated companies. Overall, the cash flow from investment activities fell by Euro 37 million compared with the 2019 financial year.

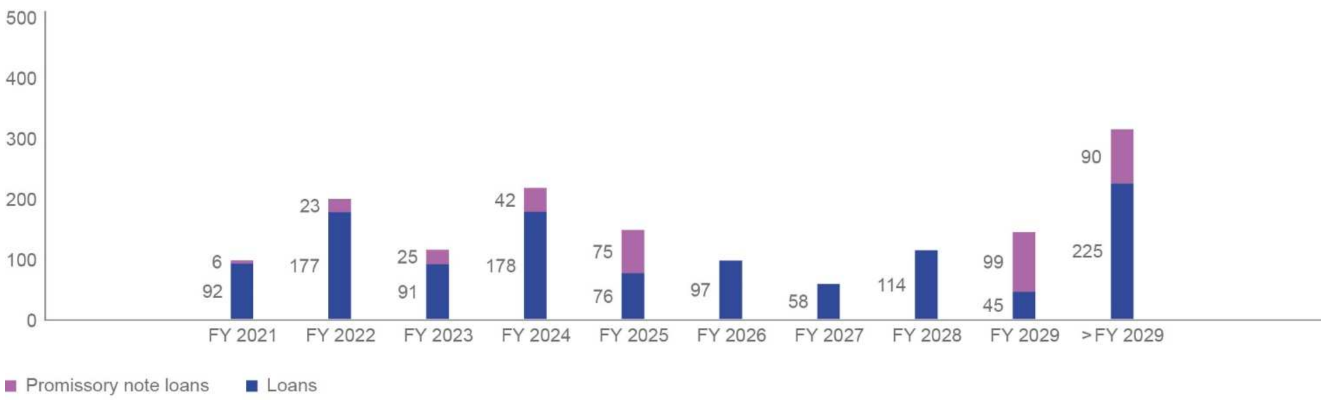
The cash flow from financing activities showed a significant year-on-year reduction of Euro 162 million, a development chiefly due to lower net new borrowing.

CASH FLOW STATEMENT
Euro million



1 Previous year's figure adjusted

REPAYMENT PROFILE
Euro million



Professional financial management

Our access to the capital markets, which remains as strong as ever, enables us to cover MVV's liquidity requirements without any difficulty. In this respect, we benefit from our strong creditworthiness, our diversified business portfolio and our corporate strategy, which focuses on generating sustainable and profitable growth. MVV has very strong liquidity resources in the form of cash funds and credit lines at banks.

Our repayment profile still does not show any significant spikes in the years ahead.

MVV Energie AG manages a cash pool for itself and 29 other 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.

Rating

MVV is not assessed by any rating agencies. In the rating talks we hold with our core banks, we nevertheless receive regular feedback on our creditworthiness. Based on this information, we 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). This declaration is submitted 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. If, for select reporting topics, we focus on our main locations in Mannheim, Offenbach, Kiel and Wörrstadt and if individual key figures include shareholdings recognised at equity, 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 183.**

We are consistently working to minimise any potentially negative implications of our business activities and to make measurable contributions to restructuring the energy supply and protecting the climate and environment. In our Annual Report and on our website we have for many years now provided information about the challenges we face and the progress we have made as a company that acts sustainably. In the first quarter of 2021, we will once again publish a separate Sustainability Report for the 2020 financial year. 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 will, in customary form, satisfy the transparency requirements of our stakeholders.

To identify which sustainability topics are particularly significant to us, in 2020 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 the 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 and thus refer to the forthcoming publication of the separate Sustainability Report.

Business model and risk analysis

We have pursued a sustainability-driven strategy for many years now. This also involves providing our customers with a supply of environmentally-friendly energy and supporting them by offering innovative solutions enabling them to implement their own energy turnarounds. In this, 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 22.**

Within our existing risk management system, we record and evaluate all material risks associated with our business activities and business relationships **Page 82.** In our risk management system, we also record and evaluate any material non-financial risks that may have severe negative implications. The review process performed on non-financial risks in the 2020 financial year concluded that there were no risks which satisfied the materiality criteria set out in § 289c (3) Nos. 3 and 4 HGB.

At the same time, we look with some concern to the consequences of the ongoing coronavirus pandemic, whose impact on our own business processes and activities is not only direct. As well as our employees, our 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, and should this be accompanied by a reduction in the dynamism 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 potential trend of this nature to a limited extent, as our business depends to a significant extent on the political and regulatory framework. To date, there are no signs of this kind of development. Quite the reverse: In recent months, the European Commission and the Federal Government have taken further steps aimed at transforming the economy and society. In particular, the resources used to combat the coronavirus pandemic should serve to accelerate 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 on our **Corporate Strategy, Page 21.** Our strategic sustainability targets **Pages 48 and 51** were adopted by the Executive Board for the years 2016 to 2026 and are an integral component of our corporate strategy. In 2020, we supplemented these targets with additional decarbonisation targets which we aim to meet by 2030 at the latest.

Our sustainability management is anchored across various levels of the Group. The Executive Board bears overall strategic responsibility. We continually review, evaluate and manage MVV's performance on the basis of sustainability indicators and medium-term targets. We evaluate investment projects, also by reference to sustainability criteria. The sustainability department is located in organisational terms in our group strategy and energy industry department. It coordinates the sustainability strategy, reports to the Executive Board and sustainability bodies and manages the group-wide sustainability programme. As well as managing the exchange of information between business fields, this department also plans and implements projects and measures.

Disclosures on contents of combined non-financial declaration

Contents of combined non-financial declaration

Aspects pursuant to § 289 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	Decarbonisation and energy turnaround	Climate protection Renewable energies
	System change	Supply reliability
Employee concerns	Employee concerns	Training and development Diversity Occupational safety and health protection
Social concerns	Social commitment	Social commitment
Respect for human rights and combating corruption and bribery	Value chain[1] Compliance[1]	Respect for human rights and combating corruption and bribery

1 Not material under GRI, but material area of action for MVV

Environmental concerns aspect

Decarbonisation and energy turnaround

Climate protection has rapidly grown in importance as an issue within society, among the general public and in the political arena. In new analyses, such as the IPCC Special Report 1.5°C, climate science has underlined the urgency of adopting a far more ambitious approach towards decarbonisation, not least as global warming is advancing much faster than projected just a few years ago. Over the past 18 months, far-reaching political decisions have been taken in response to international and national movements within society. Among others, these include:

- The national Climate Protection Act (KSG), which provides for binding CO_2 reduction targets for individual sectors by 2030, will require the energy industry sector alone to cut its CO_2 emissions by around one third between 2020 and 2030.
- The exit from coal resolved by the Federal Parliament in summer 2020 provides for a gradual reduction in the volume of electricity generated using coal through to 2038 at the latest.
- The Fuel Emissions Trading Act (BEHG) sets the level of and development in CO_2 prices for fossil fuels in the coming years in cases where fuel use is not governed by European emissions trading.
- With its Green Deal, the European Commission has announced an extensive package of measures that, by working with new fiscal and legislative approaches, aims to ensure that Europe is transformed into a sustainable and climate-neutral continent.
- In summer 2020, the European Parliament adopted an ambitious decarbonisation target for the EU. By 2030, CO_2 emissions should now be reduced by 55 %, rather than the previous target of 40 %, and climate neutrality should be reached by 2050.
- The amendment to the State Climate Protection Act in Baden-Württemberg was also adopted in the summer. This sets ambitious state targets and areas of action to promote climate protection.

In the medium term, the increasingly ambitious approach taken by society and politicians towards climate protection will be reflected in specific political measures. Here, we can expect to see a combination of additional subsidies, pricing instruments and regulatory law that raises the pace of decarbonisation and accelerates the energy turnaround.

The great challenge is the national and European target of becoming climate neutral by 2050. Climate neutrality implies not only decarbonising by at least minus 95 %, but also compensating for or capturing unavoidable residual emissions. For the energy industry, climate neutrality means on the one hand that the use of fossil fuels will have to be reduced even more significantly and more rapidly than previously planned. On the other hand, more renewable energies will have to be planned and implemented to cover the full decarbonisation of other sectors, for example by working with power-to-gas or power-to-liquids. Decarbonisation and energy turnaround are of core significance to us as an energy company.

For us as a company operating in the energy industry, climate protection, decarbonisation and renewable energies are especially important as material factors in the environmental concerns aspect relevant to our business. We have set specific targets in these areas and extended these once again in the 2020 financial year. In our NFD, we therefore accord a great deal of space to these topics, which are presented in such a way that their contents complement one other.

Climate protection

Our objective is climate neutrality
We will achieve climate neutrality as a company by 2050 at the latest.

Climate neutrality does not only mean decarbonising generation; it also includes indirect emissions caused by our business relationships with suppliers and downstream emissions at our customers.

We believe that climate neutrality can only be achieved by working with a long-term work programme that covers all business activities from the largest down to the smallest.

Our decarbonisation strategy covers four areas:

- Generation positions

  We are gradually reducing emissions from our conventional energy generation positions **Page 51** to zero. The trajectory here depends on the specific time at which existing power and heating energy plants are decommissioned, as well as on the relevant replacement investments, including the availability of green gas products, such as renewable hydrogen or biomethane. Key aspects of the underlying conditions will be fixed by the future political framework set out in the German Climate Protection Programme 2030 and the European Green Deal.

- Renewable energies

  We are pressing further ahead with expanding renewable energies. We have set ourselves the interim target of doubling our own renewable electricity generation volumes in the period from 2016 to 2026 **Page 51.** Furthermore, conventional heating energy generation will be replaced by low-CO_2 and renewable sources.

- Climate neutrality at our customers

  Our products and services promote climate neutrality at and by our customers. Today, we already facilitate substantial reductions in CO_2 in other industries and sectors, for example by means of energy efficiency measures, by planning and operating renewable energies plants and by offering innovative services. We will significantly cut energy-related emissions at our customers and improve their climate footprints. Decarbonisation at our customers will be reflected in higher annual net CO_2 savings and the scope of projected volumes of renewable energies. For both these factors, we set specific interim targets in 2016 already for the period until 2026 **Pages 48 and 51.**

- Handling residual emissions

  At our plants, we exploit ways of cutting emissions in order to reduce unavoidable emissions to an absolute minimum. Any remaining residual emissions, such as those resulting from waste incineration, can currently only be offset or used by drawing on new technologies, such as carbon capture and storage (CCS) or carbon capture and utilisation (CCU). This being so, we are monitoring and reviewing all relevant options in terms of reducing, using or offsetting CO_2 emissions.

Consistently implementing our decarbonisation strategy will gradually reduce our group-wide CO_2 intensity. We measure this figure as the relationship between value added and CO_2 emissions. We report on the development in this key figure just as transparently as on our direct and indirect CO_2 emissions and CO_2 savings.

Our decarbonisation strategy is specified in greater detail on a decentralised basis by our business fields, taking due account of local conditions. On group level, the investments made by all business fields are assessed in terms of their contribution to decarbonisation. Successful decarbonisation measures are regularly reviewed by our sustainability management team on group level. Taking due account of their strategic implications, the Executive Board then decides on measures.

Our decarbonisation targets

Using various methods, we regularly measure the success of the work programme based on this decarbonisation strategy.

With our strategic sustainability targets for the period from 2016 to 2026, we already set clear, measurable milestones as we head towards climate neutrality. In 2020, we supplemented these targets with further decarbonisation targets which we aim to achieve by 2030 at the latest.

To become climate neutral as a company by 2050 at the latest, we will have to significantly reduce our direct and indirect greenhouse gas emissions in the coming years. We have specified this in further detail in the following decarbonisation targets which cover all elements of our climate balance sheet:

Scope 1: We will reduce our direct energy industry CO_2 emissions to below 2 million tonnes a year by 2030.

As well as increasing energy efficiency at our own plants, we will gradually further reduce the use of fossil fuels for the generation of electricity and heating energy. The share of green technologies in our energy generation will increase further until this is fully regenerative in the long term. By reducing our direct energy industry CO_2 emissions to below 2 million tonnes, we are making it clear that we are assuming responsibility not only for our own plants, but also on a prorated basis for our at-equity shareholdings.

Scope 1: We will reduce our specific CO_2 emissions from district heating to 120 g CO_2/kWh by 2030

To achieve climate neutrality, we will also fully decarbonise our heating energy generation. Our district heating supply already has a CO_2 footprint that is significantly smaller than for most decentralised heating energy sources. At the same time, this move will involve the challenge, particularly in the Greater Mannheim region, of adopting a path towards decarbonisation in the years ahead that meets ever stricter requirements in terms of making buildings climate neutral in the long term and also satisfies the political objectives of the heating energy turnaround. This target is based on the energetic rating of district heating pursuant to the FW 309-6 (2016) standard of the AGFW industry association and is subject to any methodological changes resulting from the German Building Energy Act (GEG).

Scope 2: Our building use will be climate neutral level (on reporting level) by 2026 at the latest.

This target addresses our Scope 2 emissions and is aimed above all at our large locations in Mannheim, Kiel, Offenbach and Wörrstadt. At less than 10,000 tonnes a year, the greenhouse gases emitted by our business operations are low compared with those resulting from generation activities. However, we aim to reduce these indirect emissions as well by deploying renewable energies and implementing energy efficiency measures. Any remaining emissions in 2026 will be offset or compensated for with MVV-internal CO_2 reduction measures.

Scope 3: We will reduce our indirect emissions in the upstream and downstream value chains by 30 % by 2030.

Even if we are only able to influence a small share of indirect emissions sources, we will reduce our Scope 3 emissions. The key challenge here will be the increase needed in the share of green commodities, such as electricity, heating energy and gas. We will also reduce the CO_2 footprint caused by our suppliers, service providers and partners.

Overall system: We will triple our annual CO_2 savings to 1 million tonnes a year by 2026.

Our existing decarbonisation target that MVV's CO_2 reductions should be measured in terms of their effect on the overall system and not just in Scopes 1, 2 and 3 of MVV's climate balance sheet remains valid. Here, we account for climate-effective CO_2 savings along the entire value chain. We assess the extent to which all new strategic activities, projects and investments at our group of companies impact on direct and indirect greenhouse gas emissions in the overall system. For all activities, we record the average CO_2 savings for a maximum period of ten years from the beginning of the respective measure. We do not account for historic reduction projects and financial transactions. This target also includes our at-equity shareholdings.

Our climate balance sheet

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

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 heating energy, 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.

The coal-fired joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK), in which Stadtwerke Kiel owned a 50 % stake, was decommissioned in the 2019 financial year. The new highly efficient gas-fired CHP plant began operations in November 2019. In the before/after comparison, the decommissioning of GKK involves a significant reduction in emissions at the Kiel location in absolute terms. Viewed from a full consolidation perspective, however, MVV's direct CO_2 emissions did not decrease to any significant extent after the launch of operations at the gas-fired CHP plant in the 2020 financial year. That is because the 50 % stake we previously held in GKK was a shareholding recognised at equity whose CO_2 emissions were therefore outside MVV's reporting boundaries from a full consolidation perspective. By contrast, the new, highly efficient gas-fired CHP plant is fully consolidated. This means that, following the launch of operations, 100 % of its emissions are reported under our direct CO_2 emissions.

The counterintuitive circumstance that a reduction in CO_2 by around two thirds in absolute terms does not have a positive impact on our direct emissions figures underlines the limited meaningfulness of this key figure in terms of the decarbonisation success achieved. The same applies to other investments which may lead to an increase in direct greenhouse gases despite a local reduction in CO_2 emissions. We therefore use the "net CO_2 saving in the overall system" key figure to record and report all reductions in CO_2 arising in the economy as a whole as a result of our strategic measures and investments. The operations launch at our gas-fired CHP plant in Kiel in particular, as well as the measures taken to strengthen our proprietary wind power portfolio, meant that our net CO_2 savings in the 2020 financial year were significantly higher than in the previous year.

CO_2 KEY FIGURES BY REPORTING SCOPE

Within reporting scope of MVV's climate balance sheet

Origin	Suppliers		Customers
CO_2 emissions	» Indirect Scope 3: Mainly emissions upon production of procured goods/services » Indirect Scope 2: Mainly MVV buildings and vehicle pool	» Direct Scope 1: Electricity and heating energy generation plants	» Indirect Scope 3: Mainly customer use of MVV products and commodities
Reduction to be achieved by MVV	» Scope 3: –3% per annum » Scope 2: Climate neutral by 2026	» Scope 1 Energy industry: < 2m tonnes by 2030 » District heating: < 120g CO_2/kWh by 2030	» Scope 3: –3% per annum

Consideration of net CO_2 savings outside reporting scope of MVV's climate balance sheet

	CO_2 emissions in overall economy
Reduction to be achieved by MVV	» Tripling of net CO_2 savings by 2026

Indirect CO_2 emissions (Scope 2) mainly result from the energy we use for our business operations outside energy generation.

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. Emissions activities in downstream stages of the value chain chiefly involve the use of the natural gas which MVV supplies to customers.

The annual development in Scope 3 emissions is chiefly determined by sales volumes for electricity, gas and heating energy, as well as by volumes in the renewable energies project development business. In this respect, the reduction in the 2020 financial year mainly reflects the lower sales volumes and the lower volume of capacity installed by our project development business.

Climate balance sheet

1,000 tonnes CO_{2eq}	FY 2020	FY 2019	+/– change	% change
Direct CO_2 emissions (Scope 1) [1]	1,863	1,545	+ 318	+ 21
Energy industry activities	934	594	+ 340	+ 57
Disposal activities (energy from waste plants/RDF)	929	951	– 22	– 2
Direct CO_2 emissions (Scope 1) including companies recognised at equity [1]	3,315	3,582	– 267	– 7
Energy industry activities	2,386	2,631	– 245	– 9
Disposal activities (energy from waste plants/RDF)	929	951	– 22	– 2
Indirect CO_2 emissions (Scope 2) [2]	8	8	0	0
Indirect CO_2 emissions (Scope 3)	5,259	6,346	– 1,087	– 17
Net CO_2 saving	794	486	+ 308	+ 63
Net CO_2 saving including companies recognised at equity	766	439	+ 327	+ 74

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

2 Indirect Scope 2 emissions (location-based) cover the Mannheim, Kiel, Offenbach and Wörrstadt locations; these figures are based on calendar years.

The specific CO_2 emissions for our district heating supply decreased in the past financial year, a development mainly due to the launch of operations at the gas-fired CHP plant in Kiel.

Specific CO_2 emissions for district heating [1]

g CO_2/kWh	FY 2020	FY 2019
Mannheim district heating system [2]	201	201
Offenbach district heating system	150	150
SWKiel district heating system	185	218
Decentralised gas heating systems in Germany	274	274

1 The figures are reassessed every three years if the generation structure has changed.

2 The most recent certification for the Mannheim district heating network was performed as of 1 November 2020 and now amounts to 173g CO_2/kWh.

Renewable energies

Renewable energies contribute to climate protection targets

By 2050, 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 the achievement of climate protection targets on behalf of society as a whole.

Here too, 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.

The target of doubling our generation to more than 800 MW also includes the shareholdings we recognise at equity. We report on their specific renewable energies generation capacities in our separate Sustainability Report. To enable us to reach our target, we are consistently investing in expanding our proprietary renewable energies generation portfolio. One primary focus here involves onshore wind turbines.

The renewable energies electricity generation capacity at our fully consolidated companies amounted to 512 MW at the end of the 2020 financial year and was thus 40 MW higher than in the previous year. This increase was mainly due to the fact that we expanded our wind power portfolio. Electricity generation capacity at our at-equity shareholdings also showed a slight year-on-year increase.

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

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

Since the beginning of the 2017 financial year, we have connected renewable energies plants with capacities of 2,144 MW to the grid. In the 2020 financial year, we connected 262 MW of new capacities **Page 53.**

Forward-looking generation portfolio

At the end of the 2020 financial year, electricity generation at renewable energies plants (including biomass CHP and the biogenic share of waste/refuse-derived fuels) accounted for around 46 % of our total electricity generation volumes (previous year: 63%). The volume of electricity generated at renewable energies plants rose year-on-year, but the share of electricity resulting from combined heat and power (CHP) generation grew disproportionately compared with the previous year. This was due to the launch of operations at our new highly efficient gas-fired CHP plant in Kiel, which uses CHP to generate electricity and heating energy. The 50 % stake previously held in GKK, the hard coal-fired predecessor plant, was an at-equity shareholding. From a full consolidation perspective, its electricity generation volumes were therefore outside MVV's reporting boundaries.

Overall, we generated 1,220 million kWh of climate-neutral electricity at our renewable energies plants in the year under report, 117 million kWh more than in the previous year.

Electricity generation capacity from renewable energies and energy from waste (EfW)/refuse-derived fuels (RDF)

MW_e	FY 2020	FY 2019	+/– change	% change
Biomass and biogas plants [1, 2]	105	102	+ 3	+ 3
EfW/RDF	165	160	+ 5	+ 3
Wind power	236	204	+ 32	+ 16
Hydroelectricity	2	2	0	0
Photovoltaics	4	4	0	0
Total	**512**	**472**	**+ 40**	**+ 8**

1 Including biomethane plants
2 Previous year`s figure adjusted

Our biomethane plants had capacities of 35 MW in the year under report.

Heating energy generation capacity from renewable energies and energy from waste (EfW)/refuse-derived fuels (RDF)

MW_t	FY 2020	FY 2019	+/– change	% change
Biomass and biogas plants [1]	33	123	– 90	– 73
EfW/RDF	719	719	0	0
Total	**752**	**842**	**– 90**	**– 11**

1 Previous year`s figure adjusted

Sustainable recycling-based economy

Even when it has been correctly separated, household and commercial waste is by no means "rubbish", but can rather be used to generate energy. Treating the waste in strictly controlled conditions at an energy from waste plant offers twofold benefits. On the one hand, the waste is sanitised, i.e. poisons and materials harmful to people's health or the environment are destroyed. On the other hand, the energy contained in the waste is used to produce steam for industry, heating energy 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.

Using the materials and energy contained in waste makes a major contribution towards reaching the target of building an economy that is based as far as possible on recycling. 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 so-called Green Deal of the European Commission. Until that aim is met, and in cases where that is not possible, the second-best solution is to use non-recyclable 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 recycling-based economy by operating a total of eight energy from waste plants in Germany, the UK and the Czech Republic. In the 2020 financial year, these plants incinerated around 2.4 million tonnes of waste and refuse-derived fuels. In the Scottish city of Dundee, we are building a new highly efficient CHP plant that is due to launch operations before the end of 2020. This plant will initially supplement and subsequently replace the existing energy from waste plant.

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.

Concluded development of renewable energies plants

MW_e	FY 2020	FY 2019	+/– change	% change
Wind power	74	62	+ 12	+ 19
Photovoltaics	188	398	– 210	– 53
Total	**262**	**460**	**– 198**	**– 43**

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. Changes in underlying conditions, such as those arising due to the coronavirus pandemic, may have a notable influence on the implementation of projects.

Operations management for renewable energies plants

MW_e	FY 2020	FY 2019	+/– change	% change
Wind power	1,343	1,246	+ 97	+ 8
Photovoltaics	2,386	2,288	+ 98	+ 4
Total	**3,729**	**3,534**	**+ 195**	**+ 6**

System change

Energy companies play a key role in the energy system transformation. They do this 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 a reliable and stable supply of electricity, gas, heating energy and water. The advancing energy turnaround gives rise to new questions, as the volume of electricity fed in from renewable energies such as wind turbines or photovoltaics fluctuates in line with weather conditions and the time of day. As an energy company and distribution grid operator, we ensure that we provide our customers with a secure and reliable supply of energy at all times. We therefore need 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 are investing on an ongoing basis in maintaining, expanding and optimising our grids and plants.

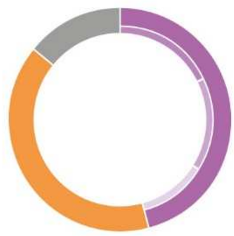
Secure energy supply

Gradual conversion of our generation portfolio

As we shape our course towards the energy system of the future 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 between 2016 and 2026 **Page 51** 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 heating energy 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 2020
Electricity from renewable energies[1]	46
Electricity from biomass and biogas plants	18
Electricity from wind power	16
Electricity from biogenic share of waste/RDF	12
Electricity from CHP	40
Other electricity generation	14



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

Electricity generation volumes

kWh million	FY 2020	FY 2019	+/– change	% change
Biomass and biogas plants	475	418	+ 57	+ 14
Biogenic share of waste/RDF	314	309	+ 5	+ 2
Wind power	422	370	+ 52	+ 14
Hydroelectricity	5	2	+ 3	>+ 100
Photovoltaics	4	4	0	0
	1,220	**1,103**	**+ 117**	**+ 11**
Electricity from CHP	1,036	418	+ 618	>+ 100
Other electricity generation[1]	367	227	+ 140	+ 62
Total	**2,623**	**1,748**	**+ 875**	**+ 50**

1 Previous year`s figure adjusted

The increase in electricity generation volumes at biomass and biogas plants and at our plants which generate energy from waste and refuse-derived fuels (biogenic share of waste) was due above all to improved plant availability. We expanded our wind power portfolio in the year under report and also benefited from higher wind volumes compared with the previous year. The electricity volumes generated by our wind turbines showed a corresponding increase.

The substantial increase in the volume of electricity we generated using CHP was mainly due to the operations launch at our new gas-fired CHP plant in Kiel, which produces electricity and heating energy using combined heat and power generation. The 50 % stake previously held in GKK, its hard coal-fired predecessor power plant, was an at-equity shareholding. From a full consolidation perspective, its electricity generation volumes were therefore outside MVV's reporting boundaries. The increase in other electricity generation is also to be viewed in this context: This relates to electricity volumes generated before CHP operations began at the new gas-fired CHP plant.

Heating energy generation volumes

kWh million	FY 2020	FY 2019	+/– change	% change
Biomass and biogas plants [1]	71	207	– 136	– 66
Biogenic share of waste/RDF	1,906	1,725	+ 181	+ 10
	1,977	**1,932**	**+ 45**	**+ 2**
Other heating energy generation	2,328	1,754	+ 574	+ 33
Total	**4,305**	**3,686**	**+ 619**	**+ 17**

1 Previous year`s figure adjusted

The reduction in biomethane volumes was due to a lower level of plant availability compared with the previous year.

Biomethane generation volumes

kWh million	FY 2020	FY 2019	+/– change	% change
Biomethane generation	212	233	– 21	– 9

Safeguarding grid stability despite growing grid 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.

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

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

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

We invested Euro 116 million in maintaining and expanding our grids in the 2020 financial year.

Electricity supply interruptions (SAIDI)

Minutes/year	2019 [1]	2018 [1]	+/– change	% change
Electricity MVV	10	17	– 7	– 41
Electricity in Germany [2]	12	14	– 2	– 14

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

The SAIDI figure for our grid regions in 2018 was still affected by an interruption in the Mannheim grid region due to a component replaced in mid-2019. In the 2019 calendar year, we were once again able to provide our customers with an electricity supply that was largely free of interruptions and ahead of the national average.

Employee concerns aspect

We offer attractive and secure jobs to more than 6,200 employees. That is a great responsibility, and one that we are aware of and account for in our strategic decisions.

The coronavirus pandemic presented us with particular challenges in this respect in the 2020 financial year. Working together, however, the Executive Board, managers, employees and employee representatives were able to manage these challenges successfully. The values laid down in our corporate culture, namely Community, Responsibility, Appreciation and Courage, were lived on a daily basis and reflected in the decisions taken to manage the crisis. To protect our employees and safeguard our operating processes, we very quickly agreed procedures, looked for solutions and implemented these. Previous forms of working together and communicating were adapted to the new working requirements, as were existing dialogue formats.

The experience we gained during this time will sustainably change our forms of cooperation, management and communication. We will evaluate this and, where possible, retain the positive aspects in future as well.

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. 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: Our aim is to remain an attractive employer. That is why we offer attractive remuneration packages and are committed to helping our employees combine their work with their family or nursing care commitments. In our recruitment, we have a particular focus on promoting women and expanding diversity at the company.

- 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 willing to make their contribution to the new energy system.

- Talent management: We deliberately identify, support and cultivate upcoming talent – and that from among our trainees and new recruits right up to our managers.

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 employees who work on our behalf. To this end, we are continually working to improve work safety at the Group. Consistent with this objective, the work safety committees organised on a decentralised basis offer structured programmes and measures which are also reported on group level and in the Executive Board on a quarterly basis.

Personnel figures (headcount) at balance sheet date

	30 Sep 2020	30 Sep 2019	+/– change	% change
MVV [1]	6,260	6,113	+ 147	+ 2
of which in Germany	5,351	5,232	+ 119	+ 2
of which abroad	909	881	+ 28	+ 3

1 Including 341 trainees (previous year: 330)

We employed a group-wide total of 6,260 individuals as of 30 September 2020. The increase compared with the previous year was due on the one hand to the acquisition and full consolidation of companies. On the other hand, we also increased employee totals in our growth fields.

Our employees abroad include 493 employees at our Czech subgroup, 261 at Juwi's foreign shareholdings and 144 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 15 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 2020, a total of 341 young women and men were in training at MVV. Our trainees also include two former refugees who are training as specialists in metals technology and industrial electricians. We have offered jobs to three other former refugees who have now completed their training.

In the 2020 financial year, we successfully completed a European Union research project with partners from the UK, Lithuania and Austria. This project was managed by City College in Plymouth, which is also a longstanding ERASMUS+ partner of MVV. This European Apprenticeship Talent Programme (EATAP) looked into how, within the ERASMUS+ programme, high-potential apprentices in STEM (Science, Technology, Engineering and Maths) vocations can work together in an international team based on agile, project-based methods. The research project now forms the basis for integrating the findings into the ERASMUS+ programme. Since the beginning of the ERASMUS+ cooperation, an average of 38 % of our second and third-year trainees in programmes offered by the Chamber of Industry and Commerce (IHK) have taken part in this international mobility project.

New further training concept

In the 2020 financial year, we defined numerous internal training measures based on our cultural values, MVV's competency model and the MVV management guidelines. We launched this process by holding a training conference with first-tier managers. The new further training concept includes extensive personnel-related and methodological topics, section head programmes, a Digital Academy for first-tier managers and an individual General Management Programme for management teams.

In view of the coronavirus pandemic, our employees and managers made intensive use of our wide range of virtual training options. Topics particularly important to our employees were agile working, communications, presentation skills and virtual management.

Targeted personnel development

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.

Our further training measures 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 the topic of digitalisation. In the 2020 financial year, our main focus was on collaboration. Looking at our everyday working life in a large organisation, the aim here was to network our cooperation even more closely, share knowledge, accept mutual impulses and information and integrate new topics into our own work processes.

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 and third-party assessment, internal management review conferences and concluding feedback talks held between employees and managers. In the previous year, 239 managers and employees with management potential took part in this programme. 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. A separate "talent advisory" function has been established to enable the company to retain high-potential employees. Our understanding of talent also extends to specialist and upcoming staff, such as trainees and career starters.

The MVV-specific competency model forms the basis for personnel development meetings and individual support programmes. We 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.

Diversity

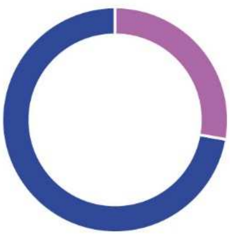
Equal opportunities on all levels

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 aim to offer more targeted and 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.

By 30 September 2021, we aim to raise the female share of our workforce to 35 % and of our total management staff to 25 %.

WOMEN AND MEN
Shares (%)

	FY 2020
Women	28
Men	72



Status: 30 September 2020

These targets were adopted by the Supervisory Board and Executive Board of MVV Energie AG in 2015. Both key figures are collected and analysed each year.

Women accounted for 28 % of our workforce and 15 % of our managers at 30 September 2020. For MVV Energie AG, we report on the share of women in both first and second management tiers. In August 2017, the Executive Board set targets to be achieved by 30 September 2021. By that date, the share of women in the first management tier should have reached 25 %, with a corresponding target of 30 % for the second management tier. At 10 %, the share of female managers in the first tier as of 30 September 2020 was at the same level as in the previous year (30 September 2019: 10 %). The share of women in the second management tier amounted to 27 % (30 September 2019: 29 %) and is thus close to the specified target.

To reach our targets, we are adopting various approaches, drawing on a variety of promotional measures and programmes and expanding these further. One major package of measures involves 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 female 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. As part of our corporate membership of "European Women's Management Development", an association for professional women, we offer free membership for interested female employees. This way, they can benefit, for example, from free contingents of places in presentations and seminars.

Occupational health and safety

Lived Safety

We accord the utmost priority to protecting the health and safety of our employees and of those employees who work on our behalf. To secure this approach at a high level not only for now, but also in future, in the 2020 financial year we launched our "Lived Safety" project.

This project has the following core points:

- 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. We liaise closely with professional associations and employee representatives and agree our work safety and prevention strategies and measures with them.

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

Every accident is one too many

One matter close to our hearts is the physical and mental health of our employees and of those employees acting on our behalf. We are therefore making continuous efforts to improve work safety at the Group and wish to make clear that every accident is one to 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.

Accident statistics

	FY 2020	FY 2019	+/– change	% change
Lost time injury frequency rate (LTIF) [1, 2, 3]	6.7	7.7	– 1.0	– 13

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)

We had set ourselves the target of achieving an LTIF figure of 3.9 by the 2020 financial year. Regrettably, we have not been able to reach this ambitious target. With an LTIF of 6.7, we nevertheless reduced our accident frequency compared with the previous year and believe that we are on the right course.

With our "Lived Safety" concept, we are making every effort possible to avoid accidents and work-related health risks and to reach our targets.

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 within 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.

Social concerns aspect

Social commitment

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 make investments, 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.

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. Based on shared values, the specific structure and scope of regional social commitment is organised on a decentralised basis. Staff on location are familiar with local needs, have contacts to local organisations and facilities and determine the priorities they would like to address and the projects they intend to support with their activities. In most cases, the support provided is financial, taking the form of donations or sponsoring.

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

At MVV Energie, the Sponsoring Fund represents one key example of its commitment. Twice a year, this provides financial support to innovative and creative projects at clubs, organisations and institutions in Mannheim and the Rhine-Neckar metropolitan region. Its largest partners in this region are the new Kunsthalle art gallery in Mannheim, which holds MVV Art Evenings with free entry every first Wednesday in the month, the Adler Mannheim ice hockey team, the Reiterverein Mannheim riding club and TSG Hoffenheim football club. With its “Heart and Soul for Your Project!” sponsorship concept, Energieversorgung Offenbach supports regional clubs and organisations. Stadtwerke Kiel has partnered Camp 24/7, in which around 6,000 children and young people a year learn how to sail and the only project of its kind in Germany, since 2002 already.

In dialogue with stakeholders

We operate at a variety of locations and in diverse business fields and therefore come into contact with 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. These are joined by 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 transformation of the energy system. 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 suitably signalised.

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 2020 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

Value chain

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.

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.

One matter of public interest is 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-powered plant we operate ourselves is the CHP plant in Offenbach. For this, we directly procured around 70 thousand tonnes of hard coal in the 2020 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 large power plant in Mannheim (Grosskraftwerk Mannheim – GKM), where we are minority shareholders. Here, we have no direct influence on business activities and fuel procurement, as we are not the operators of the plant. We are nevertheless aware of our responsibility and show our commitment by, for example, raising sustainability topics and requesting information.

Apart from commodity procurement, our remaining procurement volumes are comparatively low. They mostly involve procuring goods and highly qualified services from contract partners often known to us for many years.

The basis for our cooperation with suppliers and service providers in Germany and the EU is provided by applicable laws and ordinances, compliance regulations and forms of conducts and work practices relevant to us.

Contractual relations with suppliers are additionally governed by our compliance guidelines, which are published on our website at **www.mvv.de/zentraleinkauf.** Our compliance guidelines include specific requirements in terms of compliance, adherence to human and employee rights and environmental protection. We expect our suppliers, for example, to uphold the basic human and employee rights set out in 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. Any breaches of these conventions are sanctioned with the option of termination and of claims to contractual penalties or damages compensation.

Suppliers to MVV Energie, Energieversorgung Offenbach, Juwi and Stadtwerke Kiel are all regularly assessed in terms of 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. 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. If we access new regions or markets outside Europe, this mostly relates to our project development business. To safeguard respect for human rights along the value chain there as well, and more clearly than previously, in the 2019 financial year we already launched new processes and measures in the respective compliance management systems. Among other measures, we further developed our human rights policy, procurement terms and compliance guidelines. Furthermore, the internal procedure used to identify potential human rights risks was adapted in terms of its contents and processes to the National Action Plan for Business and Human Rights adopted by the Federal Government and then integrated into regular processes. Acquisitions of companies or shareholdings are subject to a painstaking review process 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 Union 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

Consistent adherence to all regulations and laws applicable to MVV is an absolute prerequisite for the company to act and be accepted as a reliable and trustworthy partner. High-quality compliance also makes an important contribution to our company's sustainable development and value creation.

Our compliance management system (CMS) helps us to safeguard compliance with applicable laws, as well as with in-company guidelines and the ethical standards to which we are committed. This way, we protect the integrity of our employees, our customers and business partners and save MVV from any negative consequences.

We have summarised the most important requirements and the necessary organisational structures in our Compliance Management Handbook, which also lists relevant personnel responsibilities and lays down details about our reporting system. This handbook is binding for all limited liability companies at the Mannheim subgroup of MVV Energie AG and is permanently available for downloading to all of the employees at this subgroup. The other subgroups have introduced equivalent compliance management systems. Our Compliance Management Handbook is also available in English, for example for our British and Czech subgroups.

Our CMS is structured in such a way as to ensure that breaches of compliance are basically avoided in advance, above all by working with preventative measures in the respective business processes (systemic compliance). We already check relevant processes in sensitive areas during the respective operating process, 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 are made exclusively in the form of dividends.

The Compliance Officer compiles relevant compliance regulations, documents them and sees to their implementation in business processes. He is responsible for ensuring that employee training measures are implemented and that due account is taken of all CMS processes. Furthermore, he also acts in an advisory and supportive capacity to accompany measures intended to prevent and, where necessary, investigate any violations of the law, corruption or deliberate acts harmful to the company. He reports to the Executive Board and the Audit Committee on compliance and any violations of human rights.

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

By actively implementing prevention measures within the relevant business processes themselves, we make every effort to avert all criminal or grossly incorrect actions or violations of the law. MVV has a zero-tolerance policy towards bribery and all other forms of corruption. To help prevent corruption, we therefore provide training, especially to employees working in sales, related areas and procurement. Employees also receive instructions on how to deal with gratuities and invitations. We record and check any gratuities offered or invitations received. These measures enable us to minimise the risk of "soft bribery". We also continually monitor adherence to compliance requirements, and that in all business fields, specialist divisions, group departments and subsidiaries. Employees and third parties can contact the Compliance Officer or an external confidence lawyer directly. Via "Whistleblower Hotlines", they can provide anonymous tip-offs on potential misconduct. The telephone number of the confidence lawyer is also published on our website at **www.mvv.de**.

Apart from a low number of minor infringements, no compliance incidents came to light in the period under report. One focus of our efforts to enhance the compliance management system was on improving prevention in the energy trading business.

To make sure that all of MVV's managers and all employees with contact to customers or suppliers are well informed of general compliance requirements and familiar with the legal requirements relevant to their respective business units, we also provide regular training. The topics covered by this training include the requirements of capital market, securities and stock market law, competition and cartel law, combating money laundering, sanctions lists and energy industry law. In the 2020 financial year, 245 employees at the Mannheim subgroup and 27 employees at the other subgroups took part in this training. These figures are notably lower than in the previous year. Due to the coronavirus pandemic, numerous sessions could not be held as on-site training. Where possible, we therefore held online sessions. In addition, over the same period 505 individuals completed an online training programme provided by our Stadtwerke Kiel and Energieversorgung Offenbach subsidiaries.

At the end of each financial year, all senior managers and managing directors of subsidiaries and certain shareholdings are required to submit a Compliance Management Declaration (CMD) in which they must state whether the relevant compliance regulations and legal requirements have been complied with. The matters covered by the CMD include an enquiry as to whether, as required, the employees of the respective manager have received instruction and suitable training for the CMS. Moreover, in the CMD the managers also respond in detail to questions specifically tailored to circumstances at their respective business unit.

Respect for human rights is also integrated into our compliance management system. In our human rights policy **www.mvv.de/responsibility,** we underline our commitment to internationally recognised principles of human rights. With this commitment, we also take due account of the National Action Plan for Business and Human Rights (NAP). Our human rights policy was adopted by our Executive Board, while the management at our companies and locations is responsible for compliance with all requirements of the policy. 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 within our sustainability management processes.

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 in accordance with 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 accordance with International Financial Reporting Standards (IFRS) in the form requiring application in 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, MVV's consolidated financial statements and the combined management report for the 2020 financial year are published in the Federal Gazette (Bundesanzeiger). The complete 2020 annual financial statements of MVV Energie AG can be downloaded at **www.mvv.de/investors,** as can the consolidated financial statements and the combined management report.

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

The entry into effect of the KAG has led to shorter useful lives for the generation blocks at the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM). 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 any 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 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019
Sales	1,404,404	1,474,286
less electricity and natural gas taxes	– 110,981	– 113,123
Sales less electricity and natural gas taxes	**1,293,423**	**1,361,163**
Increase or reduction in finished and unfinished products	– 173	173
Other own work capitalised	198	674
Other operating income	27,252	29,574
Cost of materials	1,104,497	1,158,676
Employee benefit expenses	79,106	75,255
Depreciation and amortisation	18,811	17,328
Other operating expenses	85,662	89,790
Financial result	94,162	76,790
Taxes on income	27,627	27,720
Earnings after taxes	99,159	99,605
Other taxes	435	449
Annual net income	**98,724**	**99,156**
Allocation to other revenue reserves	36,112	39,840
Unappropriated net profit	**62,612**	**59,316**

Sales less energy taxes at MVV Energie AG fell year-on-year by Euro 68 million to Euro 1,293 million. MVV Energie AG thus met its forecast that sales would roughly match the previous year's figure of Euro 1.3 billion. These sales were generated exclusively in Germany. The electricity business accounted for 58.6 % of total sales (previous year: 59.6 %) and remains the strongest division in terms of sales at MVV Energie AG.

At Euro 1,104 million, cost of materials was Euro 55 million lower than in the previous year. The change in this line item was largely consistent with the development in sales.

Other operating income decreased by Euro 2 million to Euro 27 million. This reduction was primarily due to lower income from disposals of assets and lower write-ups to financial assets. These factors were countered by higher reversals of provisions.

MVV Energie AG had 892 employees at 30 September 2020, 8 fewer than at the previous year's balance sheet date. At Euro 79 million, employee benefit expenses were Euro 4 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 the addition of a high volume of assets, particularly in connection with the linking up of the CHP plant in Mannheim to the district heating grid, depreciation and amortisation rose by Euro 2 million to Euro 19 million. No impairment losses were recognised on non-current assets in the year under report or the previous year.

Other operating expenses fell by Euro 4 million to Euro 86 million. This change was chiefly due to the discontinued statement of provisions.

The financial result improved year-on-year by Euro 17 million to Euro 94 million. This development was due above all to higher income from profit transfer agreements, lower write-downs of financial assets and lower interest expenses from the compounding of provisions.

At Euro 99 million, earnings after taxes were at the previous year's level (Euro 100 million). As previously forecast, net of other taxes the annual net income of Euro 99 million generated by MVV Energie AG in the 2020 financial year was at the same level as in the previous year (Euro 99 million). Based on the profit utilisation resolution adopted by the Annual General Meeting on 13 March 2020, the unappropriated net profit of Euro 59.3 million was fully distributed to shareholders of MVV Energie AG. The dividend amounted to Euro 0.90 per share.

Revenue reserves of Euro 36,112 thousand were formed from the annual net income for the year under report. MVV Energie AG reported unappropriated net profit of Euro 63 million at 30 September 2020. The Annual General Meeting will be held on 12 March 2021 and 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 increased to Euro 0.95 per share (previous year: Euro 0.90 per share); the Supervisory Board will decide on its proposal in December 2020.

Presentation of asset and financial position of MVV Energie AG

Balance sheet

Euro 000s	**30 Sep 2020**	30 Sep 2019
Assets		
Non-current assets		
Intangible assets	454	533
Property, plant and equipment	469,136	436,108
Financial assets	1,454,302	1,482,984
	1,923,892	**1,919,625**
Current assets		
Inventories	4,201	13,085
Receivables and other assets	321,444	270,391
Cash and cash equivalents	102,259	111,693
	427,904	**395,169**
Deferred expenses and accrued income	559	587
	2,352,355	**2,315,381**
Equity and liabilities		
Equity		
Share capital	168,721	168,721
Capital reserve	458,946	458,946
Revenue reserves	510,543	474,431
Unappropriated net profit	62,612	59,316
	1,200,822	**1,161,414**
Income grants received	40,442	42,774
Provisions	76,775	85,982
Liabilities	1,034,316	1,025,211
	2,352,355	**2,315,381**

Total assets increased year-on-year by Euro 37 million to Euro 2,352 million.

The asset side of the balance sheet is largely shaped by financial assets. These totalled Euro 1,454 million at 30 September 2020, equivalent to a 62 % share of total assets. The respective figures for the previous year were Euro 1,483 million and 64 %. This decrease in financial assets by Euro 29 million was chiefly due to a reclassification of loans to associates to current assets in line with their respective terms. Property, plant and equipment rose year-on-year by Euro 33 million to Euro 469 million. This was mainly due to investments made in connection with linking the CHP plant in Mannheim to the city's district heating grid.

Current assets rose to Euro 428 million, up Euro 33 million compared with 30 September 2019. This increase primarily resulted from higher current loans to associates and other receivables from associates, which offset reductions in inventories of CO_2 rights and cash and cash equivalents.

The company increased its equity by Euro 40 million in the year under report. Equity therefore amounted to Euro 1,201 million at the balance sheet date. At 51.1 %, the equity ratio at 30 September 2020 was slightly higher than the previous year's figure of 50.2 %, reflecting the solid equity resources available at MVV Energie AG.

Mainly due to lower tax provisions and lower non-current obligations, provisions decreased overall by Euro 9 million to Euro 77 million, while liabilities rose by Euro 9 million to Euro 1,034 million. The increase in liabilities resulted from higher liabilities to banks and opposing items in the other liability line items.

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.

2020 activity statements

With its 2020 activity statements, MVV Energie AG has satisfied its 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 44 million). The gross performance for the 2020 financial year was thus slightly higher than in the previous year. In terms of total electricity sector sales of Euro 629 million (previous year: Euro 675 million), sales in the electricity distribution activity are of subordinate significance. Alongside income from the leasing of its electricity girds 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 the 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 through to 30 September 2020 was opposed by corresponding other operating expenses. The electricity distribution activity field generated annual net income of Euro 1 million in the 2020 financial year (previous year: Euro 3 million).

At 30 September 2020, total assets in the electricity distribution activity field came to Euro 142 million (previous year: Euro 131 million). This corresponds to a 49 % share of total assets in the electricity sector at MVV Energie AG (previous year: 34 %). Property, plant and equipment relating to electricity distribution increased compared with the previous year's balance sheet date. At Euro 131 million (previous year: Euro 120 million), this item accounted for a 92 % share of total electricity distribution assets (previous year: 92 %). On the equity and liabilities side, electricity distribution liabilities rose from Euro 44 million to Euro 49 million. Liabilities to associates mainly 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 0.4 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 2020 financial year amounted to Euro 0.4 million. Measured in terms of total electricity sector sales of Euro 629 million (previous year: Euro 675 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 electricity meters (mME/iMSys) to Soluvia Energy Services GmbH. Soluvia Energy Services GmbH is MVV's shared services company. As a metering point operator and smart meter gateway administrator, it performs services which include all metering services. These are countered by depreciation of Euro 240 thousand on the electricity meters (mME/iMSys) recognised under non-current assets at MVV Energie AG (previous year: Euro 148 thousand). In the 2020 financial year, mME/iMSys metering operations posted annual net income of 58 thousand (previous year: Euro 18 thousand).

At 30 September 2020, total assets in the mME/iMSys metering operations activity field amounted to Euro 1.8 million (previous year: Euro 1.6 million), corresponding to a 0.6 % share of total assets in the electricity sector at MVV Energie AG (previous year: 0.4 %). At the balance sheet date, property, plant and equipment relating to mME/iMSys metering operations amounted to Euro 1.8 million (previous year: Euro 1.5 million) and thus accounted for a 99 % share of total assets in mME/iMSys metering operations (previous year: 94 %). On the equity and liabilities side, liabilities of Euro 0.8 million were reported for mME/iMSys metering operations (previous year: Euro 1.5 million). These mainly involve liabilities due to other activity fields.

Gas distribution

In the year under report, the gas distribution activity field posted sales of Euro 27 million (previous year: Euro 26 million). Gross performance thus rose by Euro 1 million in the 2020 financial year. Compared with total gas sector sales of Euro 65 million (previous year: Euro 97 million), the gas distribution activity field is of subordinate significance. By analogy with electricity distribution, as well as income from the leasing of its grids to MVV Netze GmbH earnings in the gas distribution activity field also include income from concession duties. The other operating income from charging on the concession duty to MVV Netze GmbH through to 30 September 2020 was opposed by corresponding other operating expenses. The gas distribution activity field generated annual net income of Euro 3 million in the year under report (previous year: Euro 7 million).

Total assets in the gas distribution activity field amounted to Euro 112 million (previous year: Euro 103 million) at the balance sheet date on 30 September 2020 and accounted for some 85 % of total assets in the gas sector at MVV Energie AG (previous year: 58 %). At Euro 105 million, property, plant and equipment in gas distribution was Euro 8 million higher than in the previous year and corresponded to a 94 % share of total assets in this activity field (previous year: 94 %). On the equity and liabilities side, gas distribution liabilities rose from Euro 35 million to Euro 41 million. Liabilities to associates mainly involve liabilities due to MVV Netze GmbH.

Corporate Governance Declaration (§ 289f 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 Conformity 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 Conformity on **Page 67** was published together with our Annual Report on 10 December 2020 on our website at **www.mvv.de/corporate-governance.**

Declaration pursuant to § 312 AktG

The Executive Board has compiled a report on relationships with associates for the 2020 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 2020 financial year has been jointly compiled for MVV Energie AG and the MVV Energie Group (“MVV”) and published as a Combined Non-Financial Declaration in the Combined Management Report in this Annual Report on **Page 45.**

Corporate Governance Declaration

MVV views high-quality transparent corporate governance as forming the basis for responsible company management and supervision aimed at long-term value creation. That is why we promote close cooperation based on trust between the Executive and Supervisory Boards and employees, take account of the interests of all our stakeholders, comply with applicable laws and structure our reporting and corporate communications transparently and openly. After all, we are convinced: High-quality corporate governance boosts the trust placed in our company, whether by shareholders, customers, business partners, employees or the general public.

The following Corporate Governance Declaration pursuant to § 289f and § 315d of the German Commercial Code (HGB) includes both the Declaration of Conformity 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 requiring inclusion pursuant to § 289f HGB.

MVV's Executive and Supervisory Boards addressed the company's corporate governance in detail once again in the 2020 financial year. As in previous years, in the year under report MVV Energie complied with all recommendations made by the Code in its version dated 7 February 2017. Since 16 December 2019, there has been a new version of the Code. This was presented to the Executive and Supervisory Boards and discussed in both bodies. The following Declaration of Conformity shows: MVV Energie complies with the recommendations made in the new version of the Code with just one exception. We intend to follow the suggestions made by the Code in future as well.

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

The Executive and Supervisory Boards adopted the following Declaration of Conformity with the German Corporate Governance Code in September 2020:

The Executive and Supervisory Boards of MVV Energie AG hereby declare that the company complied and complies with the recommendations made by the German Corporate Governance Code Government Commission. For the past, this declaration refers to the version of the Code dated 7 February 2017, which was published in the Federal Gazette on 24 April 2017 and republished in corrected form in the Federal Gazette on 19 May 2017. For the future, it refers to the version of the Code dated 16 December 2019 and published in the Federal Gazette on 20 March 2020.

No application has been made of the following recommendation of the Code in its version dated 16 December 2019:

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 does not provide any remuneration by way of shares in the company, share ownership obligations or corresponding share-based remuneration models. Variable remuneration is settled with a payment. MVV's remuneration system nevertheless accounts for the interest of the company and its stakeholders in long-term, value-based and sustainable growth. The variable sustainability bonuses presented in greater detail in the Remuneration Report on **Page 75** are based on the company's operating performance in the given financial year as expressed in its adjusted EBIT and on the company's 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 to ROCE and its development over a three-year period enables account to be taken of MVV's capital-intensive business and the long-term performance of the company to be reflected in variable remuneration. The ROCE measures how efficiently a company uses its capital. It is the most suitable key figure for assessing whether MVV has developed 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, 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 conditions for participating in the meeting and exercising voting rights. Shareholders may make statements on all agenda items at the meeting. Furthermore, they may submit relevant questions and motions. For the purposes of voting, each share entitles its holder to one vote. By casting their votes before or during the meeting, our shareholders may participate in the adoption of all resolutions. Here, shareholders can draw on a range of options – they can vote in person or via a proxy of their choice, be represented by a voting proxy appointed by MVV Energie AG to act in accordance with their instructions, or by a bank or shareholders' association. Moreover, shareholders can submit their votes by post in advance of the Annual General Meeting provided that they register within the relevant deadlines. Alternatively, they have the option of communicating all declarations electronically using our password-protected shareholder portal at MVV's website.

Despite the coronavirus pandemic, we were still able to hold our 2020 Annual General Meeting as a physical event. We adhered to the hygiene and safety measures recommended by the health authorities. Not least as significantly fewer people were expected to attend in person, we broadcast our Annual General Meeting for the first time live and in its entirety on our website. Not only that, votes could be cast via the internet-based shareholder portal through to the end of the general debate. This way, our shareholders could also decide on how to cast their votes at very short notice. We have already taken precautions enabling us to hold a virtual Annual General Meeting should the restrictions on large-scale events still apply in March 2021 and the provisions of the Act on Mitigating the Consequences of the COVID-19 Pandemic be extended beyond 31 December 2020. We currently expect both requirements to be met, as a result of which we are very likely to hold our Annual General Meeting in virtual form.

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

Transparent and prompt communications

We aim to ensure great 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. Prompt sources of information for this purpose chiefly include our websites – and here especially **www.mvv.de** and **www.mvv.de/investors.** The information we publish on these sites includes our financial reports, analysts' conference presentations, press releases, ad-hoc announcements and our financial calendar. We always comply with the reporting obligations incumbent on us under the German Stock Corporation Act (AktG), the German Commercial Code (HGB) and the German Securities Trading Act (WpHG).

Disclosures on auditor

The Annual General Meeting of MVV Energie AG held on 13 March 2020 elected PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, (PwC), Essen, as auditor for the 2020 financial year. Prior to 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, including those governing 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

MVV Energie AG prepares its annual financial statements 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 which were prepared by the Executive Board. The financial statements are first discussed by the Audit Committee and then examined, approved and thus adopted by the Supervisory Board. Following detailed scrutiny by the Audit Committee, the consolidated financial statements prepared by the Executive Board and audited by the auditor are also presented to the Supervisory Board for its own review and approval. 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

Making sure that our dealings with each individual stakeholder are characterised by transparency, trust, fairness and integrity – that is the standard we have set ourselves. With our compliance management system (CMS), we aim to safeguard compliance with applicable laws, as well as with in-company guidelines and the ethical standards to which we are committed. This is intended on the one hand to ensure that our managers and employees understand and adhere to these and on the other hand to monitor all relevant business activities and processes within our Group.

The most important requirements and all necessary organisational structures and processes are summarised in our Compliance Management Handbook. In this, we also list the names of those employees who are responsible for our reporting system and present further details. The handbook is binding for all limited liability companies at the Mannheim subgroup of MVV Energie AG and is permanently available for downloading to all its employees. The other subgroups have introduced equivalent compliance management systems. Our Compliance Management Handbook is available both in German and English, which is important for our British and Czech subgroups, for example.

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

We have provided our CMS system with a preventative structure and thus pursue a systemic compliance approach. Breaches of compliance are principally avoided by implementing preventative measures in the respective business processes. 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 are made exclusively in the form of dividends.

We actively implement preventative measures within all our business processes in order to avert criminal or grossly improper violations of the law. In this respect, we pursue a zero-tolerance policy towards bribery and all other forms of corruption. We provide extensive corruption prevention training, particularly to employees working in sales, related areas and procurement. We show them, for example, how they should deal with gratuities and invitations, which we record and check. These measures enable us to minimise the risk of so-called soft bribery. We also continually monitor adherence to compliance requirements in all business fields, specialist divisions, group departments and subsidiaries. Via anonymous "whistleblower hotlines", employees and third parties can contact the Compliance Officer or an external confidence lawyer directly and thus provide tip-offs on potential misconduct. We have published the telephone number of the confidence lawyer, also on our website at **www.mvv.de.**

Apart from a small number of minor infringements, no compliance incidents came to light in the period under report.

All of MVV's managers and all employees with contact to customers or suppliers are provided with regular training to make sure they are well informed of general compliance requirements and are also familiar with the legal requirements relevant to their respective business units. These include, for example, legal requirements relevant to the capital market and securities, stock market, competition and cartel law, combating money laundering, handling sanction lists and the requirements of energy industry law. In the 2020 financial year, 245 employees at the Mannheim subgroup and 27 employees at other subgroups took part in this training. The coronavirus pandemic meant that many of these training sessions could not be held in person. Using the available possibilities, we therefore provided online training. Over the same period, 505 individuals completed an e-learning programme offered by our Stadtwerke Kiel and Energieversorgung Offenbach subsidiaries. From a specific management level upwards, all managers are required to submit a Compliance Management Declaration (CMD) at the end of each financial year. The same requirement applies to the managing directors of our subsidiaries and specific shareholdings. In this, they must state whether all compliance regulations and legal requirements have been complied with. In the CMD we also ask, among other issues, whether the employees of the individual manager have received the required instruction and suitable training for the CMS. Moreover, in the context of the CMD the managers also respond in detail to questions specifically tailored to circumstances at their respective business unit.

Compliance requirements governing the prevention of money laundering and terrorism financing were updated to account for the provisions of the German Money Laundering Act (GwG), which has been amended several times, most recently in June 2020. Given its customer base, products and geographical areas of activity, MVV is only subject to a low potential risk in this respect. To eliminate the risk of participating in money laundering and terrorism financing entirely, cash transactions are generally not permitted and are absolutely prohibited for amounts of Euro 10,000 upwards. Furthermore, when establishing business relationships requirements have to be met in terms of identifying the contract partners and their economic beneficiaries.

The energy industry supply chain is characterised by fuel trading, which is handled on energy exchanges or in bilateral agreements. Only a comparatively small share of our total procurement volumes relates to suppliers who provide us with goods or perform highly qualified 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 request information from new suppliers, particularly regarding anti-corruption measures, environmental protection and social responsibility. Our cooperation with suppliers and service providers in Germany and the European Union is based on applicable laws and regulations, as well as on those compliance regulations, forms of conduct and work practices relevant to us. These include, for example, 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 publish on our website **www.mvv.de/de/partner/lieferanten/zentraleinkauf/downloadbereich.** Our suppliers undertake to comply with legal requirements governing the combating of corruption, and the protection of employees and the environment. Should these obligations be breached, then contractual sanctions, including contractual penalties, termination and damages payments, are provided for.

Further major components of our corporate management include our risk management system and internal control system in respect of the financial reporting process (IKS). Our IKS system 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, we regularly analyse all processes and interfaces involved in preparing the consolidated financial statements, the financial statements of MVV Energie AG and the combined management report of MVV.

Dual management system

As a listed stock corporation with its legal domicile in Mannheim, MVV Energie AG is governed by the requirements of German stock corporation law. One basic principle of this legislation is the dual management system, which provides for a 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 and pursues the objective of generating sustainable and profitable growth. It determines the company's strategic alignment and lays down its financial, investment and personnel planning. It assesses whether the strategy is being implemented in a targeted manner and whether the risk management system is fit for purpose. Furthermore, it monitors risk controlling, the internal control system in respect of the financial reporting process (IKS) and the compliance management system, as well as more far-reaching decentralised management and controlling systems. It takes due account of the interests of the company's stakeholders when reaching decisions.

The Supervisory Board has imposed a Code of Procedure governing the activities of the Executive Board. This lays down the 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 those transactions which require Supervisory Board approval. The Executive Board, which has to comprise at least two members, currently has four positions/divisions: CEO/Commercial Affairs, Personnel, Technology and Sales.

The CEO coordinates the work within the Executive Board. Furthermore, he represents the Executive Board externally. Executive Board members otherwise have 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 their division to the overriding interests of the company.

Diversity concept for composition of Executive Board

In June 2020, the Supervisory Board decided to adapt the diversity concept for the composition of the Executive Board to the amended recommendations of the current German Corporate Governance Code.

The composition of the Executive Board is consistent with 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 to 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 nevertheless complement each other in such a way that the Executive Board as a whole has the necessary expertise and a suitable breadth of experience. The members of the Executive Board bear joint responsibility for managing the company and the Group. They must therefore 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. Moreover, the Supervisory Board should work together with the Executive Board to find long-term succession solutions. The Supervisory Board had set the target of raising the share of women on the Executive Board. In 2017, it set 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, two years earlier than planned.

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

Composition and mode of operation of Supervisory Board and its committees

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

The Supervisory Board of MVV Energie AG consists of 20 members, Of these, ten represent the company's shareholders and ten its employees; they have identical terms in office. 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 applies to the extent that the City of Mannheim is a shareholder and, directly or indirectly, holds shares corresponding to more than half of the company's share capital. Employee representatives are elected by employees in accordance with the German Codetermination Act (MitbestG). The Chairman of the Supervisory Board coordinates the work of the Supervisory Board, whose activities are governed by a Code of Procedure. We have published the Code of Procedure for the Supervisory Board on our website at **www.mvv.de/investors.**

To perform its activities efficiently and provide effective support, the Supervisory Board of MVV Energie AG has formed five committees with a specialist focus. 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. By contrast, the Personnel, Nomination, Mediation and New Authorised Capital Creation Committees are only convened when necessary.

The **Audit Committee** addresses 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 also include preparing the selection of the auditor, reviewing and discussing the annual and consolidated financial statements and discussing the interim consolidated financial statements for the first half of and the interim financial statements for the first three and first nine months with the Executive Board. The Committee 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. Tasks incumbent on the Audit Committee also include determining key audit focuses and setting thresholds for the commissioning of non-audit services. The Audit Committee comprises three shareholder and three employee representatives. The Chairman of this committee is Prof. Heinz-Werner Ufer. As an independent and expert member, he meets the requirements of § 100 (5), § 107 (4) AktG and of Point 5.3.2 (3) Sentences 2 and 3 of the German Corporate Governance Code (DCGK). The Supervisory Board Chairman is a permanent guest in the committee. The Audit Committee had the following members at 30 September 2020: Prof. Heinz-Werner Ufer (Chairman), Heike Kamradt (Deputy Chair), Peter Erni, Detlef Falk, Dr. Lorenz Näger and Christian Specht. At the end of the 2020 financial year, Christian Specht stood down from his position. Gregor Kurth was newly elected to the committee as of 1 October 2020. Moreover, since 1 October 2020 Christian Specht and Dr. Stefan Seipl will attend Audit Committee meetings as permanent guests.

The work of the **Personnel Committee** relates in particular to preparing Supervisory Board resolutions concerning the conclusion of employment contracts with Executive Board members, as well as any amendments to or rescission of such. It proposes suitable candidates to the Supervisory Board for appointment to the Executive Board. In this, it takes due account of legal requirements and of the recommendations made by the German Corporate Governance Code. Subsequent to this preparation by the Personnel Committee, the Supervisory Board is responsible for appointing new members to the Executive Board and 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 2020: Dr. Peter Kurz (Chairman), Heike Kamradt (Deputy Chair), Ralf Eisenhauer, Peter Erni, Steffen Ratzel and Jürgen Wiesner. Steffen Ratzel stood down from his position as of 30 September 2020. Gregor Kurth was newly elected to the committee as of 1 October 2020.

The **Nomination Committee** determines targets for the composition of the Supervisory Board and recommends suitable candidates to the Supervisory Board for its own proposals to the Annual General Meeting. In this, it takes particular account of legal requirements, the diversity concept and the recommendations of the German Corporate Governance Code. The five committee members include the Supervisory Board Chairman, who also chairs the committee, and four further shareholder representatives. The Nomination Committee had the following members at 30 September 2020: Dr. Peter Kurz (Chairman), Ralf Eisenhauer, Barbara Hoffmann, Steffen Ratzel and Prof. Heinz-Werner Ufer. Steffen Ratzel stood down from his position as of 30 September 2020. Gregor Kurth and Tatjana Ratzel were newly elected to the committee as of 1 October 2020. With six members, all the positions on the committee are occupied.

Consistent with § 27 (3) of the German Codetermination Act (MitbestG), the **Mediation Committee** submits further personnel proposals to the Supervisory Board if the two-third majority required to appoint and dismiss Executive Board members is not achieved in the first ballot. The Mediation Committee had the following members at 30 September 2020: Dr. Peter Kurz (Chairman), Heike Kamradt, Steffen Ratzel and Jürgen Wiesner. Steffen Ratzel stood down from his position as of 30 September 2020. Gregor Kurth was newly elected to the committee as of 1 October 2020.

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. Dieter Hassel stood down from the committee as of 26 June 2020. The New Authorised Capital Creation Committee had the following members at 30 September 2020: Dr. Peter Kurz (Chairman), Ralf Eisenhauer, Peter Erni, Heike Kamradt, Steffen Ratzel, Christian Specht and Prof. Heinz-Werner Ufer. Steffen Ratzel stood down from his position as of 30 September 2020. Gregor Kurth and Tatjana Ratzel were newly elected to the committee as of 1 October 2020.

Diversity concept for composition of Supervisory Board

The diversity concept for the composition of the Supervisory Board was also adapted in June 2020 to account for the amended recommendations made in the current version of the German Corporate Governance Code.

The specialist and personal requirements set 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 have to be able to correctly assess the economic situation and technical context of a listed energy supplier with municipal roots and successfully accompany its sustainable development. Individual Supervisory Board members are not expected to have the full range of specific specialist skills, competencies and experience required. However, their qualities should complement each other in such a way that the full Board has the competence and experience needed for it to perform the duties incumbent on the Supervisory Board and its committees.

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

When proposing candidates, due account should be taken of the upper age limit of 70 years. As a general rule, this limit should also not be exceeded during the term in office.

According to § 96 (2) Sentence 1 AktG, the Supervisory Board of a listed company should comprise at least 30 % women and at least 30 % men. § 96 (2) Sentence 2 AktG states that 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 drawn on the possibility 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 task incumbent on the Nomination Committee involves implementing the diversity concept for the composition of the Supervisory Board. It proposes suitable candidates to the Supervisory Board for its election proposals to the Annual General Meeting. In this, it 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 ascertains 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 is governed by the provisions of codetermination law.

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

The Supervisory Board last conducted a self-assessment to evaluate the effectiveness of its work and that performed by its committees in the 2019 reporting year. Based on the findings, ideas and recommendations were then 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

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

In respect of Point 5.4.2 of the German Corporate Governance Code in its version dated 7 February 2017 and Points C1 and C6 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. Both the previous version and the new version of the Code consider a Supervisory Board member to be 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. It is therefore logical that the City of Mannheim, as majority shareholder in MVV Energie AG, should be represented on the company's Supervisory Board by members of the city council and the city administration. The decisive factor in determining independence is whether there are any material conflicts of interest. This is particularly not the case for those 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 2020 financial year.

Even if a differing view is taken as to the independence of those Supervisory Board members who are simultaneously members of the city administration or city council of the City of Mannheim, the Supervisory Board nevertheless includes an appropriate number of independent members, namely Sabine Dietrich, Barbara Hoffmann, Dr. Lorenz Näger, Gregor Kurth, Tatjana Ratzel, Dr. Stefan Seipl and Prof. Heinz-Werner Ufer. The three members who stood down from the Supervisory Board at the end of the financial year also met the criteria of being independent of the Executive Board, the company and the controlling shareholder.

Some members of our Supervisory Board 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, the Supervisory Board does not harbour 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 aim to raise the female share of our Group's workforce to 35 % by 30 September 2021, up from 27 % as of 30 June 2015. With a 28 % share of female employees as of 30 September 2020, we came slightly closer to reaching this target. We also aim to raise the share of female managers, in this case from 14 % as of 30 June 2015 to 25 %. At the balance sheet date on 30 September 2020, this key figure came to 15 %. To enable us to meet our targets by 30 September 2021, we will consistently implement and in the years ahead further expand our range of promotional measures and programmes. That is particularly true for our targeted personnel development for women with suitable potential.

For MVV Energie AG, we report on the share of women in both the first and the second management tiers. In August 2017, the Executive Board set targets which are to be met by 30 September 2021. By then, women should account for 25 % of managers in the first and 30 % in the second management tier. At 10 %, the share of female managers in the first management tier as of 30 September 2020 was at the previous year's level (30 September 2019: 10 %). Women accounted for 27 % of managers in the second management tier (30 September 2019: 29 %). This share has thus almost reached the specified target. In addition to those measures that are already in place to promote women, we are implementing measures to increase the number of applications we receive from promising external and internal female candidates.

Remuneration Report

In this section, we set out the principles underlying our remuneration system for the MVV Energie AG Executive Board. We also provide information about the structure and level of remuneration paid to members of our Executive Board and our Supervisory Board.

EXECUTIVE BOARD REMUNERATION

Remuneration system

The system and level of remuneration paid to members of our Executive Board are determined and regularly reviewed by the Supervisory Board. The Personnel Committee of the Supervisory Board prepares the required resolutions.

The basic features of our remuneration system are structured in such a way as to incentivise the sustainable and 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 the recommendations set out in the latest version of the German Corporate Governance Code.

Executive Board remuneration comprises non-performance-related and performance-related components. Should an Executive Board member prematurely leave the company, the following requirements apply to any potential compensation agreement: Payments to a retiring Executive Board member may not exceed the value of two annual remuneration packages and may also not exceed the remuneration due for the remaining term of the employment contract. No transitional allowances are granted upon the premature termination or non-extension of the employment contract.

No 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 the Executive Board consist of 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, which 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.

All Executive Board members of MVV Energie AG have been granted defined contribution pension commitments whose volume is based on 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 include benefits to cover permanent inability to work and provision for surviving dependants.

Performance-related remuneration

Two components, each of which furnished with appropriate minimum thresholds and caps, determine the variable remuneration paid to our Executive Board members. The first is the annual bonus, which is measured by reference to the adjusted EBIT generated by MVV in the past financial year. The second is the sustainability bonus, which is linked to the sustainable increase in the company's value.

The latter bonus is based on MVV's average ROCE (return on capital employed) before IFRS 9 items, with the calculation including the figures both for the financial year under report and for the two preceding financial years. The ROCE figure measures how effectively the company has used its capital employed. As the capital required for operations is influenced in particular by long-term strategic decisions, this figure is suitable to appraise the company's sustainability. The sustainability bonus is only paid out when the ROCE calculated for a three-year period exceeds a specified minimum threshold.

Compared with the annual bonus, the sustainability bonus accounted for the predominant share of variable remuneration paid to the members of MVV's Executive Board in the 2020 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

The Executive Board of MVV Energie AG received total remuneration of Euro 2,812 thousand in the year under report (previous year: Euro 2,439 thousand).

The following tables show both the benefits granted and the actual incomes paid in the year under report in accordance with the recommendations of the German Corporate Governance Code, as well as total remuneration pursuant to German Accounting Standard 17 (DRS 17). Given the structure of our remuneration system, benefits granted and actual incomes paid are identical.

Former members of the Executive Board received benefits of Euro 630 thousand in the year under report (previous year: Euro 531 thousand). We stated provisions totalling Euro 20,288 thousand for pension obligations to former Executive Board members and their surviving dependants (previous year: Euro 21,401 thousand). Of this total, an amount of Euro 64 thousand was added in the year under report (previous year: Euro 347 thousand).

Remuneration of related parties

According to IAS 24, management staff performing key functions count as related parties. Alongside the Executive Board, at MVV this group of persons includes active division heads and authorised representatives of MVV Energie AG. Our division heads and authorised representatives receive their remuneration exclusively from MVV Energie AG. In the year under report, the corresponding remuneration totalled Euro 2,955 thousand (previous year: Euro 3,015 thousand), with Euro 2,845 thousand of this involving payments with current maturities (previous year: Euro 2,906 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 remuneration. The total expenses incurred for this remuneration amounted to Euro 110 thousand in the 2020 financial year (previous year: Euro 108 thousand).

Benefits granted and income paid

	Dr. Georg Müller CEO				Verena Amann Personnel Director (since 1 August 2019)			
		Min	Max			Min	Max	
Euro 000s	**FY 2020**	FY 2020	FY 2020	FY 2019	**FY 2020**	FY 2020	FY 2020	FY 2019
Fixed remuneration [1]	524	524	524	524	313	313	313	52
Fringe benefits [2]	31	31	31	31	41	41	41	6
Other activities [3]	11	11	11	16	6	6	6	–
Total	**566**	**566**	**566**	**571**	**360**	**360**	**360**	**58**
Variable remuneration	394	–	1,048	444	264	–	626	49
Total pay	**960**	**566**	**1,614**	**1,015**	**624**	**360**	**986**	**107**
Pension expenses [4]	349	349	349	245	331	331	331	211
Total remuneration	**1,309**	**915**	**1,963**	**1,260**	**955**	**691**	**1,317**	**318**

	Ralf Klöpfer Sales Director				Dr. Hansjörg Roll Technology Director			
		Min	Max			Min	Max	
Euro 000s	**FY 2020**	FY 2020	FY 2020	FY 2019	**FY 2020**	FY 2020	FY 2020	FY 2019
Fixed remuneration [1]	313	313	313	313	313	313	313	313
Fringe benefits [2]	39	39	39	46	23	23	23	26
Other activities [3]	11	11	11	11	6	6	6	16
Total	**363**	**363**	**363**	**370**	**342**	**342**	**342**	**355**
Variable remuneration	259	–	626	296	264	–	626	296
Total pay	**622**	**363**	**989**	**666**	**606**	**342**	**968**	**651**
Pension expenses [4]	302	302	302	191	316	316	316	196
Total remuneration	**924**	**665**	**1,291**	**857**	**922**	**658**	**1,284**	**847**

1 Annual fixed remuneration including CEO allowance of Euro 211 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

Pension obligations

	Development in virtual pension accounts			Pension provision	Allocation to pension provision	
Euro 000s	Balance at 1 Oct 2019	Pension contribution	**Balance at 30 Sep 2020 [1]**	**Balance at 30 Sep 2020 [1]**	Service cost	Interest expenses
Dr. Georg Müller	2,846	394	3,369	6,175	349	19
Verena Amann	16	103	120	485	331	1
Ralf Klöpfer	781	183	995	2,105	302	5
Dr. Hansjörg Roll	697	214	940	1,949	316	5
Total	**4,340**	**894**	**5,424**	**10,714**	**1,298**	**30**

1 Including interest
2 Equivalent to present value of vested claims

SUPERVISORY BOARD REMUNERATION

Remuneration system

The Articles of Incorporation of MVV Energie AG stipulate that members of the Supervisory Board should receive fixed annual remuneration and a meeting allowance, the amount of which is determined by the Annual General Meeting. The remuneration paid to our Supervisory Board members is commensurate to the responsibility they bear and to the scope of their activities. By resolution of the Annual General Meeting on 13 March 2020, annual remuneration was adjusted and retrospectively increased as of 1 October 2019. Each Supervisory Board member thus received annual remuneration of Euro 15 thousand in the 2020 financial year. The Supervisory Board Chairman received annual remuneration of Euro 30 thousand and his deputy was paid Euro 22.5 thousand. Members joining or leaving the Supervisory Board during the financial year received prorated remuneration. Moreover, the Audit Committee Chairman received additional annual remuneration of Euro 10 thousand, while other members of the committee each received Euro 5 thousand. Each Supervisory Board member 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 525 thousand was paid to Supervisory Board members in the year under report (previous year: Euro 400 thousand).

Supervisory Board remuneration FY 2020

Euro	Annual Remuneration	Meeting allowances
Dr. Peter Kurz, Chairman	30,000	18,000
Johannes Böttcher	15,000	7,000
Timo Carstensen	15,000	5,000
Ralf Eisenhauer	15,000	9,000
Peter Erni	20,000	9,000
Detlef Falk	20,000	10,000
Gabriele Gröschl-Bahr	15,000	1,000
Dieter Hassel (until 26 June 2020)	11,083	3,000
Barbara Hoffmann	15,000	6,000
Prof. Dr. Heidrun Kämper	15,000	7,000
Heike Kamradt	27,500	14,000
Brigitte Kemmer	15,000	7,000
Gregor Kurth (since 3 July 2020)	3,667	4,000
Thoralf Lingnau (since 24 January 2020)	10,292	4,000
Dr. Lorenz Näger	20,000	11,000
Steffen Ratzel	15,000	9,000
Bernhard Schumacher	15,000	7,000
Christian Specht	20,000	10,000
Prof. Heinz-Werner Ufer	25,000	17,000
Susanne Wenz	15,000	5,000
Jürgen Wiesner	15,000	9,000
Total	**352,542**	**172,000**

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 2020, 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 funds managed by First Sentier Investors (previously: First State Investments), directly held 45.68 % 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 these authorisations.

Compensation agreements and change of control clauses

MVV Energie AG has no material agreements that are subject to a change of control resulting from 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

- » Ongoing great uncertainty due to coronavirus pandemic
- » Energy policy and industry climate remain challenging
- » Sales and earnings expected to at least match previous year's level
- » Investments set to remain high

OUTLOOK

Macroeconomic framework

Since the start of 2020, society, politicians and businesses have been confronted with the coronavirus pandemic, its developments and its effects. The consequences which the pandemic will have for overall economies and for individual companies can only be forecast to a limited extent, whether in qualitative or in quantitative terms. In their autumn survey for the 2020 calendar year, Germany's leading economic research institutes expect to see a 5.4 % reduction in the country's gross domestic product. For the 2021 calendar year, they have forecast growth of 4.7 %. According to the experts, the greatest risk involved in these forecasts is the uncertainty surrounding the further course of the pandemic, an observation which ongoing developments have proven to be valid.

Energy policy framework

In terms of the underlying conditions that will affect MVV's future business performance, the most important are the efforts being made to protect the climate and the associated acceleration in the energy turnaround. In Germany, these are specifically expressed in the amendment to the German Renewable Energies Act (EEG), the implementation of the German Coal Exit Act (KAG) and the legislative measures relating to green heating energy options. Further details about these can be found in the chapter **Business Framework** **Page 28.** Our international solar and wind project development business will be affected above all by the respective national regulations and market factors.

Executive Board summary of expected business performance

The forecast for the 2021 financial year therefore has to be provided against a backdrop of great macroeconomic uncertainty due to the coronavirus pandemic on the one hand and the emergence of a more ambitious approach to climate protection on the other. Both factors will affect the energy industry, and thus also MVV. Our top priority in future as well will be to protect the health of our employees, customers and partners. We acted early to take targeted measures in this respect and are continually adapting these in line with the latest developments. As a company that provides critical infrastructure, we are thus managing to safeguard a reliable supply of energy and water and to ensure that waste is suitably disposed.

We will continue to pursue our existing strategy. This is aligned to the transformation of the energy system and therefore focuses on energy efficiency, renewable energies, new products and services and supply reliability. We feel that our alignment has been confirmed by developments, particularly also in these times of the coronavirus pandemic. We are countering the charges resulting from this transformation and the pandemic by implementing measures to improve our processes and procedures and reduce our costs. This way, we are providing MVV with a foundation for its sustainable growth in future as well.

Despite this clear alignment, like large parts of the overall economy we too are currently unable to quantify future developments, and thus the implications of the pandemic for our company, to the customary extent. Our forecast for the 2021 financial year is therefore subject to greater uncertainty than in previous years. We have commented on the material individual potential risks that could result from the further course of the pandemic in the **Opportunity and Risk Report** **Page 82.**

Sales and earnings performance

Despite the impact of the coronavirus pandemic, we concluded the 2020 financial year with year-on-year earnings growth. This shows that we are well positioned in terms of our structures and that we have robust business models which also complement and counterbalance each other within the overall portfolio. This approach will guide our activities in the 2021 financial year as well. From an operating perspective, we are thus confident that adjusted sales (excluding energy taxes) and adjusted EBIT will each at least match the previous year's level (Euro 3.5 billion and Euro 233 million respectively). Our sales performance will depend above all on trading activities and commodity prices, customer demand and weather conditions. Further major factors that influence our earnings include wind volumes, the development in electricity and fuel prices and availability levels at our plants. The volume of solar and wind power projects marketed, a factor which is generally subject to greater volatility, is particularly significant both for our sales and for our earnings performance.

Should the coronavirus pandemic have only a limited impact on our company, then in view of the investments we have made and the new business models we have established in recent years we also see opportunities to achieve growth in the above key figures. If possible, we will issue statements in this respect in the context of our reporting during the financial year.

Expected performance of MVV Energie AG in separate financial statements

The sales and earnings performance of MVV Energie AG as well will depend on the course and impact of the coronavirus pandemic. Overall, for the 2021 financial year we expect both sales (excluding energy taxes) and annual net income after taxes at MVV Energie AG to approximately match the previous year's figures (Euro 1.4 billion and Euro 99 million respectively). Sales and sales volumes in the heating energy business are significantly influenced by weather conditions, particularly during the heating period. Earnings in the separate financial statements are also significantly 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 MVV's earnings performance in future as well. In view of this, the Executive Board has decided to propose a dividend of Euro 0.95 per share, corresponding to an increase of Euro 0.05 per share, for approval by the Annual General Meeting on 12 March 2021. The Supervisory Board will decide in December 2020 on its dividend proposal to be submitted to the Annual General Meeting.

Investments

From a current perspective and provided the coronavirus pandemic does not prevent us from doing so, we will increase our volume of investments in the 2021 financial year while retaining the same strategic investment focuses.

Capital resources and financing structure

We continue to have very good access to the financial market and are therefore able to cover MVV's financing and liquidity needs at all times. Thanks to our adjusted equity ratio of around 34 %, we can also continue to make a high volume of investments. We finance investments in our existing business primarily from depreciation. For our growth projects, we draw on retained earnings and on optimised project-based financing facilities. We pool projects with structural similarities and comparable terms and draw on the bank and promissory note loan markets. By defining and adhering to key figures as guidelines for debt-financed growth, we ensure an implicit rating on investment grade level 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 due to high current levels of uncertainty and numerous internal and external factors.

OPPORTUNITY AND RISK REPORT

The energy industry has been undergoing a process of fundamental change for years now – and the industry 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. By systematically addressing the resultant opportunities and risks, we are able 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 system 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 system also helps us to avoid material misstatements resulting from errors or irregularities.

The IKS system is a fixed component of relevant accounting and financial reporting processes at all our major locations. We regularly analyse all processes and interfaces involved in preparing MVV's consolidated financial statements and combined management report. 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 any risks of this nature, 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 and the combined management report.

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 system

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 a 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 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 system 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 on uniform guidelines that are applicable to annual and interim financial statements. These guidelines lay down the accounting policies requiring application under IFRS and also 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 the purpose of preparing the financial statements. 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 numerous 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 system is subject to uniform standards applicable throughout the Group. We ensure that our IKS system is documented and effective in terms of its structure and functionality.

Our IKS managers at all major group 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 to 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 reporting process executed during the financial year, the group controlling department monitors whether the targets set out in the business plan and approved by the Supervisory Board are actually met. Variances, whether to planned developments or to developments in the previous financial year, are documented and included in the quarterly financial 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 managed and offset by suitable opportunities.

Basic principles and organisation of RMS system

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 responsible for operating earnings at the 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 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. Existing opportunities and risks are aggregated using probability methods.

RISK MANAGEMENT SYSTEM

In our risk report, we list 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. Significant risks arising at short notice are reported immediately to the Executive Board, which in turn informs the Supervisory Board as appropriate.

Supervision of IKS and RMS systems

Both the IKS and the RMS systems 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 weaknesses and monitors whether the improvements introduced are taking 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 2021

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 has also been significantly influenced by uncertainties resulting from the coronavirus pandemic. To counter the effects of the pandemic, we are drawing on numerous proactive measures which we review continually to assess their effectiveness. Our close links to the overall economy may nevertheless lead to numerous direct or merely indirect effects of the coronavirus pandemic 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 include price fluctuations in commodities on both procurement and sales markets, exchange rate movements and interest rate changes. To limit interest rate, exchange rate and commodity risks, we make use of financial instruments **Notes to Balance Sheet (Note 35), Page 135.**

Fluctuations from marketing our generation positions
The clean dark spread (CDS), the 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. Items included – in each case together with the costs of CO_2 emission rights – in the costs of electricity generation are: the costs of coal in the case of the CDS, the costs of gas (including transport costs and currency translation differences) for the CSS 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 management.

Since the onset of the coronavirus pandemic, we have seen sharp fluctuations in wholesale market prices. These 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 due account of our applicable hedging regulations. We thus increase the consistency of our earnings and act early to improve our planning reliability for subsequent financial years.

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. Weather conditions have 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 should it be cooler than planned during the heating period and/or should wind volumes exceed our expectations.

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, 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.

Due to 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 unrelentingly high. 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 customer benefits. We are thus 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 raise 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 total volumes available and by their quality. Both factors are in turn affected 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 spread of the coronavirus and associated reduction in industrial and commercial production and turnover volumes could impact on waste prices and volumes.

In respect of the UK's decision to leave the European Union (Brexit), there is currently increased 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, with its renewable energies project development business, as well as at customers with energy-related services for industrial parks and with data centre services.

We have extensive 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. We see key opportunity and risk factors in the onshore wind turbine project development business in Germany as relating to 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.

Especially in the project development business, we monitor any potential delays to operations launches or projects, and this is also and 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 increasingly 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 expertise and great competence in project development and operations management for renewable energies plants.

Risks from progress with construction projects

Large-scale generation plants have long planning and construction stages and harbour corresponding risks. Negative implications for our expected adjusted EBIT could arise, for example, in the event of any delay in the completion and launch of operations at our major projects or if we incur unplanned costs to procure substitute electricity and heating energy or if new developments increase the costs of the projects. 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 well-qualified and committed 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. The companies within our Group 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 company and location. To enable us to continue filling key positions with internal candidates, where possible, we will keep providing our staff with targeted training.

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.

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 127.**

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 continually reduce our IT risks 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.

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 or 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. We counter these risks actively: We participate in the political opinion-forming process, adapt our processes and business models and, where possible, also develop suitable products. This way, we are able to exploit any opportunities arising.

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 69** 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 addressing these by offering innovative products, such as by using waste process heating energy to move towards sustainable district heating generation.

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. 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. In the event of any deterioration 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. These decisions are taken 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. To enable us to achieve our budgeted level of adjusted EBIT, strategically important investments have to generate 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 achieved in future financial years.

Given the transformation in the German energy system, our company still faces a high level of planning uncertainty. We are tracking the decision taken by the Federal Government to exit from coal and head for climate neutrality by gradually implementing our decarbonisation strategy **Page 48.** We are pursuing the associated targets by reducing the fossil-based share of our generation activities. The steps we are taking here include replacement investments, efficiency enhancement measures, continuing to expand renewable energies and introducing CO_2 reduction measures. The framework for gradually reducing our conventional generation capacities will largely be set by the coal exit legislation **Page 28**. This results in uncertainties for our company.

Furthermore, it is not clear how the UK's decision to leave the European Union (Brexit) will ultimately impact on our business in the UK. 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 affected include interest rates, commodities, demand levels and the regulatory framework. Further developments will depend on the specific structure of the country's exit from the EU.

The energy turnaround and changing market in Germany offer opportunities for innovations, new jobs and profitable growth, particularly in terms of renewable energies, decentralised energy supply, energy efficiency, digitalisation, building refurbishment and sustainable mobility concepts. By consistently implementing our corporate strategy **Page 21,** we are seizing 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 will also make district heating more environmentally friendly, as the link-up measure will lead to a lower primary energy factor.

For renewable energies, we still see sustainably attractive market potential. The competitive situation in Germany has nevertheless changed in the windfarm project development business. The addition of new wind turbines is highly dependent on the increased challenges presented by approval procedures 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 given the ever stricter requirements governing the disposal of organic waste. We see further growth potential abroad in areas such as photovoltaics. Having said that, dependencies on local subsidy regimes and local clients apply here. Not only that, competition is tough, particularly in high-growth Asian markets.

We are extending our decentralised energy management business model by offering innovative new solutions and products. We are thus active in the fields of energy-related services, where we offer energy-saving solutions, data centre services, individual renewable photovoltaics products for retail and business customers including tradesperson services from a single source, e-mobility solutions and projects to develop the e-mobility infrastructure. Furthermore, since the end of November 2019 a new gas-fired CHP plant has helped to ensure supply reliability in Kiel.

Executive Board summary

MVV's opportunity/risk profile has changed compared with the previous year. The onset of the coronavirus pandemic means that the known uncertainties directly related to our business have been joined by new challenges and risks affecting all business fields. These will depend on the extent and duration of any restrictions on public life and economic activity. Furthermore, competitive pressure is unrelentingly high. Changes in energy and climate policy also still have the potential to impact substantially on our business performance, as is the case at all other companies in the energy industry. This remains a key source of uncertainty. There is great planning uncertainty, particularly for long-term investments in electricity and heating energy generation plants and the renewable energies project development business. In Germany, further developments will depend on the support provided by lawmakers to overcome current hurdles to project development. In our international target markets for renewable energies, we see key risk factors in local subsidy regimes and macroeconomic developments. Other major factors include the development in political frameworks, market access terms and public acceptance of projects. Moreover, depending on the specific structure of the exit from the EU, Brexit may impact on our business. We expect our industry to be exposed to further fundamental change and underlying conditions to remain unstable. Energy markets are set to remain highly volatile, particularly in view of the current climate debate.

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 which could do so in future.

Consolidated Financial Statements

Income Statement

Income statement

Euro 000s	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019	Notes
Sales [1]	3,583,790	3,899,818	
less electricity and natural gas taxes	151,696	160,349	
Sales less electricity and natural gas taxes	**3,432,094**	**3,739,469**	1
Changes in inventories	5,483	18,067	2
Own work capitalised	22,167	20,987	3
Other operating income [1]	206,344	312,891	4
Cost of materials [1]	2,506,252	2,866,528	5
Employee benefit expenses	456,423	438,229	6
Other operating expenses [1]	291,021	454,697	7
Impairment losses on financial instruments	11,666	6,582	
Income from companies recognised at equity	21,504	25,332	8
Other income from shareholdings	2,563	– 1,732	8
EBITDA	**424,793**	**348,978**	
Depreciation	206,997	183,493	9
EBITA	**217,796**	**165,485**	
Goodwill amortisation	8,302	–	14
EBIT	**209,494**	**165,485**	
of which result of IFRS 9 derivative measurement	– 19,768	– 56,100	
of which EBIT before result of IFRS 9 derivative measurement	229,262	221,585	
Financing income	12,324	21,510	10
Financing expenses	60,676	74,581	11
EBT	**161,142**	**112,414**	
Taxes on income	46,950	36,155	12
Net income for period	**114,192**	**76,259**	
of which non-controlling interests	20,291	30,276	
of which earnings attributable to MVV Energie AG shareholders (net income for period after minority interests)	**93,901**	**45,983**	13
Basic and diluted earnings per share (Euro)	**1.42**	**0.70**	

1 Previous year's figures adjusted due to NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)"

Statement of Comprehensive Income

Statement of income and expenses recognised in group equity

Euro 000s	1 Oct 2019 to 30 Sep 2020	1 Oct 2018 to 30 Sep 2019
Net income for period	**114,192**	**76,259**
Cash flow hedges	– 14,254	– 47,226
Hedging costs	310	248
Currency translation differences	– 10,030	3,888
Reclassifiable share of companies recognised at equity	– 366	364
Items that may subsequently be reclassified to profit or loss	**– 24,340**	**– 42,726**
Actuarial gains and losses	3,318	– 17,591
Non-reclassifiable share of companies recognised at equity	– 18,217	– 1,353
Items that will not be reclassified to profit or loss	**– 14,899**	**– 18,944**
Total comprehensive income	**74,953**	**14,589**
Non-controlling interests	15,196	18,988
Total comprehensive income attributable to MVV Energie AG shareholders	**59,757**	**– 4,399**

Balance Sheet

Balance sheet

Euro 000s	**30 Sep 2020**	30 Sep 2019	Notes
Assets			
Non-current assets			
Intangible assets	283,964	309,494	14
Property, plant and equipment	2,726,545	2,633,871	15
Right-of-use assets	149,144	149,814	16
Investment properties	2,424	2,606	17
Interests in companies recognised at equity	192,331	188,816	18, 19
Other financial assets	77,735	78,931	21
Other receivables and assets	101,914	70,927	22
Deferred tax assets	30,344	29,368	
	3,564,401	**3,463,827**	
Current assets			
Inventories	198,740	179,074	23
Trade receivables	332,939	365,038	24
Other receivables and assets	563,602	441,538	22
Income tax receivables	28,465	15,156	25
Cash and cash equivalents	343,175	357,564	26
	1,466,921	**1,358,370**	
	5,031,322	**4,822,197**	
Equity and debt			
Equity			27
Share capital	168,721	168,721	
Capital reserve	455,241	455,241	
Accumulated net income	803,101	768,308	
Accumulated other comprehensive income	– 107,925	– 72,554	
Capital of MVV	**1,319,138**	**1,319,716**	
Non-controlling interests	215,162	215,551	
	1,534,300	**1,535,267**	
Non-current debt			
Provisions	208,419	211,849	28, 29
Tax provisions	–	7	28
Financial debt	1,553,168	1,533,537	30
Other liabilities	290,146	220,494	31
Deferred tax liabilities	140,200	143,461	33
	2,191,933	**2,109,348**	
Current debt			
Other provisions	127,903	152,331	28, 29
Tax provisions	1,259	33,816	28
Financial debt	163,523	168,632	30
Trade payables	336,752	361,609	32
Other liabilities	649,247	461,010	31
Income tax liabilities	26,405	184	33
	1,305,089	**1,177,582**	
	5,031,322	**4,822,197**	

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 instruments	Actuarial gains and losses	**Capital of MVV**	Non-controlling interests	**Total capital**
Balance at 1 October 2018	**168,721**	**455,241**	**798,182**	**18,555**	**12,335**	**– 52,262**	**1,400,772**	**249,694**	**1,650,466**
Other income and expenses recognised in equity	–	–	–	3,161	– 38,378	– 15,165	– 50,382	– 11,288	– 61,670
Result of business operations	–	–	45,983	–	–	–	45,983	30,276	76,259
Total comprehensive income	**–**	**–**	**45,983**	**3,161**	**– 38,378**	**– 15,165**	**– 4,399**	**18,988**	**14,589**
Dividends paid	–	–	– 59,316	–	–	–	– 59,316	– 17,795	– 77,111
Capital increase/reduction at subsidiaries	–	–	–	–	–	–	–	54	54
Change in scope of consolidation/ level of shareholding	–	–	– 16,541	– 893	61	32	– 17,341	– 35,390	– 52,731
Balance at 30 September 2019	**168,721**	**455,241**	**768,308**	**20,823**	**– 25,982**	**– 67,395**	**1,319,716**	**215,551**	**1,535,267**
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**

Cash Flow Statement

Cash flow statement [1]

Euro 000s	1 Oct 2019 to 30 Sep 2020	1 Oct 2018 to 30 Sep 2019
Net income for period before taxes on income	161,142	112,414
Amortisation, depreciation and write-ups of intangible assets, property, plant and equipment and investment properties	206,901	182,746
Financial result	48,352	53,070
Interest received	6,557	9,274
Change in non-current provisions	– 432	15,833
Other non-cash income and expenses [2]	30,114	51,025
Result of disposal of non-current assets	110	918
Cash flow before working capital and taxes	**452,744**	**425,280**
Change in other assets [2]	– 37,926	– 117,867
Change in other liabilities [2]	66,069	– 8,034
Change in current provisions	– 29,870	1,978
Income taxes paid	– 68,249	– 63,812
Cash flow from operating activities	**382,768**	**237,545**
Payments for investments in intangible assets, property, plant and equipment and investment properties	– 290,483	– 266,765
Proceeds from disposals of intangible assets, property, plant and equipment and investment properties	23,124	20,200
Proceeds from subsidy payments	11,218	5,316
Proceeds from sale of fully consolidated companies	–	13,197
Proceeds from sale of other financial assets	5,664	11,726
Payments for acquisition of fully consolidated companies and other business units	– 3,861	– 17,263
Payments for other financial assets	– 24,011	– 8,092
Cash flow from investing activities	**– 278,349**	**– 241,681**
Proceeds from taking up of loans	299,150	552,758
Payments for redemption of loans	– 291,820	– 358,838
Dividends paid	– 59,316	– 59,316
Dividends paid to non-controlling interests	– 15,640	– 17,795
Change due to changes in capital at minorities	279	– 14,817
Interest paid	– 45,020	– 51,886
Cash flow from financing activities	**– 112,367**	**50,106**
Cash-effective changes in cash and cash equivalents	– 7,948	45,970
Change in cash and cash equivalents due to currency translation	– 6,441	1,005
Cash and cash equivalents at 1 October 2019 (2018)	357,564	310,589
Cash and cash equivalents at 30 September 2020 (2019)	**343,175**	**357,564**
of which cash and cash equivalents at 30 September 2020 (2019) with restraints on disposal	534	1,833

1 See further disclosures on cash flow statement in Note 37
2 Previous year's figures adjusted

Cash Flow Statement

Cash flow – aggregate presentation

Euro 000s	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019
Cash and cash equivalents at 1 October 2019 (2018)	**357,564**	**310,589**
Cash flow from operating activities	382,768	237,545
Cash flow from investing activities	– 278,349	– 241,681
Cash flow from financing activities	– 112,367	50,106
Change in cash and cash equivalents due to currency translation	– 6,441	1,005
Cash and cash equivalents at 30 September 2020 (2019)	**343,175**	**357,564**

Notes to MVV's 2020 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 the 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 2020.

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 2020 financial year (1 October 2019 to 30 September 2020). 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.

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 10 November 2020 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 2020 financial year. These standards and interpretations did not have any material implications for MVV:

Newly applied standards and interpretations

	EU endorsement	Effective date [1]
IAS 28 Long-term Interests in Associates and Joint Ventures: Amendment	8 February 2019	1 January 2019

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 2020 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]
IFRS 3 Definition of a Business	21 April 2020	1 January 2020
IAS 16 Property, Plant and Equipment: Proceeds before Intended Use	outstanding	1 January 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 2020.

Subsidiaries are fully consolidated upon acquisition, i.e. from the time when the Group gains control. Their inclusion in the consolidated financial statements 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 [1]	Companies recognised at equity
1 October 2019	166	36
Additions	10	1
Disposals	21	1
30 September 2020	**155**	**36**

1 Opening balance adjusted

MVV Trading GmbH, Mannheim, which is fully consolidated within the MVV Group, acquired 100 % of the shares in EnDaNet GmbH, Erfurt, in the 1st quarter of the 2020 financial year. This company serves to extend the Group's market position. Its existing activities were taken over and are the reason for the goodwill stated.

The fair values of the assets and liabilities of EnDaNet GmbH that were identifiable upon full consolidation are presented in the table below. The acquisition costs of Euro 5,449 thousand correspond to the total of the fair value of the net assets thereby acquired plus goodwill. The share of cash funds paid amounted to Euro 5,050 thousand, while the remainder of the acquisition costs involved variable purchase price components. The share of goodwill attributable to minority interests amounts to Euro 659 thousand. This results from the level of shareholding held in MVV Trading GmbH, which amounts to 78.95 % from the perspective of the MVV Group.

Identifiable assets and liabilities

Euro 000s	EnDaNet GmbH, Erfurt Recognised upon acquisition
Intangible assets	2,413
Property, plant and equipment	9
Right-of-use assets	224
Other financial assets	100
Trade receivables	483
Other receivables and assets	115
Cash and cash equivalents	1,189
Provisions	174
Trade payables	711
Other liabilities	649
Deferred tax liabilities	680
Fair value of net assets	**2,319**
Acquired share of net assets	**2,319**
Goodwill	3,130

Since being fully consolidated, EnDaNet GmbH has contributed sales of Euro 42,881 thousand and earnings of Euro 3,872 thousand after consideration of consolidation-related measures.

Additions to fully consolidated companies also include companies newly founded, mainly involving project companies at the Juwi and Windwärts subgroups, as well as additions due to changes in status at other majority shareholdings.

Disposals from fully consolidated companies mostly relate to mergers of wind power or biomethane companies, as well as to sales of project companies at the Juwi and Windwärts subgroups.

The changes in companies recognised at equity mainly relate to the acquisition of Zschau GmbH, Leimen, and the sale of Recogizer Group GmbH, Bonn.

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 main exchange rates:

Currency translation

	Reporting date rate		Average rate	
	30 Sep 2020	30 Sep 2019	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019
Czech crown (CZK)	27.233	25.816	26.182	25.741
British pound (GBP)	0.912	0.886	0.879	0.884
US dollar (USD)	1.171	1.089	1.121	1.128
South African rand (ZAR)	19.709	16.558	18.184	16.166

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 standards 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. Useful lives are based on economic aspects or contract terms and range between 2 and 40 years. 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 – 50

Investment properties

Investment properties are measured at amortised cost. In the context of impairment tests, their fair values are regularly determined by way of independent surveys. As these do not constitute observable market prices, measurement is allocable to Level 3 of the IFRS 13 measurement hierarchy.

Impairment 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. 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 as 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 within a five-year forecast horizon 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

Upon the first-time application of IFRS 16 as of 1 October 2018, the previous classification of leases at the lessee as operating or finance leases was abolished and replaced by a uniform right-of-use model. 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. These items are permitted to be expensed on a straight-line basis. MVV has drawn on this accounting option. Implementation of IFRS 16 means that, since the 2019 financial year, previously existing operating leases have also triggered capital retention in the form of a right-of-use asset and a liability. 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 values of the following lease payments:

- 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.

With regard to the accounting treatment of assets held by the Group acting as lessor, the application of IFRS 16 did not necessitate any adjustments. 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 and discounted by the interest rate implicit in the lease. Over the term of the finance lease, the lessor increases the lease receivable through profit or loss for interest income and reduces it in equity by the amount of principal payments received from the lessee.

Financial instruments

Primary financial instruments: All primary financial instruments, such as shares and shareholdings, loans, securities, trade receivables, 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 potential loss events in the next twelve months (12-month expected loss). In the event of a significant deterioration in the default risk that can no longer be classified as low, the loss allowance is based on the lifetime expected credit loss of the financial instrument. In the simplified approach, by contrast, the loss allowance is directly based on lifetime expected credit losses. Alongside trade receivables, lease receivables and contract assets for customer contracts also require application of the simplified approach. Impairments are recognised directly in period earnings and may directly change the carrying amount of the financial instrument or be presented in an allowances schedule.

Purchases and sales of financial assets executed on customary market terms are recognised on the date of the transaction, i.e. on the date on which the company assumed the liability to purchase or sell the assets. Purchases and sales executed on customary market terms require transfer of the assets within a period determined by market regulations or conventions.

Financial assets are retired when the contractual rights to cash flows from the asset expire or when the financial asset is transferred, provided that substantially all the risks and rewards incidental to ownership of the asset are transferred and the power to dispose over the asset has been ceded.

Financial 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 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 within 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 are countered with the best possible estimates. Among other methods, the calculations are based 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 after electricity and natural gas taxes

Sales include all revenues generated by the Group's typical business activities. MVV's main products are electricity, heating energy, gas, water and waste incineration and disposal. The Group also generates significant revenues from services and solar and wind power project development services. 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 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 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 2020	FY 2019
Electricity	1,596,210	1,656,037
Heating energy	374,743	374,362
Gas	585,743	706,389
Water	89,458	89,187
Other sales [1]	785,940	913,494
	3,432,094	**3,739,469**

1 Previous year's figures adjusted. Accounting methodology was changed in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)"

Timing of sales recognition

Euro 000s	FY 2020	FY 2019
Sales recognised at a point in time	3,156,188	3,312,630
Electricity	1,596,210	1,656,037
Heating energy	374,743	374,362
Gas	585,743	706,389
Water	89,458	89,187
Other sales [1]	510,034	486,655
Sales recognised over time	275,906	426,839
Project development	225,102	380,019
Operations management services	50,804	46,820
	3,432,094	**3,739,469**

1 Previous year's figures adjusted. Accounting methodology was changed in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".

The previous year's sales figures have been adjusted due to a change in the accounting methodology in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)". Sales in the "Other sales" product category increased by Euro 79,727 thousand. The "Other sales" recognised at a point in time showed rose by the same amount.

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

In group currency, sales at our foreign subsidiaries came to Euro 262,857 thousand (previous year: Euro 443,964 thousand). The reduction in this share of sales is chiefly due to the lower number of projects realised abroad.

Sales of Euro 31,075 thousand were included in net contract liabilities at the beginning of the period under report (previous year: Euro 24,395 thousand).

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 [1]

Euro 000s	FY 2020	FY 2019
Income from IFRS 9 derivatives	110,797	236,728
Reimbursements	21,810	10,209
Reversal of provisions	17,668	15,581
Income from sales of assets and write-ups	14,047	1,716
Agency agreements and personnel supplies	10,234	9,782
Rental income	4,880	3,884
Exchange rate gains	4,021	5,211
Employee benefits	3,210	4,458
Miscellaneous	19,677	25,322
	206,344	**312,891**

1 Previous year's figures adjusted. Accounting methodology was changed in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".

The previous year's figures for other operating income have been reduced by Euro 14,176 thousand due to a change in the accounting methodology in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".

Other operating income particularly includes measurement items for energy trading transactions requiring measurement under IFRS 9. This valuation-dependent income is offset by corresponding expenses.

Reimbursements include repayments made in connection with contracts with suppliers.

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 2020	FY 2019
Minimum lease payments with maturities < 1 year	1,857	1,562
Minimum lease payments with maturities > 1 year and < 5 years	3,302	2,940
Minimum lease payments with maturities > 5 years	6,596	2,611

5. Cost of materials

Cost of materials

Euro 000s	FY 2020	FY 2019
Raw materials, supplies and purchased goods [1]	1,807,045	2,010,064
Procurement of wind turbines and solar power systems	141,223	294,378
Purchased services	557,984	562,086
	2,506,252	**2,866,528**

1 Previous year's figures adjusted. Accounting methodology was changed in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".

The previous year's figures for cost of materials have been adjusted due to a change in the accounting methodology in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)". The cost of materials for raw materials, supplies and purchased goods rose by Euro 65,574 thousand.

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 2020	FY 2019
Wages and salaries	371,480	358,910
Social security expenses and welfare expenses	63,143	59,934
Pension expenses	21,800	19,385
	456,423	**438,229**

MVV had an annual average of 6,182 employees (previous year: 6,040). This total includes 10 executives (previous year: 10), 5,851 employees (previous year: 5,713), 295 trainees (previous year: 287) and 26 interns/students (previous year: 30).

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 2020	FY 2019
Expenses for IFRS 9 derivatives	122,944	268,529
Contributions, fees and duties	32,183	30,271
Expenses for advisory services	26,262	27,255
Maintenance, repair and IT services	19,632	20,276
Operating taxes (including energy taxes)	14,901	15,796
Rental, leasehold and leasing expenses	13,851	12,327
Other employee-related expenses	10,426	12,605
Public relations expenses	9,720	10,812
Facility management	8,391	7,748
Losses incurred on sales of assets	5,759	3,473
Exchange rate losses	4,951	2,860
Personnel supplies	3,321	4,698
Service contracts	2,529	3,872
Office materials and specialist literature	1,622	1,688
Hospitality expenses	1,308	1,960
Miscellaneous [1]	13,221	30,527
	291,021	**454,697**

1 Previous year's figures adjusted. Accounting methodology was changed in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".

The previous year's figures for other operating expenses have been reduced by Euro 23 thousand due to a change in the accounting methodology in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".

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

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 2020	FY 2019
Income from companies recognised at equity	21,504	25,332
Income from other shareholdings	– 106	1,229
Expenses/income from sales of financial assets	2,669	– 2,961
	24,067	**23,600**

9. Depreciation and amortisation

Depreciation and amortisation

Euro 000s	FY 2020	FY 2019
Depreciation	206,997	183,493
of which impairment losses	2,161	–

10. Financing income

Financing income

Euro 000s	FY 2020	FY 2019
Interest income from finance leases	3,961	3,540
Income from currency translation in connection with financing activities	3,371	10,579
Income from IFRS 9 measurement	1,254	1,445
Interest income from current account, overnight and fixed-term deposits	901	1,052
Other interest and similar income	2,837	4,894
	12,324	**21,510**

11. Financing expenses

Financing expenses

Euro 000s	FY 2020	FY 2019
Interest expenses from current account, non-current and current loans [1]	40,462	45,053
Expenses from currency translation in connection with financing activities	9,737	10,000
Expenses for IFRS 9 measurement	1,466	742
Compounding of provisions	578	10,990
Other interest and similar expenses [1]	8,433	7,796
	60,676	**74,581**

1 Previous year's figures reclassified

The other interest and similar expenses were reduced by Euro 628 thousand as a result of the capitalisation of borrowing interest (previous year: Euro 3,558 thousand). The financing cost rate thereby assumed ranged from 1.1 % to 2.5 % in the financial year under report and from 1.4 % 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 2020	FY 2019
Actual taxes	48,405	54,803
Deferred taxes	– 1,455	– 18,648
	46,950	**36,155**

Current tax expenses comprise trade tax 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 income is due on the one hand to tax expenses of Euro 12,454 thousand (previous year: Euro 1,650 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, as well as to deferred tax income of Euro 13,909 thousand (previous year: Euro 20,298 thousand) attributable to the arising and/or reversal of temporary differences.

Actual tax expenses were reduced by Euro 10,522 thousand by using tax losses not previously recognised (previous year: Euro 5,646 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 2020**	FY 2019
Earnings before taxes (EBT)	**161,142**	**112,414**
Expected tax expenses based on tax rate of 30.3 % (previous year: 30.3 %)	**48,826**	**34,061**
Deviations resulting from trade tax assessment base	1,171	1,216
Deviations from expected tax rate	– 5,071	– 4,884
Utilisation of losses carried forward, change in write-down for losses and losses for which no deferred taxes are recognised	12,447	1,716
Non-deductible expenses	10,380	8,298
Tax-exempt income	– 12,856	– 7,098
Income from shareholdings recognised at equity	– 3,299	– 4,113
Permanent differences	4,913	5,248
Taxes for previous years	– 13,223	1,225
Goodwill impairments	2,517	–
Miscellaneous	1,145	486
Effective tax expenses	**46,950**	**36,155**
Effective tax rate (%)	**29.1**	**32.2**

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 2020	FY 2019
Share of earnings attributable to MVV Energie AG shareholders (Euro 000s)	93,901	45,983
Number of shares (weighted average in 000s)	65,907	65,907
Earnings per share (Euro)	1.42	0.70
Dividend per share (Euro)	0.95	0.90

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 2019 financial year were accepted by the Annual General Meeting on 13 March 2020. A dividend of Euro 59,316 thousand was distributed.

Given the company’s earnings performance, the Executive Board has decided to propose an increase in the dividend of Euro 0.05 per share to Euro 0.95 per share for approval by the Annual General Meeting on 12 March 2021. This would result in a distribution of Euro 62,611 thousand. The Supervisory Board will decide in December 2020 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 came to Euro 803 thousand in the 2020 financial year (previous year: Euro 575 thousand). Development expenses capitalised under IAS 38 came to Euro 257 thousand (previous year: Euro 334 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 2020 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 4.3 % to 10.2 % before taxes (previous year: 5.3 % to 11.5 %). 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 % mostly 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 between 12.5 % and 16.2 %. An increase in the discount rate by + 0.5 % lowers the recoverable amount by between 10.0 % and 12.3 %.

The carrying amounts stated for goodwill are structured as follows:

Goodwill carrying amounts

Euro 000s	30 Sep 2020	30 Sep 2019
Juwi subgroup	74,970	74,970
Energieversorgung Offenbach subgroup	75,894	75,894
MVV Enamic subgroup	36,233	44,535
Windwärts subgroup	3,910	3,910
MVV Energie CZ subgroup	5,885	6,257
MVV Umwelt subgroup	3,080	3,080
Other subgroups	3,023	552
	202,995	**209,198**

The increase in goodwill referring to other subgroups was due to the acquisition by MVV Trading GmbH of 100 % of the shares in EnDaNet GmbH in the 1st quarter of the 2020 financial year. The goodwill thereby arising at MVV Trading GmbH amounts to Euro 3,130 thousand. The share of goodwill attributable to MVV comes to Euro 2,471 thousand.

The write-down of goodwill at the MVV Enamic subgroup was primarily due to the reduction in earnings prospects resulting from slower developments in demand for energy efficiency solutions at the cash generating units. In the impairment test, the value in use was taken as the recoverable amount and compared with the carrying amount of the MVV Enamic subgroup, which is allocated to the Customer Solutions reporting segment. The future value in use was determined using a discount rate of 4.9 % after taxes.

Intangible assets

Euro 000s	Concessions, industrial property rights and similar rights and values	Goodwill	Advance payments	**Total**
Gross value at 1 October 2018	347,649	243,329	6,324	597,302
Change in scope of consolidation	1,546	12,452	–	13,998
Currency adjustments	36	– 31	–	5
Additions	3,558	–	4,438	7,996
Disposals	– 19,287	–	–	– 19,287
Reclassifications	2,383	–	– 2,440	– 57
Gross value at 30 September 2019	**335,885**	**255,750**	**8,322**	**599,957**
Amortisation at 1 October 2018	– 234,819	– 46,560	–	– 281,379
Change in scope of consolidation	2,839	–	–	2,839
Currency adjustments	3	8	–	11
Scheduled amortisation	– 14,152	–	–	– 14,152
Disposals	2,221	–	–	2,221
Reclassifications	– 3	–	–	– 3
Amortisation at 30 September 2019	**– 243,911**	**– 46,552**	**–**	**– 290,463**
Net value at 30 September 2019	**91,974**	**209,198**	**8,322**	**309,494**
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**

15. Property, plant and equipment

Property, plant and equipment

Euro 000s	Land, leasehold rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other assets, plant and operating equipment	Advance payments and construction in progress	**Total**
Gross value at 1 October 2018	890,453	4,540,024	178,896	315,121	5,924,494
Change in scope of consolidation	1,679	– 2,497	314	100	– 404
Currency adjustments	– 124	– 23	54	– 40	– 133
Additions	3,724	40,285	6,993	210,832	261,834
Subsidy payments received	– 620	– 4,171	– 11	– 514	– 5,316
Disposals	– 2,100	– 21,800	– 3,671	– 898	– 28,469
Reclassifications	7,827	42,097	1,212	– 51,079	57
Gross value at 30 September 2019	**900,839**	**4,593,915**	**183,787**	**473,522**	**6,152,063**
Depreciation at 1 October 2018	– 440,828	– 2,817,330	– 132,887	– 79	– 3,391,124
Change in scope of consolidation	217	1,429	2,299	–	3,945
Currency adjustments	154	329	– 29	–	454
Scheduled depreciation	– 21,141	– 123,129	– 9,730	–	– 154,000
Write-ups	–	652	96	–	748
Disposals	1,747	16,645	3,390	–	21,782
Reclassifications	60	42	– 96	– 3	3
Depreciation at 30 September 2019	**– 459,791**	**– 2,921,362**	**– 136,957**	**– 82**	**– 3,518,192**
Net value at 30 September 2019	**441,048**	**1,672,553**	**46,830**	**473,440**	**2,633,871**
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**

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 million (previous year: Euro 43 million) has been provided as security for financial debt. This involves land and buildings, technical equipment and machinery. Property, plant and equipment of Euro 101 million is subject to restrictions on disposal (previous year: Euro 110 million).

Subsidy payments received involve government grants received in the 2020 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.

In addition to the construction of a gas-fired CHP plant in Kiel, the largest additions to advance payments and construction in progress in the 2020 financial year involved the connection of a waste-fired CHP plant to the district heating grid in Mannheim and the construction of an energy from waste plant in the UK. Advance payments account for an immaterial share of advance payments and construction.

The impairment losses arising in the 2020 financial year were primarily due to the development in earnings at individual cash generating units. The earnings strength of three biogas plants in the Customer Solutions segment is lower than originally assessed. The management saw this as indicating a need to perform impairment tests on these cash generating units. The future values in use were determined using a discount rate of 4.9 % after taxes.

The income from write-ups recognised in the 2020 financial year was due to the fact that the reasons for a historic impairment no longer applied. The earnings strength of a cash generating unit in the Customer Solutions segment developed better than originally assessed. The management saw this as indicating a need to perform an impairment test on this cash generating unit. This confirmed the increased earnings strength. The future values in use were determined using a discount rate of 4.9 % after taxes.

16. Leases as lessee

The development in right-of-use assets recognised in connection with leased items is presented in the table below:

Right-of-use assets

Euro 000s	Land and buildings	IT hardware and software	Vehicles	Technical equipment and machinery	Plant and office equipment	Other leased items	**Total**
Opening balance at 1 October 2019	107,305	947	3,440	37,655	7	460	149,814
Depreciation and amortisation	– 10,711	– 521	– 2,592	– 3,172	– 26	– 188	– 17,210
Impairment losses	– 99	–	–	–	–	–	– 99
Additions	14,494	174	3,580	2,465	52	40	20,805
Other changes	6,001	–	– 37	– 10,129	–	– 1	– 4,166
Closing balance at 30 September 2020	**116,990**	**600**	**4,391**	**26,819**	**33**	**311**	**149,144**

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 2020**	FY 2019
Interest expenses for lease liabilities	4,289	4,470
Outflow of cash for leases	16,036	15,562
Expenses for short-term leases	1,309	2,633
Expenses for low-value leases	509	570
Expenses for variable lease payments	311	367
Income from sub-lease arrangements	308	719

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 32 thousand in the 2020 financial year (previous year: Euro 34 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 2020**	FY 2019
Gross value at 1 October	2,606	2,451
Currency adjustments	– 182	155
Gross value at 30 September	**2,424**	**2,606**
Depreciation at 1 October	–	–
Depreciation at 30 September	–	–
Net value at 30 September	**2,424**	**2,606**

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	585,404	754,058	188,633	191,626
Scheduled depreciation and amortisation	104,230	– 98,036	– 14,450	– 13,953
Interest income	2	–	639	92
Interest expenses	– 46,670	– 52,705	– 897	– 1,009
Income tax expenses/income	– 11,291	– 7,212	– 6,967	– 7,639
Annual net income	26,659	39,691	16,634	19,593
Other income and expenses	– 64,618	– 3,603	128	– 337
Total comprehensive income for period	**– 37,959**	**36,088**	**16,762**	**19,256**
Dividends received from material joint ventures	–	–	8,576	8,883

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	**1,887,580**	**2,001,398**	**273,803**	**269,923**
Non-current assets	1,656,133	1,723,518	236,566	234,275
Current assets	231,447	277,880	37,237	35,648
of which cash and cash equivalents	7,028	1,298	963	877
Equity and debt	**1,887,580**	**2,001,398**	**273,803**	**269,923**
Equity	114,158	152,117	65,731	66,689
Non-current provisions	723,956	632,599	6,517	6,697
Non-current debt and other liability items	727,626	893,510	83,807	96,067
of which non-current financial debt	668,500	830,000	18,747	22,050
Current provisions	150,521	187,526	60	124
Current debt and other liability items	171,319	135,646	117,688	100,346
of which current financial debt	150,403	99,621	87,698	80,406

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	152,117	116,029	66,689	65,787
Profit/loss for period	26,659	39,691	16,634	19,593
Distribution	–	–	– 17,720	– 18,354
Other income and expenses	– 64,618	– 3,603	128	– 337
Net assets at 30 September	**114,158**	**152,117**	**65,731**	**66,689**
Group share of net assets	31,964	42,593	31,814	32,277
Other items	1,897	1,897	– 154	– 154
Goodwill			53,759	53,759
Carrying amount of interest in joint ventures	**33,861**	**44,490**	**85,419**	**85,882**

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 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	5,369	12,469
Other income and expenses	– 360	–
Total comprehensive income for period	5,009	12,469
Carrying amount of interest in non-material joint ventures	**58,835**	**45,416**

19. Associates

The aggregate profits, total comprehensive income and carrying amounts of non-material associates are presented in the following table:

Summarised key financial figures for non-material associates

Euro 000s	Financial year	Previous year
Profit/loss for period	3,007	1,743
Total comprehensive income for period	3,007	1,743
Carrying amount of interest in non-material joint ventures	**14,216**	**13,028**

The income from shareholdings collected by MVV from associates amounted to Euro 230 thousand in the 2020 financial year (previous year: Euro 53 thousand).

MVV's share of the contingent liabilities at associates amounted to Euro 1,690 thousand (previous year: Euro 1,775 thousand).

20. Subsidiaries with non-controlling interests of material significance to the Group

Given their size and their 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 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019
Sales excluding energy taxes	354,896	341,420
Annual net income	11,380	5,361
Other income and expenses	– 8,411	– 3,784
Total comprehensive income for period	**2,969**	**1,577**
Total comprehensive income attributable to non-controlling interests	1,484	788
Dividends paid (to non-controlling shareholders)	6,633	5,468

Statement of comprehensive income for non-controlled interests in Stadtwerke Kiel AG

Euro 000s	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019
Sales excluding energy taxes	712,670	614,123
Annual net income	25,936	– 6,036
Other income and expenses	1,375	– 4,882
Total comprehensive income for period	**27,311**	**– 10,918**
Total comprehensive income attributable to non-controlling interests	13,382	– 5,350
Dividends paid (to non-controlling shareholders)	6,270	9,316

Further key financial figures for non-controlled interests in Energieversorgung Offenbach AG

Euro 000s	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019
Assets	**415,889**	**374,889**
Non-current assets	333,301	299,474
Current assets	82,588	75,415
of which cash and cash equivalents	21,892	13,871
Equity and debt	**415,889**	**374,889**
Equity	139,056	149,354
Non-current provisions	32,487	37,909
Non-current debt and other liability items	163,554	134,822
of which non-current financial debt	130,227	111,021
Current provisions	4,932	6,815
Current debt and other liability items	75,860	45,989
of which current financial debt	7,815	1,858

Further key financial figures for non-controlled interests in Stadtwerke Kiel AG

Euro 000s	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019
Assets	**711,181**	**709,318**
Non-current assets	656,770	633,435
Current assets	54,411	75,883
of which cash and cash equivalents	1,976	13,648
Equity and debt	**711,181**	**709,318**
Equity	224,105	209,590
Non-current provisions	32,774	25,802
Non-current debt and other liability items	299,617	327,713
of which non-current financial debt	263,626	289,063
Current provisions	15,343	8,847
Current debt and other liability items	139,342	137,366
of which current financial debt	56,621	57,545

Total non-controlled interests in subsidiaries amounted to Euro 215,162 thousand in the period under report, of which Euro 109,543 thousand related to Stadtwerke Kiel AG, Kiel, Euro 50,737 thousand to Energieversorgung Offenbach AG, Offenbach am Main, and Euro 54,882 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 "Financing income" (Note 35).

Other financial assets comprise other majority shareholdings, other shareholdings, receivables in connection with 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. These items are adjusted when necessary if cash flows fall short of expectations or default risks materialise. 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 4.8 % (previous year: 4.4 %). The average period for which interest rates remain fixed amounts to 2.1 years in the case of fixed-interest loans (previous year: 4.4 years) and 6.5 years in the case of finance leases (previous year: 6.2 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 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 2020**	30 Sep 2019
Minimum lease payments with maturities < 1 year	13,909	12,432
Minimum lease payments with maturities > 1 year and < 5 years	44,550	44,275
of which minimum lease payments with maturities > 1 year and < 2 years	13,785	12,791
of which minimum lease payments with maturities > 2 years and < 3 years	10,110	11,678
of which minimum lease payments with maturities > 3 years and < 4 years	10,332	10,259
of which minimum lease payments with maturities > 4 years and < 5 years	10,323	9,547
Minimum lease payments with maturities > 5 years	32,297	31,838
Total minimum lease payments	**90,756**	**88,545**
Less financing income not yet realised	– 18,657	– 15,663
Net investments in finance leases	**72,099**	**72,882**

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 2020**	FY 2019
Financing income from net investment in lease	3,961	3,540
Profit/loss on sale	91	64

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 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Financial receivables and assets						
Derivative financial instruments	81,246	367,308	448,554	54,416	266,113	320,529
Receivables from security deposits for energy trading transactions	–	21,763	21,763	–	14,088	14,088
Receivables in connection with finance leases	–	10,476	10,476	–	9,293	9,293
Suppliers with debit balances	–	7,730	7,730	–	3,957	3,957
Loans	–	1,245	1,245	–	6,378	6,378
Receivables from employees	–	269	269	–	352	352
Escrow accounts	–	35	35	–	35	35
Miscellaneous other financial assets	6,752	18,346	25,098	4,411	7,958	12,369
Non-financial receivables and assets						
Project development contract assets	–	6,019	6,019	–	64,119	64,119
Other contract assets	3,098	49,411	52,509	3,308	408	3,716
Other tax receivables	–	66,893	66,893	–	52,393	52,393
Deferred expenses and accrued income	6,250	7,422	13,672	3,024	13,217	16,241
Emission rights	–	2,462	2,462	–	113	113
Miscellaneous other non-financial assets	4,568	4,223	8,791	5,768	3,114	8,882
	101,914	**563,602**	**665,516**	**70,927**	**441,538**	**512,465**

Derivative financial instruments (financial receivables and assets)

	30 September 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	81,246	367,308	448,554	54,416	266,113	320,529
of which without IFRS 9 hedges	52,935	295,415	348,350	34,066	231,876	265,942
of which with IFRS 9 hedges	28,311	71,893	100,204	20,350	34,237	54,587

Derivative financial instruments increased in value compared with the previous year. This was due in particular to more substantial 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 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.

Miscellaneous other financial assets rose by Euro 12,729 thousand in the financial year under report. This line item mainly includes a receivable due from a shareholding and a receivable due from a transmission grid operator.

Due to the settlement of completed projects, project development contract assets showed a significant reduction of Euro 58,100 thousand. By contrast, other contract assets rose by Euro 48,793 thousand, with this increase being 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 6,245 thousand for the past extension and renewal of infrastructure assets at the two British power plants. 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 acquisitions costs pursuant to IFRS 15

Euro 000s	**FY 2020**	FY 2019
Balance at 1 October	444	–
Balance at 30 September	1,071	444

Other receivables and assets

	30 September 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Other receivables and assets						
from third parties	101,120	509,809	610,929	70,311	434,114	504,425
from other majority shareholdings	–	919	919	–	1,211	1,211
from companies recognised at equity	794	52,857	53,651	616	6,196	6,812
from other shareholdings	–	17	17	–	17	17
	101,914	**563,602**	**665,516**	**70,927**	**441,538**	**512,465**

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 parties. These involve margins. To reduce these counterparty risks, payments are made to the European Energy Exchange (EEX). These are included in the receivables from security deposits for energy trading transactions line item. Receivables from security deposits increased year-on-year to Euro 21,763 thousand (previous year: Euro 14,088 thousand).

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

Contract assets

Euro 000s	**FY 2020**	FY 2019
Balance at 1 October	67,835	21,048
Balance at 30 September	58,528	67,835

23. Inventories

Inventories

Euro 000s	**30 Sep 2020**	30 Sep 2019
Raw materials and supplies	91,247	48,229
Finished and unfinished products and services (project rights)	44,437	44,517
Finished and unfinished products and services (other) and merchandise	48,038	47,401
Advance payments	7,137	33,663
Commodity trading assets	7,881	5,264
	198,740	**179,074**

Write-downs of Euro 1,695 thousand were recognised for inventories (previous year: Euro 698 thousand). Write-ups of Euro 1,475 thousand were included due to higher net disposal prices (previous year: Euro 2,168 thousand).

The commodity trading assets item includes inventories relating to special gas storage transactions.

24. Trade receivables

Trade receivables

Euro 000s	**30 Sep 2020**	30 Sep 2019
Trade receivables	332,939	365,038
of which due from other majority shareholdings	238	110
of which due from companies recognised at equity	15,081	17,550
of which due from other shareholdings	387	1,470

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 comprise receivables recognised under IFRS 15.

The write-downs and maturity structures for trade receivables have been presented under Note 35.

25. Income tax receivables

The income tax receivables of Euro 28,465 thousand (previous year: Euro 15,156 thousand) mainly relate to corporate income tax and trade tax refund claims. These have been recognised at nominal value.

The increase in income tax receivables is mainly due to one-off corporate income tax receivables at Juwi Inc., which resulted from legislative amendments in the USA, as well as to higher income tax receivables in Germany.

26. Cash and cash equivalents

Cash and cash equivalents predominantly comprise credit balances at banks. The acquisition of fully consolidated companies and other business units resulted in the addition of cash and cash equivalents of Euro 1,595 thousand (previous year: Euro 1,795 thousand). The disposal of fully consolidated companies and other business units led to the retirement of cash and cash equivalents of Euro 198 thousand (previous year: Euro 1,774 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 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 2020, while FS DE Energy GmbH held 45.68 % of the shares. The remaining 4.22 % 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 8,185 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 38,378 thousand).

28. Provisions

Provisions

Euro 000s	Balance at 1 Oct 2019	Change in scope of consolida-tion	Currency adjustments	Utilised	Reserved	Added	Reclassified	Interest component	**Balance at 30 Sep 2020**
Non-current provisions									
Pensions and similar obligations	**103,807**	**–**	**–**	**– 2,681**		**– 1,243**	**–**	**375**	**100,258**
Tax provisions	**7**	**–**	**–**	**–**	**–**	**–**	**– 7**	**–**	**–**
Other provisions									–
Personnel-related obligations	44,583	– 1,101	– 12	– 1,535	– 41	2,051	– 4,361	125	39,709
Refurbishment, dismantling and warranty obligations	36,957	–	– 59	– 370	– 327	8,973	– 2,107	1	43,068
Provisions for litigation and contract risks	1,183	–	–	– 205	– 331	379	– 14	–	1,012
Miscellaneous contingencies	25,319	–	–	– 1,235	– 5,211	5,422	–	77	24,372
Total other provisions	**108,042**	**– 1,101**	**– 71**	**– 3,345**	**– 5,910**	**16,825**	**– 6,482**	**203**	**108,161**
Total non-current provisions	**211,856**	**– 1,101**	**– 71**	**– 6,026**	**– 5,910**	**15,582**	**– 6,489**	**578**	**208,419**
									–
Current provisions									**–**
Tax provisions	**33,816**	**–**	**– 65**	**– 17,865**	**– 3,081**	**14,639**	**– 26,185**	**–**	**1,259**
Other provisions									–
Personnel-related obligations	42,977	139	– 227	– 37,104	– 2,083	32,644	4,361	–	40,707
Services not yet invoiced	54,973	–	– 125	– 47,909	– 2,183	38,819	–	–	43,575
Refurbishment, dismantling and warranty obligations	20,243	–	– 1,139	– 2,858	– 2,584	2,940	2,107	–	18,709
Provisions for litigation and contract risks	3,143	–	– 45	– 700	– 298	1,911	14	–	4,025
Miscellaneous contingencies	30,995	165	83	– 14,558	– 4,605	8,807	–	–	20,887
Total other provisions	**152,331**	**304**	**– 1,453**	**– 103,129**	**– 11,753**	**85,121**	**6,482**	**–**	**127,903**
Total current provisions	**186,147**	**304**	**– 1,518**	**– 120,994**	**– 14,834**	**99,760**	**– 19,703**	**–**	**129,162**
									–
Total provisions	**398,003**	**– 797**	**– 1,589**	**– 127,020**	**– 20,744**	**115,342**	**– 26,192**	**578**	**337,581**

Provisions broken down by maturity

	30 September 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Provisions for pensions and similar obligations	100,258	–	100,258	103,807	–	103,807
Tax provisions	–	1,259	1,259	7	33,816	33,823
Personnel-related obligations	39,709	40,707	80,416	44,583	42,977	87,560
Services not yet invoiced	–	43,575	43,575	–	54,973	54,973
Refurbishment, dismantling and warranty obligations	43,068	18,709	61,777	36,957	20,243	57,200
Provisions for litigation and contract risks	1,012	4,025	5,037	1,183	3,143	4,326
Miscellaneous contingencies	24,372	20,887	45,259	25,319	30,995	56,314
	208,419	**129,162**	**337,581**	**211,856**	**186,147**	**398,003**

MVV reviewed its tax provisions in the 2020 financial year to account for the "Decision on presentation of uncertain tax liabilities (or assets)" of the IFRS IC on 25 September 2019. In this context, income tax items of Euro 26,192 thousand were reclassified out of tax provisions not meeting the requirements of IFRIC 23 to tax liabilities. In future, all income tax items for which a tax assessment notice has been received will be presented under tax liabilities in the balance sheet. Provisions will only be stated for uncertain income tax items in cases where the fiscal authorities are unlikely to recognise the respective item.

Tax provisions include other provisions for energy and valued added taxes as of the reporting date.

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 obligations and warranties 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 here 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 and provisions for risks associated with a price adjustment clause.

The provisions recognised are utilised in line 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 0.6 %. 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 pensions and similar obligations

The company pension plans consist of defined contribution and defined benefit plans.

The pension scheme for MVV employees is largely arranged in line with collective wage and salary agreements specific to the respective companies. This results in indirect pension obligations to employees which are covered almost exclusively by municipal supplementary pension companies (ZVKs). This requires allocations to be made for retirement periods. The payments made in this context serve to finance current pension outlays. According to IFRS requirements, this type of pension plan represents a defined benefit plan, as the individual benefits provided by the ZVKs to former employees of member companies are not dependent on the level of contributions paid into the pension funds. Moreover, as the employees of several member companies are insured by the ZVKs, this type of pension plan is considered a multi-employer plan and thus requires the application of special regulations.

Given the redistribution of the benefits provided by ZVKs among member companies and the lack of adequate information about the age structures, personnel turnover rate and salaries of the employees thereby covered, no data is available on the proportion of future payment obligations (economic obligation) accruing to MVV. In view of this, IFRS does not permit recognition of provisions and the amounts therefore have to be treated by MVV as a defined contribution obligation, even though it is actually a defined benefit pension plan. Contributions to the pension plan are measured as a percentage of remuneration subject to the additional pension premium and are borne by employees and employers. The percentage rate of contribution is determined by the ZVKs. MVV expects contributions in the 2021 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 31,603 thousand were made into the state pension systems in the 2020 financial year (previous year: Euro 30,303 thousand). Moreover, an amount of Euro 15,749 thousand was paid into defined contribution pension schemes (previous year: Euro 15,259 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 pension and similar obligations are recognised exclusively for defined benefit plans.

The principal estimates used when measuring provisions for pensions and similar obligations relate in particular to 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.

Consistent with the relevant accounting requirements, the yield on high-quality corporate bonds with congruent terms is referred to when determining the discount rate for future payment obligations for pensions, perquisites and compensation payments. For the euro area, the selection of underlying corporate bonds so far used to determine the discount rate was refined as of 30 September 2020. This has resulted in the more accurate exclusion of those corporate bonds whose yield/risk profiles basically correspond to those of government bonds.

The discount rate calculated on this basis amounted to 0.6 % as of 30 September 2020 (previous year: 0.3 %). Without the aforementioned adjustment, this would have been 0.4 % lower. Using the new procedure, the provision for pension obligations came to Euro 102,258 thousand as of 30 September 2020. Based on a discount rate of 0.2 %, the pension obligations in the euro area would have been around Euro 5,614 thousand higher. The differential amount has been treated as a change in accounting estimate pursuant to IAS 8 and recognised in equity in the statement of comprehensive income.

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 2020:

Parameter

	FY 2020	FY 2019
Discount rate	0.6 %	0.3 %
Future pay rises	2.0-2.5 %	2.1-3.0 %
Future pension increases	1.6-3.0 %	1.6-2.0 %

The expenses for these pensions and similar obligations structured as defined benefit plans comprise the following items:

Pension provision expenses

Euro 000s	**FY 2020**	FY 2019
Service cost	3,491	2,075
Interest expenses	375	1,598
	3,866	3,673

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 2020			30 September 2019		
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	104,521	714	103,807	78,199	648	77,551
Current service cost	3,491	–	3,491	2,075	–	2,075
Interest expenses (interest income)	375	–	375	1,598	14	1,584
Remeasurement						
(i) Income from plan assets (excluding amounts included in interest income from plan assets)	–	2	– 2	–	4	– 4
(ii) Actuarial gains/losses						
of which due to changes in financial assumptions	– 3,891	40	– 3,931	26,357	48	26,309
of which due to changes in demographic assumptions	12	–	12	280	–	280
of which due to changes in experience adjustments	– 849	–	– 849	– 2,437	–	– 2,437
Payments made to beneficiaries	– 2,680	–	– 2,680	– 2,675	–	– 2,675
Employer contributions	11	– 24	35	–	–	–
Change in scope of consolidation	–	–	–	1,124	–	1,124
Balance at 30 September	**100,990**	**732**	**100,258**	**104,521**	**714**	**103,807**

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 provision

Euro 000s	**FY 2020**	FY 2019
Present value of defined benefit obligation	100,990	104,521
Fair value of plan assets	732	714
Provisions recognised at 30 September	**100,258**	**103,807**

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 2020**	FY 2019
Accumulated actuarial gains (+) and losses (-) recognised in equity at 1 October	– 26,693	– 12,942
Actuarial gains (+) and losses (-) recognised in equity	2,370	– 13,751
Accumulated actuarial gains (+) and losses (-) recognised in equity at 30 September	**– 24,323**	**– 26,693**

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 3,335 thousand are forecast for existing pension obligations for the 2021 financial year.

In the financial year, use was made of a discount rate appropriate to the expected weighted remaining term of 17 years.

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

Expected pension payments

Euro 000s	
2021	3,335
2022	4,522
2023	3,349
2024	3,436
2025	6,824
>2025	80,401
	101,867

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 8 %	Increase by 9 %
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

	30 September 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liabilities						
to banks	1,408,149	107,017	1,515,166	1,380,470	107,432	1,487,902
in connection with leases	125,744	15,203	140,947	120,840	18,494	139,334
to other majority shareholdings	–	742	742	–	557	557
to companies recognised at equity	–	36,581	36,581	–	36,581	36,581
to other shareholdings	–	–	–	–	830	830
Other financial debt	19,275	3,980	23,255	32,227	4,738	36,965
	1,553,168	**163,523**	**1,716,691**	**1,533,537**	**168,632**	**1,702,169**

Maturity in years

	30 September 2020			30 September 2019		
Euro 000s	**< 1 year**	**1 - 5 years**	**> 5 years**	< 1 year	1 - 5 years	> 5 years
Liabilities						
to banks	107,017	715,230	692,919	107,432	680,870	699,599
in connection with leases	15,203	44,076	81,668	18,494	120,840	–
to other majority shareholdings, companies recognised at equity and other shareholdings	37,323	–	–	37,968	–	–
Other financial debt	3,980	8,051	11,224	4,738	21,003	11,225
	163,523	**767,357**	**785,811**	**168,632**	**822,713**	**710,824**

The fixed-rate liabilities to banks of Euro 1,002 million (previous year: Euro 1,036 million) have an average interest rate of 2.0 % (previous year: 2.4 %), while the floating-rate liabilities to banks of Euro 513 million (previous year: Euro 452 million) have an average interest rate of 1.8 % (previous year: 2.0 %). This interest rate is influenced by foreign currency liabilities with higher rates. The average remaining period for which the rate remains fixed in the case of fixed-rate liabilities amounts to seven years (previous year: nine years). The floating-rate liabilities to banks are hedged.

At 30 September 2020, MVV had undrawn committed credit lines of Euro 1,139 million (previous year: Euro 699 million).

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 in the tables below. The hedging 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 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Other financial liabilities						
Derivative financial instruments	129,085	368,796	497,881	72,908	259,655	332,563
Liabilities to employees	–	27,770	27,770	–	26,251	26,251
Customer credit balances	–	6,556	6,556	–	11,514	11,514
Interest liabilities	–	6,875	6,875	–	6,087	6,087
Liabilities for security deposits for energy trading transactions	–	–	–	–	687	687
Concession duties	–	2,521	2,521	–	2,607	2,607
Social security liabilities	–	727	727	–	693	693
Miscellaneous other financial liabilities	30,232	41,569	71,801	27,633	37,924	65,557
Other non-financial liabilities						
Contract liabilities for advance payments received	–	72,699	72,699	–	26,720	26,720
Contract liabilities for building cost grants	109,734	7,394	117,128	96,239	6,913	103,152
Other contract liabilities	15,578	5,645	21,223	17,920	4,355	22,275
Liabilities for other taxes	–	102,756	102,756	–	67,187	67,187
Miscellaneous other non-financial liabilities	5,517	5,939	11,456	5,794	10,417	16,211
	290,146	**649,247**	**939,393**	**220,494**	**461,010**	**681,504**

Other liabilities

	30 September 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liabilities	290,146	576,548	866,694	220,494	434,290	654,784
of which to companies recognised at equity	999	92,570	93,569	862	4,264	5,126
Advance payments received for orders	–	72,699	72,699	–	26,720	26,720
	290,146	**649,247**	**939,393**	**220,494**	**461,010**	**681,504**

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 2020			30 September 2019		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	129,085	368,796	497,881	72,908	259,655	332,563
of which without IFRS 9 hedges	52,642	289,477	342,119	22,488	217,505	239,993
of which with IFRS 9 hedges	76,443	79,319	155,762	50,420	42,150	92,570

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 (Intercontinental Exchange). No liabilities were recognised for security deposits for energy trading transactions as of the balance sheet date on 30 September 2020 (previous year: Euro 687 thousand).

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

Non-financial liabilities for other taxes chiefly include value added tax and energy tax liabilities.

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

Contract liabilities

Euro 000s	**FY 2020**	FY 2019
Balance at 1 October	152,147	156,061
Balance at 30 September	**211,050**	**152,147**

Contract liabilities showed a significant year-on-year increase as of 30 September 2020. This was due to contract liabilities in connection with advance payments made to a subsidiary acting as the general contractor for the construction of two data centres.

MVV expects that, of the transaction price allocated to unsatisfied performance obligations as of 30 September 2020, an amount of Euro 85,737 thousand (previous year: Euro 37,988 thousand) will be recognised as revenues in the next reporting period. The remaining amount of Euro 125,311 thousand (previous year: Euro 114,159 thousand) will be recognised in subsequent financial years.

32. Trade payables

Trade payables

Euro 000s	**30 Sep 2020**	30 Sep 2019
Trade payables	336,752	361,609
to other majority shareholdings	190	62
to companies recognised at equity	12,229	14,135
to other shareholdings	10	3

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 26,405 thousand (previous year: Euro 184 thousand).

In the 2020 financial year, income tax items amounting to Euro 26,192 thousand were reclassified from tax provisions not meeting the requirements of IFRIC 23 to tax liabilities. Further information can be found in Note 29 "Provisions".

The deferred taxes reported for the 2020 financial year relate to the following items:

Deferred taxes

	30 September 2020		30 September 2019	
Euro 000s	**Deferred tax assets**	**Deferred tax liabilities**	Deferred tax assets	Deferred tax liabilities
Intangible assets	3,077	– 13,416	4,152	– 14,283
Property, plant and equipment, including investment properties	20,760	– 180,319	19,182	– 170,008
Right-of-use assets	–	– 39,513	–	– 40,096
Inventories	9,067	– 3,854	14,543	– 3,722
Special item	–	– 9,870	–	– 5,997
Other assets and positive fair values of derivatives	13,250	– 200,933	8,262	– 177,628
Provisions for pensions	18,672	–	20,941	–
Non-current other provisions	25,806	–	25,969	–
Current other provisions	5,143	– 16,354	7,333	– 14,182
Liabilities and negative fair values of derivatives	210,456	– 20,607	168,268	– 20,071
Lease liabilities	37,204	–	37,395	–
Losses carried forward	31,575	–	25,849	–
Deferred taxes (gross)	375,010	– 484,866	331,894	– 445,987
Netting	– 344,666	344,666	– 302,526	302,526
Deferred taxes (net)	**30,344**	**– 140,200**	**29,368**	**– 143,461**

Of the (net) deferred taxes presented above, Euro 15,089 thousand (previous year: Euro 14,952 thousand) relate to non-current deferred tax assets and Euro 89,477 thousand (previous year: Euro 93,427 thousand) to non-current deferred tax liabilities.

No deferred tax assets have been recognised for corporate income tax loss carryovers of Euro 109,814 thousand (previous year: Euro 95,962 thousand), trade tax loss carryovers of Euro 89,110 thousand (previous year: Euro 88,826 thousand) or foreign loss carryovers of Euro 90,474 thousand (previous year: Euro 162,616 thousand).

For temporary differences of Euro 11,525 thousand at shareholdings (previous year: Euro 12,876 thousand), no deferred tax liabilities have been stated for an amount of Euro 3,492 thousand (previous year: Euro 3,901 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 4,442 thousand (previous year: Euro 6,460 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 25,045 thousand were recognised directly in other comprehensive income as part of group equity in the 2020 financial year (previous year: Euro 21,873 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 2020		30 September 2019	
Euro 000s	**Income tax**	**Gross**	Income tax	Gross
Actuarial gains and losses	– 1,450	4,767	6,561	– 24,152
Share of total comprehensive income attributable to companies recognised at equity	–	– 18,217	–	– 1,353
Items that will not be reclassified to profit or loss	**– 1,450**	**– 13,450**	**6,561**	**– 25,505**
Cash flow hedges/hedging costs	4,622	– 18,566	16,800	– 63,778
Currency translation differences	–	– 10,030	–	3,888
Share of total comprehensive income attributable to companies recognised at equity	–	– 366	–	364
Items that will be reclassified to profit or loss	**4,622**	**– 28,962**	**16,800**	**– 59,526**

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 8.4 million). It has obligations of this nature in the form of guarantees amounting to Euro 13.3 million (previous year: Euro 13.1 million). As in the previous year, no collateral has been provided for third-party liabilities.

MVV has purchase commitments of Euro 65.7 million in connection with investment orders placed and financial obligations (previous year: Euro 68.4 million).

The Group has a contingent claim from the State of Baden-Württemberg and the City of Mannheim in connection with a land decontamination measure. This claim has a present value of Euro 2.7 million.

35. Financial instruments

Fair values and carrying amounts of financial instruments

The carrying amounts and fair values of financial instruments recognised at MVV and their allocation to 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 at 30 September 2020

Euro 000s	IFRS 9 measurement category	Carrying amounts	of which not within scope of IFRS7	Fair values
Assets				
Financial assets				
of which other shareholdings	Fair value through profit or loss	5,575	–	5,575
of which other shareholdings	Not applicable	1,371	1,371	–
of which loans excluding finance leases	Amortised cost	10,195	–	10,195
of which loans in connection with finance leases	Not applicable	72,099	–	72,099
Trade receivables < 1 year	Amortised cost	332,939	–	332,939
Other assets				
of which derivatives outside hedge accounting	Fair value through profit or loss	348,350	–	348,350
of which derivatives within hedge accounting	Not applicable	100,204	–	100,204
of which other financial assets	Amortised cost	54,895	–	54,895
of which contract assets	Not applicable	58,528	–	58,528
Cash and cash equivalents	Amortised cost	343,175	–	343,175
		1,327,331	**1,371**	**1,325,960**
Debt				
Financial debt				
of which financial debt in connection with finance leases	Not applicable	140,947	–	140,947
of which other financial debt	Amortised cost	1,575,744	–	1,602,914
Trade payables < 1 year	Amortised cost	336,752	–	336,752
Other liabilities				
of which derivatives outside hedge accounting	Fair value through profit or loss	342,119	–	342,119
of which derivatives within hedge accounting	Not applicable	155,762	–	155,762
of which other financial liabilities	Amortised cost	90,855	–	90,855
	Fair value through profit or loss	25,395	–	25,395
		2,667,574	**–**	**2,694,744**

IFRS 9 measurement categories for carrying amounts at 30 September 2019

Euro 000s	IFRS 9 measurement category	Carrying amounts	of which not within scope of IFRS 7	Fair value
Assets				
Financial assets				
of which other shareholdings	Fair value through profit or loss	6,861	–	6,861
	Not applicable	1,232	1,232	–
of which loans excluding finance leases	Amortised cost	13,629	–	13,629
of which loans in connection with finance leases	Not applicable	72,880	–	72,880
of which securities	Fair value through profit or loss	–	–	–
Trade receivables < 1 year	Amortised cost	365,038	–	365,038
Other assets				
of which derivatives outside hedge accounting	Fair value through profit or loss	265,942	–	265,942
of which derivatives within hedge accounting	Not applicable	54,587	–	54,587
of which other financial assets	Amortised cost	30,761	–	30,761
	Fair value through profit or loss	40	–	40
of which contract assets	Not applicable	67,835	–	67,835
Cash and cash equivalents	Amortised cost	357,564	–	357,564
		1,236,369	**1,232**	**1,235,137**
Debt				
Financial debt				
of which financial debt in connection with finance leases	Not applicable	139,334	–	139,334
of which other financial debt	Amortised cost	1,562,835	–	1,668,661
Trade payables < 1 year	Amortised cost	361,609	–	361,609
Other liabilities				
of which derivatives outside hedge accounting	Fair value through profit or loss	239,993	–	239,993
of which derivatives within hedge accounting	Not applicable	92,570	–	92,570
of which other financial liabilities	Amortised cost	91,498	–	91,498
	Fair value through profit or loss	21,898	–	21,898
		2,509,737	**–**	**2,615,563**

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 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 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.

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 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 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

Fair value hierarchy at 30 September 2019

Euro 000s	Level 1	Level 2	Level 3
Financial assets			
Other shareholdings	–	–	6,861
Derivatives outside hedge accounting	93,339	171,954	649
Derivatives within hedge accounting	26,730	27,857	–
Other financial assets	40	–	–
Financial liabilities			
Derivatives outside hedge accounting	82,287	157,381	325
Derivatives within hedge accounting	30,723	56,115	5,732
Other financial liabilities	–	–	21,898

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 4,424 thousand in Level 3 hedge accounting include interest swaps with floor (previous year: Euro 5,732 thousand). The fair value of these derivatives amounts to 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 59 thousand or reduce it by 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 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

Development in financial instruments recognised in Level 3

Euro 000s	Balance at 1 Oct 2018	Gains/losses in income statement	Gains/losses in OCI	Additions/ disposals	Balance at 30 Sep 2019
Financial assets					
Other shareholdings	8,536	73	–	– 1,748	6,861
Derivatives outside hedge accounting	829	– 180	–	–	649
Financial liabilities					
Derivatives outside hedge accounting	250	75	–	–	325
Derivatives within hedge accounting	1,712	–	4,020	–	5,732
Other financial liabilities	–	3,428	–	18,470	21,898

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 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**

Gains and losses recognised in statement of comprehensive income for Level 3 financial instruments

Euro 000s	Total	of which still held at 30 Sep 2019
Other operating income and expenses	– 255	–
Income from shareholdings	73	–
Financial result	– 3,428	– 3,428
Other comprehensive income	– 4,020	– 4,020
	– 7,630	**– 7,448**

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 asset 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 for market transactions and derivatives not meeting the set-off criteria of IAS 32.

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 excluding 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
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**

Netting of financial assets at 30 September 2019

	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 excluding finance leases	13,629	–	13,629	–	–	13,629
Trade receivables < 1 year	515,831	– 150,793	365,038	–	–	365,038
Derivative financial instruments	320,529	–	320,529	– 237,974	– 25,489	57,066
Other financial assets	98,643	– 7	98,636	–	–	98,636
Cash and cash equivalents	357,564	–	357,564	– 14,202	–	343,362
	1,306,196	**– 150,800**	**1,155,396**	**– 252,176**	**– 25,489**	**877,731**

Netting of financial liabilities at 30 September 2019

	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	
Financial debt	1,562,835	–	1,562,835	– 4,737	– 805	1,568,377
Trade payables < 1 year	493,369	– 131,760	361,609	–	–	361,609
Derivative financial instruments	332,563	–	332,563	– 237,974	– 38,890	609,427
Other financial liabilities	110,538	– 19,040	91,498	–	–	91,498
	2,499,305	**– 150,800**	**2,348,505**	**– 242,711**	**– 39,695**	**2,630,911**

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 2020	FY 2019
Financial assets and liabilities measured at fair value through profit or loss	– 19,655	– 39,970
of which mandatorily measured at fair value	– 19,655	– 39,970
Financial assets measured at amortised cost	– 10,587	– 6,582

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 2020	FY 2019
Total interest income	7,840	9,472
Total interest expenses	46,070	40,056

The financial result also includes currency translations and interest components for provisions 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 interest derivatives.

Risk management
Due to its business activities, MVV is exposed to various financial risks. These comprise receivables default and liquidity risks, interest and exchange rate risks and 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 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.

Receivables 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 receivables 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 securities and contractual mitigation mechanisms. Receivables 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 which require detailed checks on the counterparty's creditworthiness, such as EFET, ISDA or IETA.

For trading transactions concluded with stock exchanges, security payments (margins) are deposited by our contract partners (counterparties) in order to reduce any additional receivables default risks.

In the carrying amounts of financial assets, default risks have already been accounted for by way of write-downs. These are only recognised 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 patterns of default. Our customer segments are based on the business models which are in turn mostly allocable to a similar geographical area.

Any internal or external ratings available for our customers are used as the basis for determining the expected credit losses.

Loss allowances for loans and other financial assets are determined on the basis of 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 since 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 2020**	FY 2019
Balance at 1 October	24,140	36,748
Net balance of additions/disposals	5,391	6,779
Retirements	– 10,373	– 19,398
Reclassifications	–	–
Currency translation	– 124	11
Balance at 30 September	**19,034**	**24,140**

Of the above loss allowance, Euro 18,023 thousand is attributable to trade receivables (previous year: Euro 22,678 thousand) and Euro 400 thousand to contract assets (previous year: Euro 1,392 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 2020

Euro 000s	**Gross carrying amount**	**Loss allowance**	**Credit default rate**
not overdue	373,074	3,960	1%
overdue by			
< 89 days	19,262	524	3%
90 to 179 days	3,324	796	24%
180 to 359 days	6,008	1,903	32%
360 to 719 days	5,524	2,853	52%
> 719 days	9,614	8,780	91%
	416,806	**18,816**	

Receivables default risks (simplified approach) at 30 September 2019

Euro 000s	Gross carrying amount	Loss allowance	Credit default rate %
not overdue	375,809	4,285	1%
overdue by			
< 89 days	20,185	314	2%
90 to 179 days	4,646	632	14%
180 to 359 days	10,943	2,039	19%
360 to 719 days	9,274	6,455	70%
> 719 days	10,894	10,345	95%
	431,751	24,070	

Impairments of Euro 218 thousand relate to assets whose loss allowances were determined on the basis of an internal or external rating (previous year: Euro 70 thousand).

Due to retirements of financial instruments, the loss allowances recognised for trade receivables changed by Euro 10,373 thousand in the 2020 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 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
Utilisations	– 493	–	– 3,404	– 3,897
Reclassifications	– 39	–	39	–
Other	– 22	–	27	5
Balance at 30 Sep 2020	**10,331**	**–**	**593**	**10,924**

Loss allowance (general approach) at 30 September 2019

	12-month expected credit loss	Lifetime expected credit loss		Total
Euro 000s	Level 1	Level 2	Level 3	
Balance at 1 Oct 2019	4,305	–	3,342	7,647
Additions	501	–	42	543
Utilisations	– 2,101	–	–	– 2,101
Reclassifications	24	–	– 24	–
Other	–	–	– 21	– 21
Balance at 30 Sep 2019	2,729	–	3,381	6,110

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

Default risk (general approach) at 30 September 2020

Euro 000s	12-month expected credit loss	Lifetime expected credit loss		Total
	Level 1	Level 2	Level 3	
Extremely secure contract partner	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**

Default risk (general approach) at 30 September 2019

Euro 000s	12-month expected credit loss	Lifetime expected credit loss		Total
	Level 1	Level 2	Level 3	
Extremely secure contract partner	26,015	–	2,699	28,714
Secure contract partner	17,956	–	1,524	19,480
Acceptable contract partner	2,355	–	–	2,355
Speculative contract partner	280	–	–	280
Balance at 30 Sep 2019	46,606	–	4,223	50,829

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. Cash and liquidity management at MVV is responsible for maintaining 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.

A financial budget is compiled for liquidity management purposes. Any financing requirements arising are covered by means of suitable liquidity management instruments. 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 covenants had been complied with as of the balance sheet date on 30 September 2020.

MVV's group companies are generally financed by banks and by MVV Energie AG.

Further information about financial debt 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 non-current assets, receivables and cash and cash equivalents with a total amount of Euro 6,048 thousand (previous year: Euro 4,986 thousand) and interests in subsidiaries amounting to Euro 13,364 thousand (previous year: Euro 3,327 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

Euro 000s	30 September 2020 Maturities < 1 year	30 September 2020 Maturities 1 - 5 years	30 September 2020 Maturities > 5 years	30 September 2019 Maturities < 1 year	30 September 2019 Maturities 1 - 5 years	30 September 2019 Maturities > 5 years
Non-derivative financial liabilities						
Liabilities to banks	130,930	785,610	747,814	128,269	732,429	765,083
Lease liabilities	–	57,406	97,457	–	55,130	96,941
Trade payables	336,752	867	2,842	361,609	838	2,670
Other financial debt	41,513	9,593	16,621	42,938	22,719	17,006
Other financial liabilities	91,059	12,303	29,807	89,637	9,341	32,715
Derivative financial liabilities	344,986	77,024	–	247,145	33,778	–
	945,240	**942,803**	**894,541**	**869,598**	**854,235**	**914,415**

Interest rate risks: Interest rate risks relate to bank credit balances on the asset side and to floating-rate liabilities to banks on the liabilities side of the balance sheet. They result from any potential change in the reference interest rate underlying the hedged item. 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 2020 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 481 thousand/Euro 485 thousand (previous year: Euro 730 thousand/Euro 737 thousand).

Currency risks: Currency risk arise due to exchange rate movements that may impact negatively on our asset, financial or earnings position, for example due to an increase in a foreign-currency liability or a reduction in income or in a receivable denominated in a foreign currency.

The resultant currency risks are hedged by natural hedges in the form of currency-congruent financing and by using derivative financial instruments. MVV is therefore not exposed to any material risks in this respect. As a result, no disclosures of currency risks have been provided. 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.

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 initially limited by setting narrow and clearly defined limit structures. Compliance with the stipulated limits is monitored on an ongoing basis. Regular reporting is also provided on limit capacity. Taking due account of the limits thereby stipulated, commodity price risks are hedged using suitable derivative financial instruments. The hedging instruments used mainly involve forwards, futures and swaps. The objective of MVV's hedging activities is always to optimise and minimise risk across the entire portfolio and the existing underlying risks. Particularly in procurement activities, the objective is to hedge purchase prices at the market level at which the sales contracts were concluded.

Hedging transactions are structured and concluded in a manner appropriate to the risks identified for the hedged item, thus creating a direct economic relationship. The price index for hedging instruments is selected in each case in such a way as to conform to the hedged item. This way, the hedging instruments are subject to the same commodity price risk as the hedged items.

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 requiring mandatory recognition. 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 2020, this would have increased/decreased annual net income by Euro 9,205 thousand/Euro 10,602 thousand (previous year: Euro 10,250 thousand/Euro 10,139 thousand. Equity as of the same reporting date would have increased/decreased by Euro 20,786 thousand/Euro 22,111 thousand (previous year: Euro 19,901 thousand/Euro 19,736 thousand).

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. Financing 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 2020			30 September 2019		
Euro 000s	**< 1 year**	**1 - 5 years**	**> 5 years**	< 1 year	1 - 5 years	> 5 years
Interest derivatives	17,443	405,838	181,445	11,443	343,933	154,285
Commodity derivatives	5,586,936	1,992,294	–	4,623,796	1,783,479	–
Currency derivatives	76,894	–	–	7,353	61,100	–
	5,681,273	**2,398,132**	**181,445**	**4,642,592**	**2,188,512**	**154,285**

The commodity derivatives deployed at MVV can be broken down as follows:

Commodity derivatives

	30 September 2020		30 September 2019	
Euro 000s	**Nominal volumes**	**Fair values**	Nominal volumes	Fair values
Commodity derivatives				
Electricity	5,345,577	– 4,328	4,427,176	13,388
Coal	20,015	– 12,452	17,426	– 8,287
Gas	1,481,488	– 17,355	1,788,569	– 10,392
CO_2 rights	730,607	24,693	172,541	40,714
Other	1,543	– 650	1,563	324
	7,579,230	**– 10,092**	**6,407,275**	**35,747**
Commodity derivatives				
Futures	7,559,216	2,360	6,389,849	44,034
Swaps	20,014	– 12,452	17,426	– 8,287
	7,579,230	**– 10,092**	**6,407,275**	**35,747**

As derivatives 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 at 30 September 2020

Euro 000s	Total		of which < 1 year		of which 1 to 5 years	
Counterparty rating as per Standard & Poor's and/or Moody's	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
Other	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**

Counterparty risk at 30 September 2019

Euro 000s	Total		of which < 1 year		of which 1 to 5 years	
Counterparty rating as per Standard & Poor's and/or Moody's	Nominal value	Counterparty risk	Nominal value	Counterparty risk	Nominal value	Counterparty risk
AAA and Aaa to AA- and Aa3	530,728	78,657	135,095	35,451	395,633	43,206
A+ and A1 to A- and A3	73,604	5,484	7,280	45	66,324	5,439
BBB+ and Baa1 to BBB- and Baa3	88,678	13,532	–	–	88,678	13,532
BB+ and Ba1 to BB- and Ba3	–	–	–	–	–	–
Other	2,609,211	292,366	1,403,246	172,503	1,205,965	119,863
	3,302,221	**390,039**	**1,545,621**	**207,999**	**1,756,600**	**182,040**

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 13 years as of 30 September 2020 (previous year: 14 years). For commodity hedges, the terms of planned hedged items amount to up to five years (previous year: up to four 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 an average interest rate of 0.92 % to 3.87 % to hedge against interest rate risks in its financing activities. The average hedged prices for commodity price risks range from Euro 46.00 to Euro 51.91 in the electricity business, Euro 15.77 to Euro 17.91 in the gas business and Euro 21.74 to Euro 21.74 to Euro 24.92 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 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 risk	–	38,112	604,726	– 5,842	– 6,977
	100,204	**154,131**	**1,902,691**	**– 54,649**	**– 55,784**

Hedging relationships involving cash flow hedges at 30 September 2019

	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	54,525	50,432	913,137	– 9,388	– 9,388
Interest rate risk	62	40,099	509,661	– 29,581	– 30,179
	54,587	**90,531**	**1,422,798**	**– 38,969**	**– 39,567**

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 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**

Impact of cash flow hedges on total comprehensive income at 30 Sep 2019

Euro 000s	Hedging gains (+)/ losses (-) recognised in OCI	Ineffective-ness recognised through profit or loss	Reclassi-fication through profit or loss
Commodity price risk	– 9,388	–	32,688
Interest rate risk	– 30,179	598	– 8,229
	– 39,567	**598**	**24,459**

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 recognised. For commodity hedges, amounts of Euro 112,285 thousand and Euro 141,184 thousand were reclassified through profit or loss and recognised under sales and cost of materials respectively in the 2020 financial year. For interest rate hedges, an amount of Euro 7,012 thousand was reclassified through profit or loss and recognised under financing expenses. 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 2020	FY 2019
Balance at 1 October	– 35,875	27,903
Unrealised change in reserve for hedging costs		
Interest rate hedges	310	248
Unrealised change in cash flow hedge reserve		
Commodity hedges	– 48,807	– 9,388
Interest rate hedges	– 6,977	– 30,179
Reclassification through profit or losses		
Commodity hedges	28,899	– 32,688
Interest rate hedges	8,010	8,229
Balance at 30 September	**– 54,440**	**– 35,875**

Fair value hedges serve to hedge risks relating to changes in fair value. At MVV, fair value hedges include one foreign currency hedge for intragroup loans and payments denominated in foreign currency. The hedged items amount to Euro 231,702 thousand. The hedging instruments deployed involve a bank liability in British pounds and a forward exchange transaction. The average hedging rate amounts to 0.93 GBP/Euro.

As of 30 September 2020, existing hedged items were included in fair value hedges with terms of up to 12 years (previous year: 13 years).

Other assets include a cumulative amount of Euro 1,020 thousand for hedging-related adjustments (previous year: Euro 1,832 thousand).

The following table presents the carrying amounts and nominal volumes, as well as changes in the fair value, for the hedged items and hedging instruments deployed in fair value hedging relationships.

Hedging relationships involving fair value hedges at 30 September 2020

Euro 000s	Carrying amount of hedging instrument: Other financial liabilities	Carrying amount of hedging instrument: Other financial debt	Nominal volume	Changes in fair value of hedging instrument	Changes in fair value of hedged item
Currency risk	1,631	178,702	231,702	5,842	6,084
	1,631	**178,702**	**231,702**	**5,842**	**6,084**

Hedging relationships involving fair value hedges at 30 September 2019

Euro 000s	Carrying amount of hedging instrument: Other financial liabilities	Carrying amount of hedging instrument: Other financial debt	Nominal volume	Changes in fair value of hedging instrument	Changes in fair value of hedged item
Currency risk	1,547	194,235	247,235	1,617	1,625
	1,547	**194,235**	**247,235**	**1,617**	**1,625**

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 2020

Euro 000s	Ineffectiveness recognised through profit or loss
Currency risk	1
	1

Impact of fair value hedges on total comprehensive income at 30 Sep 2019

Euro 000s	Ineffectiveness recognised through profit or loss
Currency risk	1
	1

In the 2020 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 2019 to 30 September 2020

Euro 000s	Adjusted external sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation	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**

Segment report from 1 October 2018 to 30 September 2019

Euro 000s	Adjusted external sales excluding energy taxes [1]	Intercompany sales excluding energy taxes	Scheduled depreciation	Impairment losses
Customer Solutions	2,655,824	162,970	18,531	–
New Energies	734,227	102,217	80,235	–
Supply Reliability	278,121	621,973	59,253	–
Strategic Investments	85,950	1,304	10,924	–
Other Activities	2,368	50,369	14,550	–
Consolidation	–	– 938,833	–	–
	3,756,490	**–**	**183,493**	**–**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Income from companies recognised at equity	Investments
Customer Solutions	15,980	26,281	– 6,726	36,665
New Energies	1,442	108,584	9,252	119,346
Supply Reliability	– 8,022	68,909	12,789	124,488
Strategic Investments	515	20,553	9,908	15,681
Other Activities	3,890	969	109	14,025
Consolidation	–	–	–	–
	13,805	**225,296**	**25,332**	**310,205**

1 Previous year's figures adjusted. Accounting methodology adjusted in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".

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, heating energy, gas and water, the solutions business for corporate customers and the service and trading business at MVV Trading GmbH, Mannheim.

  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, 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 heating energy from sustainable/partly sustainable commodities such as wind, waste timber, non-recyclable 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, heating energy, 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, heating energy, 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 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019	+/– change
EBIT as per income statement	209,494	165,485	+ 44,009
Financial derivative measurement items	19,768	56,100	– 36,332
Structural adjustment for part-time early retirement	11	172	– 161
Interest income in connection with finance leases	3,961	3,539	+ 422
Adjusted EBIT	**233,234**	**225,296**	**+ 7,938**

Reconciliation of external sales excluding energy taxes with adjusted external sales excluding energy taxes

Euro 000s	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019	+/– change
Sales after electricity and natural gas taxes	3,432,094	3,739,469	– 307,375
Realisation effects for financial derivatives	83,226	17,021	+ 66,205
Adjusted sales after electricity and natural gas taxes	**3,515,320**	**3,756,490**	**– 241,170**

Of adjusted segment sales with external customers, 92.33 % were generated in Germany (previous year: 88.1 %). 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 significant year-on-year improvement in annual earnings before taxes (EBT) led the cash flow before working capital and taxes to increase by Euro 27 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 145 million. The largest positive item related to the settlement of project development projects at the Juwi subgroup. Further items with a significantly positive impact on the cash flow on the one hand included the reduction in trade receivables and on the other the receipt of advance payments, mainly in connection with a project in the Customer Solutions segment. The depositing of securities for counterparty default risk (margins) also led to a significantly lower outflow of cash in the year under report than in the previous year and thus contributed to the improvement in the cash flow from operating activities.

To improve the presentation of changes in other asset and liability items, since the end of the 2020 financial year non-cash measurement items for derivatives subject to hedge accounting have no longer been presented in these items. The previous year's items have been adjusted accordingly, which resulted in the following changes: Other non-cash income and expenses decreased by Euro 3,758 thousand, while the change in other asset items fell by Euro 23,672 thousand and the change in other liability items rose by Euro 27,430 thousand.

The development in the cash flow from investing activities was mainly shaped by significantly higher investments in property, plant and equipment, of which a major share related to the gas-fired CHP plant in Kiel. Payments for other financial assets also had the effect of reducing the cash flow compared with the previous year. One significant item here involved capital increases at joint ventures recognised using the equity method. An opposing positive effect resulted from the lower volume of payments made to acquire fully consolidated companies, which in the current period under report related to the acquisition of EnDaNet GmbH. Overall, the cash flow from investing activities fell by Euro 37 million compared with the 2019 financial year.

The cash flow from financing activities showed a significant year-on-year reduction of Euro 162 million, a development mainly due to lower net new borrowing.

MVV posted cash and cash equivalents of Euro 343 million as of 30 September 2020 (30 September 2019: Euro 358 million).

The reconciliation of liabilities in connection with financing activities is summarised in the following overview:

Liabilities in connection with financing activities

Euro 000s	30 Sep 2019	**Cash-effective changes**	**Non-cash-effective changes**			**30 Sep 2020**
			Change in scope of consolidation	**Changes in exchange rates**	**Additions to leases**	
Liabilities to banks	1,487,902	36,991	–	– 9,727	–	1,515,166
Lease liabilities	139,335	– 15,344	224	– 464	17,195	140,946
Other financial debt	74,932	– 14,318	– 1	– 34	–	60,579
	1,702,169	**7,329**	**223**	**– 10,225**	**17,195**	**1,716,691**

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 (previously: MVV GmbH). MKB Mannheimer Kommunalbeteiligungen GmbH owns 99.99 % of the shares in MV Mannheimer Verkehr GmbH (previously: MVV 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 19,473 thousand (previous year: Euro 19,441 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 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019	**1 Oct 2019 to 30 Sep 2020**	1 Oct 2018 to 30 Sep 2019	**30 Sep 2020**	30 Sep 2019	**30 Sep 2020**	30 Sep 2019
City of Mannheim	12,032	15,901	24,697	24,995	32	850	6,269	7,245
Abfallwirtschaft Mannheim	7,475	7,567	1,724	1,661	1,330	1,333	348	327
GBG Mannheimer Wohnungsbaugesellschaft mbH	14,091	12,661	66	25	76	166	15	8
m:con - mannheim:congress GmbH	3,449	4,058	431	352	5,373	6,037	24	431
MKB Mannheimer Kommunalbeteiligungen GmbH (previously: MVV GmbH)	63	64	–	–	–	1	–	–
MV Mannheimer Verkehr GmbH (previously: MVV Verkehr GmbH)	34	24	1	1	–	1	1	–
Rhein-Neckar-Verkehr GmbH	7,480	5,786	236	317	1,254	603	1,182	1,369
Stadtentwässerung Mannheim	1,521	1,697	438	376	278	427	75	19
Associates	32,176	9,810	1,349	1,301	2,663	2,849	1,827	1,724
Joint ventures	161,091	117,161	192,215	239,027	70,948	24,268	91,741	54,118
Other related parties	21,977	23,602	4,023	3,364	5,813	5,872	1,146	1,457
	261,389	**198,331**	**225,180**	**271,419**	**87,767**	**42,407**	**102,628**	**66,698**

The income and expenses with other related parties include income of Euro 28 thousand (previous year: Euro 19 thousand) and expenses of Euro 477 thousand (previous year: Euro 358 thousand) for goods and services provided to management staff performing key functions.

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 2020. 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 2020.

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 2,812 thousand (previous year: Euro 2,439 thousand). Pension provisions of Euro 10,714 thousand were recognised for them (previous year: Euro 9,871 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 2,955 thousand in the year under report (previous year: Euro 3,033 thousand). Of this total, Euro 2,845 thousand involved short-term benefits (previous year: Euro 2,926 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 110 thousand in the 2020 financial year (previous year: Euro 108 thousand).

Active Supervisory Board members were remunerated as follows:

Supervisory Board remuneration

Euro 000s	**FY 2020**	FY 2019
Fixed remuneration (including meeting allowances)	525	400

Individualised information and further details concerning the remuneration of Executive and Supervisory Board members can be found in the audited Remuneration Report, which forms part of the Combined Management Report.

Former members of the Executive Board received benefits of Euro 630 thousand in the year under report (previous year: Euro 531 thousand). Provisions totalling Euro 20,288 thousand have been stated for pension obligations towards former Executive Board members (previous year: Euro 21,727 thousand). A total of Euro 64 thousand was allocated to this item in the year under report (previous year: Euro 347 thousand).

39. MVV's shareholdings

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [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	
Bürgerwind Thaden GmbH & Co. KG	Hanover	Germany	100.00	5
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	74.99	
DC-Group Immobilienverwaltung GmbH & Co. OHG	Wallmenroth	Germany	100.00	
econ solutions GmbH	Munich (dom.: Mannheim)	Germany	100.00	4
En/Da/Net GmbH	Erfurt	Germany	100.00	4, 5
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
FRASSUR GmbH Umweltschutz-Dienstleistungen	Mörfelden-Walldorf	Germany	100.00	
Gasversorgung Offenbach GmbH	Offenbach am Main	Germany	74.90	
Gesellschaft für Hochspannungsbau Offenbach mbH (previously: EVO Alpha 5 GmbH)	Offenbach am Main	Germany	100.00	5
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 Schmölln GmbH & Co. KG	Wörrstadt	Germany	41.32	
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 196 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	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, 5
MVV Alpha fünfzehn GmbH	Mannheim	Germany	100.00	4
MVV Biogas Bernburg GmbH	Mannheim (dom.: Bernburg/Saale)	Germany	90.00	

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
MVV Biogas Dresden GmbH	Mannheim (dom.: Dresden)	Germany	100.00	
MVV Biomethan GmbH (previously: Biomethananlage Klein Wanzleben GmbH)	Mannheim (dom.: Wanzleben-Börde)	Germany	100.00	
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	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	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 GmbH	Mannheim	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 Buhlenberg GmbH & Co. KG	Hanover	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	
Windpark Thaden GmbH & Co. KG	Hanover	Germany	100.00	5
Windwärts Energie GmbH	Hanover	Germany	100.00	
Windwärts Photovoltaik GmbH	Hanover	Germany	100.00	

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
Fully consolidated subsidiaries				
Associates (international)				
Cactus Garden Solar LLC	Delaware	USA	100.00	
Ceskolipská teplárenská a.s.	Ceská Lípa	Czech Republic	75.00	
Ceskolipské teplo a.s.	Prague	Czech Republic	100.00	
Corsoleil EURL i.L.	Saint Florent	France	100.00	
CTZ s.r.o.	Uherské Hradiste	Czech Republic	50.96	
e.services s.r.o.	Decín	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.	Pelhrimov	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 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	Bangalore	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 Wind LLC	Delaware	USA	100.00	
Kozilio Dio I.K.E. (Monoprosopi)	Athens	Greece	100.00	
Kozilio Ena I.K.E. (Monoprosopi)	Athens	Greece	100.00	
mobiheat Schweiz GmbH	Glattbrugg	Switzerland	100.00	
mobiheat Österreich GmbH	Sankt Lorenz	Austria	100.00	
MVV Energie CZ a.s.	Prague	Czech Republic	100.00	
MVV Environment Baldovie Limited	Dundee	UK	100.00	
MVV Environment Devonport Limited	Plymouth	UK	100.00	
MVV Environment Limited	London	UK	100.00	
MVV Environment Ridham Limited	Sittingbourne/Iwade	UK	100.00	

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
MVV Environment Services Limited	London	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	
SE Chronus Solar Energy 10 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 11 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 12 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 13 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 14 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 15 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 16 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 17 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 18 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 19 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 2 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 3 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 4 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 5 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 6 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 7 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 8 E.P.E.	Athens	Greece	100.00	
SE Chronus Solar Energy 9 E.P.E.	Athens	Greece	100.00	
Teplárna Liberec a.s.	Liberec	Czech Republic	76.04	
TERMIZO a.s.	Liberec	Czech Republic	100.00	
TERMO Decín a.s.	Decín	Czech Republic	96.91	
Zásobování teplem Vsetín a.s.	Vsetín	Czech Republic	100.00	
Unconsolidated other shareholdings				
Associates (Germany)				
Blue Village FRANKLIN Mobil GmbH	Mannheim	Germany	100.00	
Erschließungsträgergesellschaft Weeze mbH	Weeze	Germany	75.00	
EVO Vertrieb GmbH	Offenbach am Main	Germany	100.00	
juwi Wind Germany 126 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 127 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 128 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 178 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 184 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 185 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 186 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 190 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 191 GmbH & Co. KG	Wörrstadt	Germany	100.00	

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
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 198 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 201 GmbH & Co. KG	Wörrstadt	Germany	100.00	
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 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 208 GmbH & Co. KG	Wörrstadt	Germany	100.00	
juwi Wind Germany 210 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
juwi Wind Germany 211 GmbH & Co. KG	Wörrstadt	Germany	100.00	5
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	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	5
Windpark Biebelnheim-Gabsheim GmbH & Co. KG	Wörrstadt	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	
Windpark Worms Repowering GmbH & Co. KG (previously: juwi Wind Germany 207 GmbH & Co. KG)	Wörrstadt	Germany	100.00	
Windwärts Betriebs- und Beteiligungsgesellschaft mbH	Hanover	Germany	100.00	
Windwärts Projektmanagement GmbH	Hanover	Germany	100.00	
WKA Schauerberg GmbH & Co. KG	Wörrstadt	Germany	100.00	

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
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	
Bench Solar LLC	Delaware	USA	100.00	5
Birch Creek 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	
Cache Valley Solar LLC	Delaware	USA	100.00	
Castle Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Chapeno Solar LLC	Delaware	USA	100.00	
Chico Creek Solar LLC	Delaware	USA	100.00	5
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	5
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	
Fairforest Solar LLC	Delaware	USA	100.00	5
Firelands Wind Farm 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	
Jacksonville Solar LLC	Delaware	USA	100.00	5
JSI Procurement Group LLC	Delaware	USA	100.00	
JSI Rockfish Realty LLC	Delaware	USA	100.00	
juwi Devco Pty. Ltd.	Brisbane	Australia	100.00	5
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	5
juwi Development 05 Srl	Verona	Italy	100.00	5
juwi Development 06 Srl	Verona	Italy	100.00	5
juwi Development 07 Srl	Verona	Italy	100.00	5
juwi Development 08 Srl	Verona	Italy	100.00	5
juwi Development 09 Srl	Verona	Italy	100.00	5
juwi Energy Services 2 (Pty) Ltd.	Cape Town	South Africa	80.00	
juwi Solar ZA Construction 9 (Pty) Ltd.	Cape Town	South Africa	60.00	
juwi Solar ZA O&M 2 (Pty) Ltd.	Cape Town	South Africa	100.00	

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
juwi Viet Nam Company Limited	Hanoi	Vietnam	100.00	
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	5
Kap Vley Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
Kenhardt PV1 (Pty) Ltd.	Cape Town	South Africa	100.00	
Kiowa Community Solar LLC	Delaware	USA	100.00	5
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	
La Garita Solar LLC	Delaware	USA	100.00	
Lavaca Solar LLC	Delaware	USA	100.00	
Los Brazos Solar LLC	Delaware	USA	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	
MVV Environnement Ressources SASU i.L.	Colmar	France	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	
Pike Solar LLC	Delaware	USA	100.00	
Pronghorn Solar LLC	Delaware	USA	100.00	
Rattlesnake Flat Solar LLC	Delaware	USA	100.00	5
Red Dirt Solar LLC	Delaware	USA	100.00	
Royal Slope Solar LLC	Delaware	USA	100.00	
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	5
Spanish Peaks II Solar LLC	Delaware	USA	100.00	

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
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	
Wyandot Solar LLC	Delaware	USA	100.00	5
Zingesele Wind Farm (Pty) Ltd.	Cape Town	South Africa	100.00	
At equity				
Joint ventures (Germany)				
ABeG Abwasserbetriebsgesellschaft mbH	Dietzenbach	Germany	49.00	
Allegro engineering GmbH	Markranstädt-Thronitz	Germany	30.00	
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	
Fernwärme Rhein-Neckar GmbH	Mannheim	Germany	50.00	
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	
Naunhofer Transportgesellschaft mbH	Parthenstein-Großsteinberg	Germany	50.00	
Qivalo GmbH	Mannheim	Germany	42.50	
ReNabi GmbH	Mannheim	Germany	51.00	
Rockenhausen Windenergie-Projektentwicklungs GmbH i.L.	Rockenhausen	Germany	49.00	
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	
wärme.netz.werk Rhein-Neckar GmbH	Heidelberg	Germany	33.34	
Zschau GmbH	Leimen	Germany	75.00	5

List of MVV's shareholdings at 30 September 2020

	Town/city	Country	Share of capital in % [1]	Footnotes
At equity				
Joint ventures (international)				
juwi Shizen Energy Inc.	Tokyo	Japan	50.00	
luminatis S.à.r.l.	Luxembourg	Luxembourg	70.00	
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	
Other minority shareholdings				
(Germany)				
8KU GmbH	Berlin	Germany	12.50	
Infrastruktur Oberheimbach I GmbH & Co. KG	Wörrstadt	Germany	15.00	
Infrastrukturgesellschaft Bischheim GmbH & Co. KG	Wörrstadt	Germany	15.31	
juwi Wind Germany 129 GmbH & Co. KG	Wörrstadt	Germany	16.00	
Klimaschutzagentur Mannheim gemeinnützige GmbH	Mannheim	Germany	40.00	
Main-Kinzig-Entsorgungs- und Verwertungs GmbH	Gelnhausen	Germany	49.00	
Management Stadtwerke Buchen GmbH	Buchen-Odenwald	Germany	25.20	
RIO Holzenergie GmbH & Co. Langelsheim KG	Wörrstadt	Germany	37.55	
Stadtmarketing Mannheim GmbH	Mannheim	Germany	3.09	
Stadtwerke Langen Gesellschaft mit beschränkter Haftung	Langen	Germany	10.00	4
Stadtwerke Schwetzingen GmbH & Co. KG	Schwetzingen	Germany	10.00	
Stadtwerke Schwetzingen Verwaltungsgesellschaft mbH	Schwetzingen	Germany	10.00	
Stadtwerke Sinsheim Verwaltungs GmbH	Sinsheim	Germany	30.00	
Stadtwerke Walldorf GmbH & Co. KG	Walldorf	Germany	25.10	
Stadtwerke Walldorf Verwaltungs GmbH	Walldorf	Germany	25.10	
SWT Regionale Erneuerbare Energien GmbH	Trier	Germany	51.00	
Wasserversorgungsverband Neckargruppe	Edingen-Neckarhausen	Germany	25.00	
WiWi Windkraft GmbH & Co. Westpfalz KG	Wörrstadt	Germany	5.32	
WVE Wasserversorgungs- und -entsorgungsgesellschaft Schriesheim mbH	Schriesheim	Germany	24.50	

1 Share of capital at 30 September 2020 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
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 2020 financial year:

Auditor's fee

Euro 000s	FY 2020	FY 2019
Audit services	1,962	1,973
Other audit services	230	252
Tax advisory services	41	63
Other services	58	56
	2,291	**2,344**

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 2020 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 Conformity (§ 161 AktG)

The Executive and Supervisory Boards of MVV Energie AG refer to the management report in respect of the Declaration of Conformity with the recommendations made by the German Corporate Governance Code.

The complete declaration is published on the internet at **www.mvv.de/investors.**

43. Information on concessions

In addition to the concession agreements between the City of Mannheim and MVV Energie AG (see Note 37 Related party disclosures), further concession agreements have also been concluded between MVV companies and local and regional authorities. The remaining terms range from 10 to 16 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, 10 November 2020

MVV Energie AG

Executive Board

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, 10 November 2020

MVV Energie AG

Executive Board

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

Timo Carstensen [1]
Deputy Chairman of Works Council
of Stadtwerke Kiel AG

Sabine U. Dietrich
Supervisory Board Member, Consultant
(since 1 October 2020)

Ralf Eisenhauer
Construction and Project Manager at
MWS Projektentwicklungsgesellschaft mbH, Mannheim

Peter Erni [1]
Trade Union Secretary at ver.di Rhine-Neckar

Detlef Falk [1]
Chairman of Works Council of Stadtwerke Kiel AG

Gabriele Gröschl-Bahr [1]
Head of Social Insurance Division at ver.di, Berlin

Dieter Hassel
Member of Executive Board of RheinEnergie AG, Cologne
(until 26 June 2020)

Barbara Hoffmann
Auditor, Tax Advisor

Prof. Dr. Heidrun Kämper
Academic Employee at Institut
für Deutsche Sprache, Mannheim
(until 30 September 2020)

Brigitte Kemmer
Tax Advisor
(until 30 September 2020)

Gregor Kurth
Head of Transactions, Infrastructure Investments, Europe,
First Sentier Investors (FSI), London, UK
(since 3 July 2020)

Thoralf Lingnau [1]
Member of Works Council
(since 24 January 2020)

Dr. Lorenz Näger
Deputy Chairman of Executive Board and CFO
of HeidelbergCement AG

Steffen Ratzel
Managing Director of BKV-Bäder- und Kurverwaltung
Baden-Württemberg, Anstalt des öffentlichen Rechts,
Baden-Baden
(until 30 September 2020)

Tatjana Ratzel
Head of Sickness Allowance Department at
INTER Versicherungsgruppe, Mannheim
(since 1 October 2020)

Bernhard Schumacher [1]
Head of Smart Cities Division at MVV Energie AG

Dr. Stefan Seipl
Businessman, Independent Management Consultant
(since 1 October 2020)

Christian Specht
First Mayor of City of Mannheim

Prof. Heinz-Werner Ufer
Graduate in Economics

Susanne Wenz [1]
Deputy State Regional Director at
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	• Prof. Heinz-Werner Ufer (Chairman) • Heike Kamradt (Deputy Chair) • Peter Erni • Detlef Falk • Gregor Kurth (since 1 October 2020) • Dr. Lorenz Näger • Christian Specht (until 30 September 2020)
Personnel Committee	• Dr. Peter Kurz (Chairman) • Heike Kamradt (Deputy Chair) • Ralf Eisenhauer • Peter Erni • Gregor Kurth (since 1 October 2020) • Steffen Ratzel (until 30 September 2020) • Jürgen Wiesner
Nomination Committee	• Dr. Peter Kurz (Chairman) • Ralf Eisenhauer • Barbara Hoffmann • Gregor Kurth (since 1 October 2020) • Steffen Ratzel (until 30 September 2020) • Tatjana Ratzel (since 1 October 2020) • Prof. Heinz-Werner Ufer
Mediation Committee	• Dr. Peter Kurz (Chairman) • Heike Kamradt • Gregor Kurth (since 1 October 2020) • Steffen Ratzel (until 30 September 2020) • Jürgen Wiesner
New Authorised Capital Creation Committee	• Dr. Peter Kurz (Chairman) • Ralf Eisenhauer • Peter Erni • Dieter Hassel (until 26 June 2020) • Heike Kamradt • Gregor Kurth (since 1 October 2020) • Steffen Ratzel (until 30 September 2020) • Tatjana Ratzel (since 1 October 2020) • Christian Specht • Prof. Heinz-Werner Ufer

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	• 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 • Saarschmiede GmbH, Völklingen (until 2 July 2020) • Stadtwerke Kiel AG, Kiel (Chairman)	
Verena Amann	• Energieversorgung Offenbach AG, Offenbach (since 26 February 2020) • Juwi AG, Wörrstadt (since 19 February 2020) • MVV Enamic GmbH, Mannheim • MVV Netze GmbH, Mannheim (since 1 October 2019) • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt (since 8 May 2020) • Stadtwerke Kiel AG, Kiel (since 1 January 2020)	
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 since 4 December 2019) • Soluvia GmbH, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Dr. Hansjörg Roll	• Energieversorgung Offenbach AG, Offenbach • Grosskraftwerk Mannheim AG, Mannheim (Chairman) • Juwi AG, Wörrstadt • 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)

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 Wohnungsbau-gesellschaft 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)	
Timo Carstensen Deputy Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	
Sabine U. Dietrich Supervisory Board Member, Consultant (since 1 October 2020)	• Commerzbank AG, Frankfurt • H&R GmbH & Co. KGaA, Salzbergen	
Ralf Eisenhauer Construction and Project Manager at MWS Projektentwicklungs-gesellschaft mbH, Mannheim	• Rhein-Neckar-Verkehr GmbH, Mannheim	• Sparkasse Rhein Neckar Nord, Mannheim
Peter Erni Trade Union Secretary at ver.di Rhine-Neckar		
Detlef Falk Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	• Soluvia GmbH, Mannheim • Soluvia Energy Services GmbH, Offenbach • Soluvia IT-Services GmbH, Kiel
Gabriele Gröschl-Bahr Head of Social Insurance Division at ver.di, Berlin		• Board of Directors of Federal Employment Agency, Nuremberg • Supervisory Board of Federal and State Government Employees Retirement Fund (BVL), Karlsruhe (Chair)

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Dieter Hassel Member of Executive Board of RheinEnergie AG, Cologne (until 26 June 2020)	• BRUNATA-METRONA GmbH, Hürth • NetCologne Gesellschaft für Telekommunikation mbH, Cologne	• Agger Energie GmbH, Gummersbach • BELKAW GmbH, Bergisch Gladbach (Deputy Chairman) • Energieversorgung Leverkusen GmbH & Co. KG, Leverkusen • Gasversorgungsgesellschaft mbH, Rhein-Erft, Hürth • Rheinische NETZGesellschaft mbH, Cologne • Stadtwerke Leichlingen GmbH, Leichlingen (Deputy Chairman) • Stadtwerke Lohmar GmbH & Co. KG, Lohmar
Barbara Hoffmann Auditor, Tax Advisor		• Berliner Stadtreinigungsbetriebe, Anstalt des öffentlichen Rechts, Berlin
Prof. Dr. Heidrun Kämper Academic Employee at Insititut für Deutsche Sprache, Mannheim (until 30 September 2020)		
Brigitte Kemmer Tax Advisor (until 30 September 2020)		
Gregor Kurth Head of Transactions, Infrastructure Investments, Europe, First Sentier Investors (FSI), London, UK (since 3 July 2020)		• Utilitas Group, Estonia • Owlcastle Holdings Limited, UK
Thoralf Lingnau Member of Works Council of MVV Energie AG (since 24 January 2020)	• 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 Deputy Chairman of Executive Board and CFO of HeidelbergCement AG	• PHÖNIX Pharma SE, Mannheim	• Castle Cement Limited, Maidenhead, UK (until 31 January 2020) • Cimenteries CBR S.A., Brussels, Belgium • ENCI Holding N.V., 's-Hertogenbosch, Netherlands • Hanson Limited, Maidenhead, UK (until 31 January 2020) • Hanson Pioneer España, S.L.U., Madrid, Spain • HeidelbergCement Canada Holding Limited, Maidenhead, UK • HeidelbergCement Holding S.à.r.l., Luxembourg • HeidelbergCement UK Holding Limited, Maidenhead, UK • HeidelbergCement UK Holding II Limited, Maidenhead, UK • Italcementi Fabbriche Riunite Cemento S.p.A., Bergamo, Italy • Lehigh B.V., 's-Hertogenbosch, Netherlands (Chairman) • Lehigh Hanson, Inc., Irving, TX, USA • Lehigh Hanson Materials Limited, Calgary, Canada • Lehigh UK Limited, Maidenhead, UK (until 31 January 2020) • PHOENIX Pharmahandel GmbH & Co. KG, Mannheim, Germany • PT Indocement Tunggal Prakarsa Tbk., Jakarta, Indonesia
Steffen Ratzel Managing Director of BKV-Bäder- und Kurverwaltung Baden-Württemberg, Anstalt des öffentlichen Rechts, Baden-Baden (until 30 September 2020)		• Badenweiler Thermen und Touristik GmbH, Badenweiler • Gemeinschaftskraftwerk Baden-Baden GmbH, Baden-Baden • Staatsbad Wildbad - Bäder- und Kurbetriebsgesellschaft mbH, Bad Wildbad (Deputy Chairman)
Tatjana Ratzel Head of Sickness Allowance Department at INTER Versicherungsgruppe, Mannheim (since 1 October 2020)		
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

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Dr. Stefan Seipl Businessman, Independent Management Consultant (since 1 October 2020)	• Ferngas Netzgesellschaft GmbH, Schwaig (Chairman)	• Nordion Energi AB, Malmö, Sweden • Swedegas AB, Göteborg, Sweden • WEUM 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	• Amprion GmbH, Dortmund (Chairman)	
Susanne Wenz Deputy State Regional Director at ver.di Baden-Württemberg	• Bausparkasse Schwäbisch Hall AG, Schwäbisch Hall	• 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 • 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 2020, the consolidated income statement, statement of comprehensive income, consolidated statement of changes in equity and consolidated cash flow statement for the financial year from 1 October 2019 to 30 September 2020, and notes to the consolidated financial statements, 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 2019 to 30 September 2020. 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 2020, and of its financial performance for the financial year from 1 October 2019 to 30 September 2020, 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 2019 to 30 September 2020. 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 of € 203 million is reported under the "Intangible assets" balance sheet item in the consolidated financial statements of MVV Energie AG. Goodwill is tested for impairment by the Company once a year or when there are indications of impairment to determine any possible need for write-downs. The impairment test is carried out 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, as are the expected implications of the ongoing coronavirus crisis for the Group's business activities. The discount rate used is the weighted average cost of capital for the respective group of cash-generating units. The regular impairment tests led to the recognition of impairment losses of € 8.3 million 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, not least also in view of the implications of the coronavirus crisis, 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. We appraised the assessment by the executive directors of the implications of the coronavirus crisis for the Group's business activities and reviewed the inclusion of these implications in the calculation of future cash flows. 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 projections, we evaluated the sensitivity analyses performed by the Company. Overall, the valuation parameters and assumptions used by the executive directors are in line with our expectations and 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 the 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 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 so-called hedged cash flows. The underlying transactions are the purchase respectively the 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 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 section "35 Financial instruments" in the notes to the 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 statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in the "Corporate Governance" section of the group management report
- the corporate governance report pursuant to No. 3.10 of the German Corporate Governance Code
- 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 comprises further 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 control 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 REGULATORY REQUIREMENTS

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 13 March 2020. We were engaged by the supervisory board on 19 September 2020. We have been the group auditor of MVV Energie AG, Mannheim, without interruption since the 2008/09 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).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is Andrea Ehrenmann.

Essen, 10 November 2020

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

Ralph Welter	Andrea Ehrenmann
Wirtschaftsprüfer (German Public Auditor)	Wirtschaftsprüferin (German Public Auditor)

Other Disclosures

Auditor's Report on Combined Non-Financial Declaration

INDEPENDENT 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 § 315b Abs. 1 HGB ("Handelsgesetzbuch": "German Commercial Code") for the period from 1 October 2019 to 30 September 2020 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 2019 to 30 September 2020 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 material 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 2019 to 30 September 2020 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, 10 November 2020

PricewaterhouseCoopers GmbH

Wirtschaftsprüfungsgesellschaft

Hendrik Fink — ppa. Meike Beenken

Wirtschaftsprüfer
[German Public Auditor]

Ten-Year Overview

Ten-year overview

	FY 2020[1,2]	FY 2019[1,2]	FY 2018[1,2]	FY 2017[1,2]	FY 2016[1,2]	FY 2015[1,2]	FY 2014[2]	FY 2013[2]	FY 2012[2]	FY 2011[2]
Income statement (Euro million)										
Adjusted sales excluding energy taxes	3,515	3,756	3,903	4,010	4,066	3,422	3,707 [1]	4,044	3,895	3,600
Adjusted EBITDA	449	409	443	407	425	336	330 [1]	376	399	404
Adjusted EBIT	233	225	228	224	213	175	170 [1]	208	223	242
Adjusted EBT	181	168	179	169	139	132	127 [1]	143	151	179
Adjusted annual net income	128	115	111	107	98	92	93 [1]	101	98	125
Adjusted annual net income after minority interests	104	98	94	93	95	75	86 [1]	85	80	108
Balance sheet figures (Euro million)										
Non-current assets	3,564	3,464	3,493	3,326	3,586	3,513	3,056 [1]	3,032	2,868	2,965
Current assets	1,467	1,358	1,647	1,387	1,418	1,071	1,015 [1]	1,207	1,211	910
Share capital	169	169	169	169	169	169	169	169	169	169
Capital reserve	455	455	455	455	455	455	455	455	455	455
Accumulated net income	803	768	777	705	641	594	579 [1]	547	517	512
Accumulated other comprehensive income	– 108	– 72	– 21	– 57	– 81	– 107	– 73	– 74	– 48	– 3
Non-controlling interests	215	215	245	249	243	203	206 [1]	206	207	213
Equity	1,534	1,535	1,625	1,521	1,427	1,314	1,336 [1]	1,303	1,300	1,346
Non-current debt	2,192	2,109	1,922	1,976	2,080	2,211	1,710 [1]	1,751	1,882	1,555
Current debt	1,305	1,178	1,593	1,216	1,497	1,059	1,025 [1]	1,185	897	974
Total assets	5,031	4,822	5,140	4,713	5,004	4,584	4,071 [1]	4,239	4,079	3,875
Net financial debt [3]	1,374	1,345	1,075	1,077	1,283	1,341	1,063 [1]	1,111	1,028	1,011
Key balance sheet figures and ratios										
Cash flow from operating activities (Euro million)	383	238	331	474	274	255	407 [1]	372	285	376
Adjusted equity ratio [4] (%)	34.3	34.5	37.3	35.1	33.0	33.8	35.7 [1]	34.5	36.1	37.7
ROCE [5] (%)	7.7	7.9	8.5	8.2	7.6	6.6	6.7 [1]	8.3	9.0	9.7
WACC [6] (%)	6.0	6.3	6.3	6.1	6.4	6.4	7.4	7.4	8.6	8.5
Value spread [7] (%)	1.7	1.6	2.2	2.1	1.2	0.2	0.7 [1]	0.9	0.4	1.2
Capital employed [8] (Euro million)	3,018	2,847	2,674	2,734	2,806	2,660	2,527 [1]	2,507	2,486	2,489

1 Since 2015 financial year: Ingolstadt subgroup no longer recognised proportionately, but included in consolidated financial statements at equity (figures for 2014 financial year adjusted)

2 Excluding non-operating measurement items for financial derivatives, excluding restructuring result and including interest income from finance leases; since 2013 financial year: excluding structural adjustment for part-time early retirement

3 Non-current and current financial debt less cash and cash equivalents

4 Adjusted equity as percentage of adjusted total assets

5 Return on capital employed: adjusted EBIT as percentage of capital employed

6 Weighted average cost of capital

7 Value spread (ROCE less WACC)

8 Adjusted equity plus financial debt plus provisions for pensions and similar obligations less cash and cash equivalents (calculated as annual average)

Ten-year overview

	FY 2020[1,2]	FY 2019[1,2]	FY 2018[1,2]	FY 2017[1,2]	FY 2016[1,2]	FY 2015[1,2]	FY 2014[2]	FY 2013[2]	FY 2012[2]	FY 2011[2]
Share and dividend										
Closing price at 30 September[3] (Euro)	26.00	26.50	26.30	22.85	19.90	21.15	23.89	22.35	21.39	23.86
Annual high[3] (Euro)	29.00	26.70	26.80	24.15	22.00	26.20	26.05	28.00	27.96	29.90
Annual low[3] (Euro)	23.80	23.80	22.94	19.90	19.30	20.26	21.85	20.50	19.50	18.85
Market capitalisation at 30 September (Euro million)	1,714	1,747	1,733	1,506	1,312	1,394	1,575	1,473	1,410	1,573
Average daily trading volume (no. of shares)	2,871	1,745	3,307	8,313	5,630	4,233	2,882	4,121	6,707	8,431
No. of individual shares at 30 September (000s)	65,907	65,907	65,907	65,907	65,907	65,907	65,907	65,907	65,907	65,907
No. of shares with dividend entitlement (000s)	65,907	65,907	65,907	65,907	65,907	65,907	65,907	65,907	65,907	65,907
Dividend per share (Euro)	0.95[4]	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Dividend total (Euro million)	62.6[4]	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3	59.3
Adjusted earnings per share[5] (Euro)	1.57	1.49	1.43	1.41	1.45	1.14	1.30[1]	1.29	1.21	1.63
Cash flow from operating activities per share[5] (Euro)	5.81	3.60	5.03	7.19	4.16	3.86	6.18[1]	5.64	4.33	5.70
Adjusted carrying amount per share[5, 6, 7] (Euro)	20.41	20.11	19.71	18.88	18.36	17.73	18.03[1]	17.89	17.80	17.61
Price/earnings ratio[5, 8]	16.6	17.8	18.4	16.2	13.7	18.6	18.4[1]	17.3	17.7	14.6
Price/cash flow ratio[5, 8]	4.5	7.4	5.2	3.2	4.8	5.5	3.9[1]	4.0	4.9	4.2
Dividend yield[8] (%)	3.7[4]	3.4	3.4	3.9	4.5	4.3	3.8	4.0	4.2	3.8
Investments (Euro million)	**322**	**310**	**290**	**194**	**236**	**470**	**310**[1]	**392**	**294**	**281**
Number of employees at 30 September (headcount)										
MVV	6,260	6,113	5,978	6,062	6,174	5,308	5,166[1]	5,459	5,541	5,919
of which in Germany	5,351	5,232	5,137	5,227	5,328	4,676	4,561[1]	4,900	4,900	5,278
of which abroad	909	881	841	835	846	632	605	559	641	641
Full-time equivalents at 30 September	**5,744**	**5,543**	**5,408**	**5,487**	**5,575**	**4,828**	**4,688**[1]	**4,785**	**4,898**	**5,085**
Sales volumes										
Electricity turnover (kWh million)	20,147	20,246	23,556	26,239	21,797	20,823	23,207[1]	25,817	28,283	26,093
Heating energy turnover (kWh million)	6,249	6,286	6,598	6,917	6,716	6,995	6,292[1]	7,510	6,888	7,289
Gas turnover (kWh million)	24,974	25,719	21,209	25,190	28,270	27,410	22,517[1]	25,078	17,418	10,888
Water turnover (m³ million)	41	41	41	40	41	46	47	47	53	54
Combustible waste delivered (tonnes 000s)	2,388	2,300	2,328	2,291	2,306	2,040	1,940	1,888	1,897	1,835

1 Since 2015 financial year: Ingolstadt subgroup no longer recognised proportionately, but included in consolidated financial statements at equity (figures for 2014 financial year adjusted)

2 Excluding non-operating measurement item for financial derivatives, excluding restructuring result and including interest income from finance leases; since 2013 financial year: excluding structural adjustment for part-time early retirement

3 XETRA trading

4 Pending approval by Annual General Meeting on 12 March 2021

5 Weighted average number of shares: 65,906,796

6 Excluding minority interests, weighted annual average number of shares

7 Excluding non-operating measurement items for financial derivatives

8 Basis: closing price in XETRA trading at 30 September

Financial Calendar

10 December 2020

Annual Report
2020 Financial Year

10 December 2020

Annual Results Press Conference
and Analysts' Conference
2020 Financial Year

12 February 2021

3M Quarterly Statement
2021 Financial Year

12 March 2021

Annual General Meeting

12 May 2021

H1 Interim Report
2021 Financial Year

13 August 2021

9M Quarterly Statement
2021 Financial Year

14 December 2021

Annual Report
2021 Financial Year

14 December 2021

Annual Results Press Conference
and Analysts' Conference
2021 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 10 December 2020.

All of MVV's financial reports can be downloaded from our websites.

This Annual Report has been translated into English. Only the original German version is legally binding.

Imprint/Contact

PUBLISHED BY

MVV Energie AG
Luisenring 49
D-68159 Mannheim

T +49 621 290 0
F +49 621 290 23 24

www.mvv.de
kontakt@mvv.de

EDITORIAL RESPONSIBILITY

MVV Energie AG
Investor Relations

T +49 621 290 37 08
F +49 621 290 30 75

www.mvv.de/investors
ir@mvv.de

INVESTOR RELATIONS CONTACT

Philipp Riemen
Head of Department
Finance and Investor Relations
T +49 621 290 31 88
philipp.riemen@mvv.de

GRAPHICS

HGB Hamburger Geschäftsberichte GmbH & Co. KG,
Hamburg

MVV Energie AG
Luisenring 49
D-68159 Mannheim