We inspire
with energy.

Sustainability Report 2020

Contents

MVV at a Glance

ADJUSTED SALES

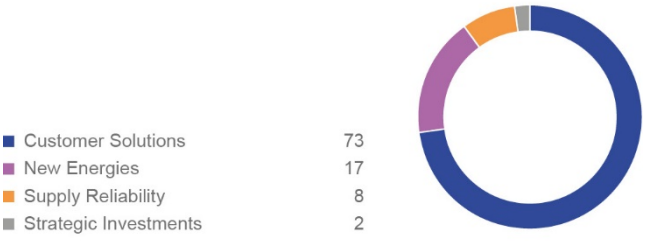
3.5 Euro billion

ADJUSTED EBIT

233 Euro million

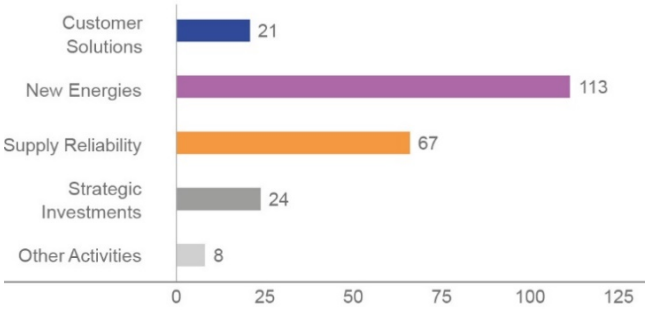
ADJUSTED SALES EXCLUDING ENERGY TAXES BY REPORTING SEGMENT

Shares %



ADJUSTED EBIT BY REPORTING SEGMENT

Euro million



INVESTMENTS

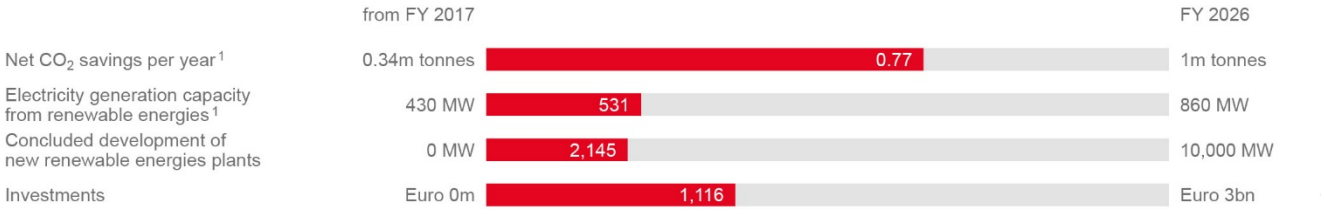
322 Euro million

NUMBER OF EMPLOYEES

6,260

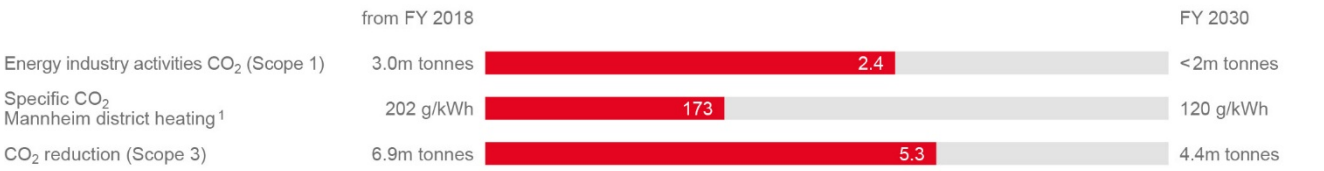
Target achievement for our sustainability and decarbonisation targets FY 2020

SUSTAINABILITY TARGETS



1 Fully consolidated companies and companies recognised at equity

DECARBONISATION TARGETS



1 Recertification at 1 November 2020: 173 g/kWh; at 30 September 2020: Kiel 185 g/kWh, Offenbach 150 g/kWh

2020

MVV in Figures

	FY 2020	FY 2019	% change
Financial key figures – fully consolidated companies			
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)	0.95	0.90	+ 6
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
Value added (Euro million)	915	895	+ 2

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 item 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 und 3) (tonnes 000s)	5,267	6,354	– 17
Net CO_2 savings (tonnes 000s)	794	486	+ 63
Average fuel efficiency rate (%)	64	57	+ 12
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
Number of trainees at 30 September (headcount)	341	330	+ 3
Share of female managers at 30 September (%)	15	15	0
Lost time injury frequency (LTIF) rate	6.7	7.7	– 13

1 Previous year's figure adjusted

Foreword

Dr. Georg Müller
CEO of
MVV Energie AG

Dear Ladies and Gentlemen,

Coronavirus may be determining nearly all our thoughts and actions at the moment, but decarbonisation, i.e. consistently working to achieve more effective and extensive climate protection, is and remains one of the key tasks for the future for politicians, businesses and society as a whole.

There is political will to move forward here, as is apparent not least in the energy policy decisions taken in recent months. In Germany, the Renewable Energies Act has been amended and the target of generating 65 percent of electricity from renewable sources by 2030 is now binding. Moreover, all of Germany's electricity generation should be greenhouse gas-neutral before 2050 already. In the EU, the heads of state and government have approved the Climate Target Plan. By 2030, emissions should be reduced by at least 55 percent compared with their 1990 levels. Not only that, the EU intends to become climate neutral by 2050. The EU Parliament still has to approve these stricter targets. They are certainly necessary if we intend to meet the Paris climate targets together.

MVV is pursuing a clear course towards climate neutrality. We have excluded none of our business from this ambitious target – neither areas of our proprietary energy generation nor individual parts of our business activities. We see climate neutrality as meaning absolutely climate neutral. We are therefore following the science-based concept promoted by the Science Based Targets Initiative, of which we as one of only few companies in the energy sector have long been a member, and are thus intentionally setting ourselves apart from others. For us, climate protection is – alongside economic efficiency and supply reliability – an indispensable component of our corporate strategy, and has been for many years now. It is what all our business activities have in common. We have provided our basic target of climate neutrality with a framework by setting ourselves additional interim quantitative targets for the years 2026 and 2030. These cover all emissions sources, from proprietary energy generation (Scope 1) via indirect emissions at our buildings (Scope 2) through to upstream and downstream emissions at customers and suppliers (Scope 3). The overview on Page 4 allows you to assess where we currently stand on our way towards becoming a climate-neutral MVV.

Against this backdrop, we joined the Baden-Württemberg Climate Alliance as well last year. We concluded a climate protection agreement with the state in which we committed ourselves to meeting our climate targets.

Some projects from the 2020 financial year will contribute towards our sustainability and climate protection targets:

We launched operations at our ultramodern gas-fired CHP plant in Kiel at the end of November 2019. With its flexibility and its technological sophistication, it has shown for more than a year now that it is the ideal power plant for the electricity turnaround. Its combined heat and power generation and its ability to adjust to fluctuating feed-in volumes from renewable energies make it the high-performing heart of what is a secure, affordable, and environmentally-aware supply of energy to Kiel. It has also reduced CO_2 emissions by 70 percent compared with the predecessor plant. This means that 1 million tonnes of CO_2 were avoided in the first full year of operations alone!

In Mannheim, we connected our waste incineration plant on Friesenheimer Insel to our district heating grid in February 2020. This way, we can cover around 30 percent of heating energy needs in Mannheim and the surrounding region with Green Heat. Further innovative projects will enable us to cover 50 to 60 percent of heating energy requirements in Mannheim and the region on a climate-neutral basis in the medium term already. Looking slightly further ahead, we see additional potential for biomass, river heat, geothermal energy, solar thermal energy and waste heat.

A further component involves innovative plants with which we recycle phosphorous from sewage sludge and generate energy at the same time. The first plant is in the process of launching operations at Energieversorgung Offenbach. The symbolic ground-breaking ceremony for the Mannheim plant took place in October 2020, which means that we are working to launch operations at the end of 2021. We are also planning similar plants at other locations.

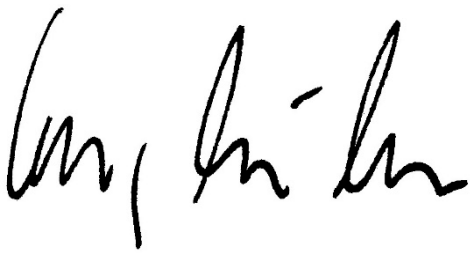
Major projects in the 2020 financial year also include several windfarms with which we have extended our proprietary renewable energies generation portfolio. All of these were developed and built by our subsidiaries Windwärts and Juwi. We now have wind turbines with installed capacities of 236 MW. These enabled us to generate environmentally friendly electricity for more than 140,000 households in the 2020 financial year. Not only that, despite postponements due to coronavirus we linked up renewable energies plants with total capacities of 262 MW to the grid for our customers in Germany and abroad.

By enabling our customers to accomplish their own energy turnarounds, we are also implementing further projects that promote climate protection. Thanks to our comprehensive service portfolio – from complete energy supply concepts to modern lighting systems to next-generation energy management solutions for industry, SMEs, real estate companies, commercial businesses and data centres – we were able to enhance our customers' efficiency and reduce their emissions. We are also pressing ahead with other forward-looking topics that are important for the energy turnaround, such as smart city services and e-mobility.

The 2020 financial year was a special year for MVV, and not just because of the coronavirus pandemic. We were able to conclude major projects and initiated new ones. We owe our ability to consistently implement our strategy to the performance and commitment of our employees. I would therefore like to express my appreciation and my thanks for their superb achievements – above all in these exceptional circumstances.

Do please accompany us further as we head for climate neutrality. We would be delighted to receive your feedback on our Sustainability Report!

Yours faithfully,



Dr. Georg Müller
CEO

About This Report

In this 2020 Sustainability Report, we have documented information about sustainability at MVV in accordance with the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) in the GRI standards version. This report is published in electronic form on our website at **www.mvv.de.** This report simultaneously represents our Progress Report pursuant to the UN Global Compact **Page 63** and shows how we are contributing to the UN Sustainable Development Goals **Page 64**.

The 2020 Sustainability Report has been published in German and in English. It was approved for publication by the Executive Board of MVV.

Furthermore, all of MVV's financial reports and the 2020 MVV Magazine can be downloaded from our website at **www.mvv.de**.

We meet the obligation imposed on us by the German Commercial Code (HGB) to publish a combined non-financial declaration (nfD) in our 2020 Annual Report **www.mvv.de/GB2020e.pdf, Page 45.**

Editorial notes

Within this report, we denote indications and references as follows:

Reference to other information on the internet.

Reference to other information contained in this report.

The page references in the tables in the GRI Content Index **Page 60,** the Progress Report for the UN Global Compact **Page 63** and the UN Sustainable Development Goals **Page 64** also refer to this 2020 Sustainability Report.

In the interests of simplicity and to enhance legibility, all references to employees or other persons in this report denote people of all gender identities.

Forward-looking statements are based on current assumptions and assessments made on the basis of the information available to us. Although the Executive Board is convinced that the assumptions made and the budgets are accurate, the high volume of current uncertainties and numerous internal and external factors mean that actual developments and actual results in future may deviate from the forward-looking statements.

General Disclosures

102 GENERAL DISCLOSURES

Organisational Profile

102-1 Name of the organisation

MVV Energie AG

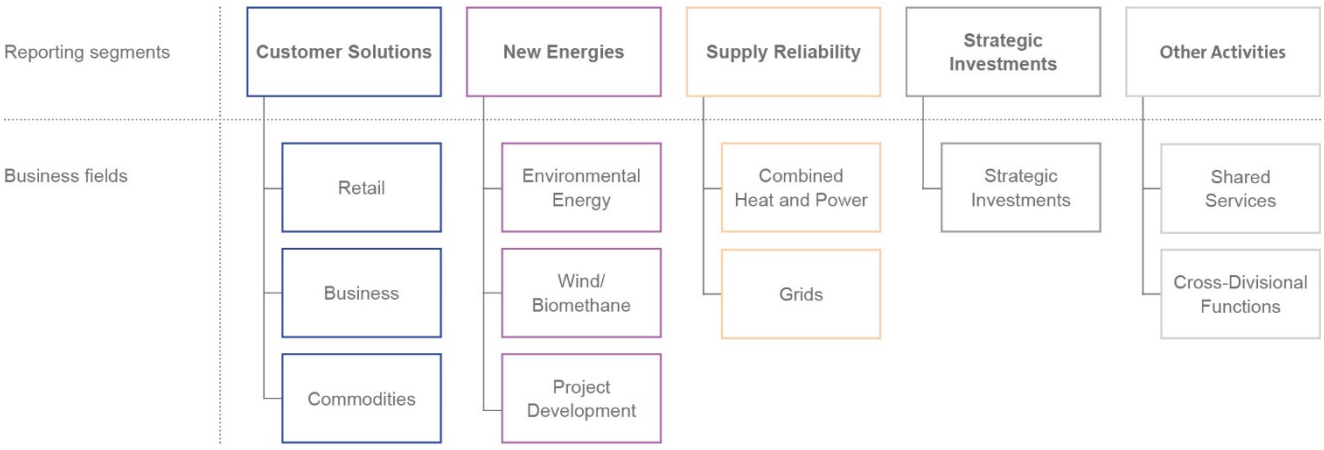
102-2 Activities, brands, products and services

As one of Germany's leading energy companies, we cover all major stages of the energy industry value chain. We generate energy, trade with it and distribute it via proprietary distribution grid companies, market energy solutions and have environmental energy activities. We also produce and distribute water. We have a particular focus on renewable energies, where we are active in project development and operations management for windfarms, solar parks, as well as for biomass power plants, and also have these kinds of plants in our proprietary generation portfolio.

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

The Customer Solutions reporting segment comprises the Retail, Business and Commodities business fields. 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 business field and the Grids business field. The Strategic Investments reporting segment mainly comprises the companies Köthen Energie and MVV Energie CZ, as well as the at-equity result of Stadtwerke Ingolstadt. We pool our Shared Service companies and our Cross-Divisional Functions in our Other Activities reporting segment. The shared service companies perform metering, billing and IT services for MVV.

REPORTING SEGMENTS AND BUSINESS FIELDS



102-3 Location of headquarters

Mannheim, Germany

102-4 Location of operations

The largest locations of our group of companies are in Mannheim, Kiel, Offenbach and Wörrstadt. An overview of all companies in which we hold shareholdings can be found in the List of Shareholdings in MVV's 2020 Annual Report **www.mvv.de/GB2020e.pdf, Page 158.**

102-5 Ownership and legal form

MVV Energie AG is a publicly listed stock corporation and the parent company of MVV. The City of Mannheim holds 50.1 % and First Sentier Investors 45.1 % of the shares in the company. The other shares (4.8 %) are in free float.

102-6 Markets served

MVV operates in all major stages of the energy industry value chain in Germany and abroad. Our most important markets include Germany, the UK and the Czech Republic. We have activities in more than 20 countries. We describe our value chain under **102-9 Page 12.**

102-7 Scale of the organisation

The key figures presented on **Pages 5-6** provide an overview of our company's size.

102-8 Information on employees and other workers

As of 30 September 2020, we had a group-wide total of 6,260 employees, of which 909 employees abroad.

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.

Employee key figures

	FY 2020	FY 2019
Number of employees	6,260	6,113
of which		
Germany	5,351	5,232
Abroad	909	881
of which		
Women	1,760	1,756
Men	4,500	4,357
of which trainees [1]		
Women	89	87
Men	252	243
Total	341	330
of which part-time employees (%)		
Women	10.6	10.4
Men	4.4	4.3
Total	15.0	14.7
of which permanent employees		
Women	1,561	1,568
Men	4,054	3,910
Total	5,615	5,478
Average age (years)		
Women	42.6	42.4
Men	44.4	44.6
Total	43.9	44.0
Average length of service (years)		
Women	12.1	11.9
Men	13.1	13.6
Total	12.9	13.1
Number of employees on childcare leave [2]		
Women	97	105
Men	69	91
Total	166	196
Staff turnover rate [2] (%)	8.4	10.0
Employees with severe disabilities [2] (%)	4.5	5.0

1 Including students at Baden-Württemberg Cooperative State University (DHBW)
2 In Germany

We report extensively on the concerns of our employees on **Pages 54-59.**

102-9 Supply chain

MVV's value creation covers the following main activities:

- Procuring, processing and marketing electricity and natural gas in the international wholesale business and marketing electricity generated from renewable energies on a decentralised basis
- Procuring waste, biomass and, to a minor extent, coal
- Generating electricity, heating energy and biomethane
- Developing new generation plants, especially onshore wind and photovoltaics plants, for proprietary use and for third parties
- Operating electricity, natural gas, district heating and water grids and energy storage facilities
- Supplying electricity, gas, heating energy and water to end customers and secondary distributors
- Producing, processing and supplying drinking water
- Planning and building IT data centres and providing digital services
- Providing energy-related services for buildings, SMEs and industrial customers.

We exercise influence on topics relating to sustainability along our upstream and downstream supply chains as well. In the upstream supply chain, we place minimum requirements in our suppliers. Significant non-financial factors when selecting our suppliers include employee rights, including work safety, efforts to combat corruption, respect for human rights and environmental protection. We aim to avoid any situation in which activities along our supply chain have or favour any harmful effects in terms of human rights.

In terms of our downstream supply chain, our products and services enable our customers to analyse and reduce their energy consumption, for example. Moreover, we ourselves also make investments in sustainable decentralised energy solutions.

The energy industry supply chain, and thus our business as well, is very much shaped by trading with energy carriers, i.e. commodities, which are traded on exchanges or in bilateral contracts.

Only a low share of our total procurement volumes relates to suppliers who provide us with goods or highly qualified services. These suppliers have often been known to us for many years.

The majority of our procurement volumes involve energy carriers such as electricity and natural gas. We typically hedge these by way of financial transactions but do not physically procure them. Recent years have seen greater public interest in the greenhouse gas emissions resulting from the production and transport of natural gas. This particularly relates to natural gas from Russia and LNG 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.

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 conduct 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/centralprocurement.** 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 **www.mvv.de/responsibility,** procurement terms and compliance guidelines. Furthermore, the internal process 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 of 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.

102-10 Significant changes to the organisation and its supply chain

No significant changes to the organisation and its supply chain arose in the year under report.

102-11 Precautionary principle or approach

We account for the precautionary approach to dealing with potential negative environmental implications by recording relevant developments in our risk management system at an early stage **www.mvv.de/GB2020e.pdf, Page 82.**

102-12 External initiatives

We play an active role in specialist bodies, associations and networks, participate in research projects and take part in the public debate surrounding the energy turnaround and climate neutrality. MVV is involved in regional, national and international sustainability initiatives. Examples here include the UN Global Compact in connection with the international Sustainable Development Goals (SDG), the Science-Based Targets Initiative, BAUM E.V., WIN!-Charta and the Baden-Württemberg Climate Alliance. Moreover, we occasionally finance studies and surveys on matters relating to the energy industry. These are published and our involvement is suitably signalised. We have commissioned the Wuppertal Institute, for example, to compile an energy framework study for Mannheim. This should show how existing energy infrastructures and services can contribute to the electricity, heating energy and transport turnarounds and indicate which new infrastructure measures will be needed for Mannheim to achieve its ambitious climate protection targets. This study, which was initiated together with the City of Mannheim, will be published in the first quarter of 2021.

102-13 Membership of associations

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), technischer Verband der Energieanlagen-Betreiber VGB PowerTech e. V. (VGB), 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.

102-14 Statement from senior decision-maker

Foreword, Page 7.

We have presented MVV's strategy in detail in our current 2020 Annual Report **www.mvv.de/GB2020e.pdf, from Page 21 onwards.**

Ethics and Integrity

102-16 Values, principles, standards and norms of behaviour

As part of society, we see ourselves as being obliged to adhere consistently to all requirements and laws applicable to MVV and to report transparently on the management and supervision of our company. We meet our responsibility to the public – our shareholders, customers, business partners and employees – by ensuring high-quality compliance and corporate governance. We report on these areas in detail in our 2020 Annual Report **www.mvv.de/GB2020e.pdf, Page 67** (Corporate Governance Declaration), **Page 60** (Combined Non-Financial Declaration).

Governance

102-18 Governance structure

As a publicly listed stock corporation, MVV Energie AG has three governing bodies: the Annual General Meeting, its Supervisory Board and its Executive Board.

In our 2020 Annual Report, we report extensively on shareholders' rights of involvement and supervision **www.mvv.de/GB2020e.pdf, Page 68 onwards.** We also report in detail in the 2020 Annual Report on the dual management system required by law, the composition and mode of operation of the Executive and Supervisory Boards, on the diversity concepts and on the work performed by the Supervisory Board's committees **www.mvv.de/GB2020e.pdf, Page 70 onwards.** The Supervisory Board Report provides information about the work it performed in the 2020 financial year **www.mvv.de/GB2020e.pdf, Page 11 onwards.**

Sustainability management

Our sustainability management is anchored on 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 also evaluate investment projects by reference to sustainability criteria. The sustainability department, which is located in organisational terms in our group strategy and energy industry department, coordinates the sustainability strategy, reports to the Executive Board and sustainability bodies and manages the group-wide sustainability programme. This department shares information across business fields and is also where projects and measures are planned and implemented. Moreover, sustainability management is responsible for major aspects of MVV's stakeholder management. The operative implementation of measures is also executed independently within the business fields.

The key focus of our sustainability management is on topics, processes and measures that we view as forming part of our core business and in which MVV can make a major contribution towards sustainable development **102-6 Markets served Page 11** and **Corporate strategy www.mvv.de/GB2020e.pdf, Page 21 onwards.** Our strategic sustainability targets **Page 27** have been set by the Executive Board for the period from 2016 to 2026 and are a firm component of our corporate strategy. In 2020, these targets were supplemented with additional decarbonisation targets **Page 27** which we aim to achieve by 2030 at the latest.

Stakeholder Engagement

102-40 List of stakeholder groups

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 customers, employees and shareholders 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, associations and suppliers. These are joined by cooperation partners, business partners and research institutes.

102-41 Collective bargaining agreements

Of our employees in Germany, 73 % are employed at companies that have concluded collective bargaining agreements.

102-42 Identifying and selecting stakeholders

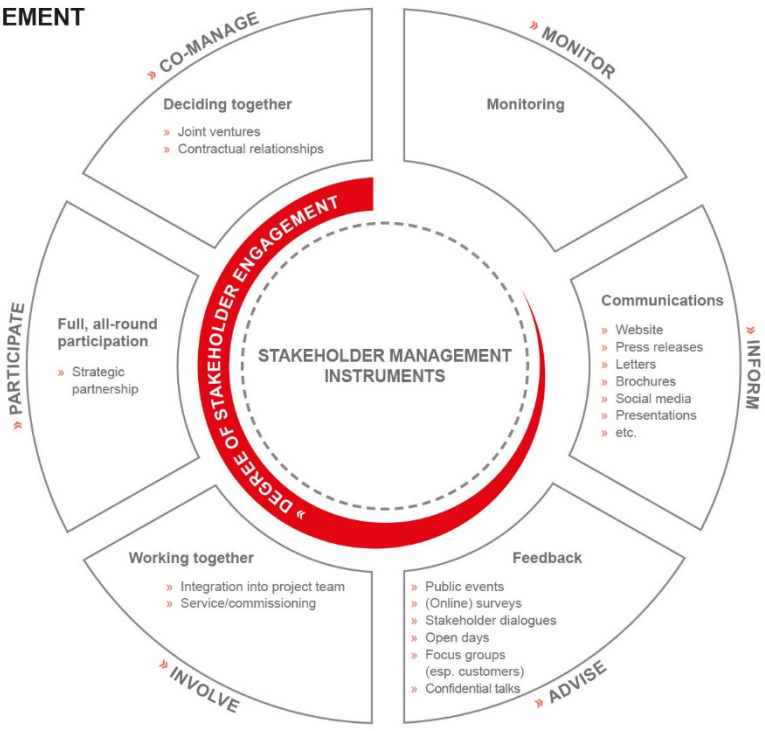
We are open to the concerns of all our stakeholders and seek ongoing dialogue with them. This makes it possible to assess a variety of perspectives and concerns more closely and to factor these into our company's activities.

102-43 Approach to stakeholder engagement

MVV's stakeholder management is coordinated by the sustainability department, which is located in organisational terms within the group strategy, energy industry and M&A department. We take our regular discussions and interviews with stakeholders as an opportunity to review our material topics. Together with MVV's specialist departments and companies, we assess how far and in which ways we can take account of specific concerns. The findings are then discussed and implemented by our experts in the sustainability programme.

We aim to maintain an open and transparent dialogue with our stakeholders, and that both in our personal contacts with them and via our websites, press releases, social networks and special 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. In the light of the coronavirus pandemic, these activities only took place to a limited extent in the 2020 financial year.

STAKEHOLDER ENGAGEMENT



102-44 Key topics and concerns raised

We address the core concerns of our stakeholders in greater detail in our comments on material sustainability topics **Pages 33-59**.

Overview of stakeholder concerns

Stakeholder group	Material sustainability topics in 2020	Select concerns brought to MVV's attention
Customers	Energy and Environment	• Renewable energies and energy efficiency (products and services for own energy turnaround) • Products for marketing green electricity
	System Transformation	• Energy prices • Position regarding coal exit • Climate protection and climate neutrality
Employees	Economic Output	• Company performance, value creation
	Energy and Environment	• Position regarding coal exit • Climate protection and climate neutrality • Local environmental protection
	System Transformation	• Sector coupling (including e-mobility products and services)
	Employees and Society	• Work safety and health protection (including coronavirus) • Training and development • Diversity
Shareholders, analysts	Economic Output	• Company performance, value creation • Dividend • Green growth
	Energy and Environment	• Position regarding coal exit • Climate protection and climate neutrality
	Employees and Society	• Work safety and health protection
Government and political representatives, non-government organisations (NGOs), associations	Energy and Environment	• Future of GKM plant • Climate protection and climate neutrality • Long-term role of natural gas
	System Transformation	• Hydrogen industry
	Employees and Society	• CSR/sponsoring • Human rights and supply chains, including origin of coal
Residents at our locations	Energy and Environment	• Emissions and influence of pollutants • GKM plant exit and long-term role of natural gas
	System Transformation	• Supply reliability (heating energy)
	Employees and Society	• Society (sponsoring measures)
Suppliers, cooperation and business partners	Energy and Environment	• Climate protection in the value chain • Energy prices
	System Transformation	• Digital transformation • Innovations
	Employees and Society	• Human rights in the supply chain
Research institutes	System Transformation	• Sector coupling and digital transformation (studies and projects) • Hydrogen industry

Focus on customer satisfaction

The satisfaction of our customers was a key focus once again in the 2020 financial year. After all, we aim both to attract new customers and to retain our existing customers in the long term. To measure our performance objectively, we regularly perform customer surveys.

We measure customer satisfaction both with support from independent market research institutes and directly in dialogue with our customers. On this basis, we collect and analyse key figures which we use to shape our customer relationships proactively and positively across all channels. In the 2020 financial year, for example, we took part in the BDEW service monitor for some of our locations. The results showed that, despite restrictions in customer service due to coronavirus, we were able to maintain customer satisfaction at the strong previous year's level. The findings of surveys already conducted provided us with important insights that we will be converting into specific measures in the 2021 financial year. We are adapting the methodology of our annual customer satisfaction survey for the 2021 financial year to enable us to understand the expectations and experiences of our customers even more clearly in future. As well as measuring customer loyalty, we are establishing further performance indicators, such as the customer migration index. This makes it possible for us to record customer satisfaction from a variety of perspectives.

We are also extending our expertise in the area of customer management by investing in personnel resources. Not only that, in the 2021 financial year, we will be expanding our digital interactions with customers. The numerous webinars we use to provide customers with information, particularly about renewable energies and decentralised smart energy solutions, have encountered high levels of acceptance.

Reporting Approach

102-45 Entities included in the consolidated financial statements

Including MVV Energie AG, the MVV Group comprises 155 fully consolidated companies and 36 companies recognised at equity. **www.mvv.de/GB2020e.pdf, Page 158.**

Our reporting generally refers to MVV and all subsidiaries that are fully consolidated in the consolidated financial statements. To supplement this information, in the context of this Sustainability Report we also publish additional data which includes our at-equity shareholdings, as our stakeholders rightly expect a high degree of transparency from us. A large share of our conventional electricity generation, for example, relates to the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM), which we consolidate using the equity method. Moreover, activities at Stadtwerke Ingolstadt are also in the scope of companies recognised at equity. If, for select reporting topics, we focus on our large locations in Mannheim, Offenbach, Kiel and Wörrstadt, we have indicated this accordingly.

102-46 Defining reporting content and topic boundaries

To perform our materiality analysis, we continually monitor public discussions and the positions of our stakeholders. We regularly assess whether and how these have altered the relevance of our material topics. This multistage process involves desk-based research, internal analysis and surveys of those specialist departments which have interfaces with our external stakeholder groups. In addition, in the year under report we also held workshops and interviews with select stakeholders. We review all aspects of the materiality process every three to four years, most recently in the 2018 financial year. Moreover, we also update the main characteristics and prioritisations on an annual basis. In terms of its contents, the materiality analysis accounts for global challenges and megatrends, Sustainable Development Goals (SDGs) **Page 64,** industry and technology-related trends and the expectations of our internal and external stakeholders. We account for the two perspectives relevant to GRI, namely “importance to stakeholders” and “impact of our business activities”. These perspectives result in the topics that we then identify as material pursuant to GRI. Furthermore, on an internal level we also consider further topics that are of relevance to our company.

In determining the GRI-based material topics, we proceed in accordance with the approach recommended by the GRI. When identifying topics, we took account of the perspective of MVV’s specialist departments and companies, as well as of the findings of extensive stakeholder analyses. We classify a sustainability topic as material when our stakeholders deem it relevant and/or the impact of MVV’s business activities is high. We report in detail on these GRI-based material topics **Pages 33-59** and base our reporting on GRI standards. The results of this process were discussed on Executive Board level and their relevance confirmed. Moreover, these results also form the basis for the materiality analysis performed in connection with the combined non-financial declaration in our Annual Report. The GRI-based material topics listed in the following table are material both inside and outside MVV **Pages 20-21.**

Unless we indicate otherwise in the comments on the various indicators, our reporting focuses on those markets and regions in which we primarily operate. These are Germany, the UK and the Czech Republic. Most of our suppliers and partners are also located in these countries.

102-47 List of material topics

List of material topics		
Topic-specific disclosure	**What we aim to achieve**	**What we achieved in the 2020 financial year**
Economic Output		
Economic output (GRI)	We aim to continue generating value and meet our responsibility as an economic player.	We increased our net value added year-on-year by Euro 20 million to Euro 915 million.
Indirect economic impacts (GRI)	We will invest a further total of Euro 3 billion in the energy turnaround in the years ahead.	We invested Euro 322 million.
Energy and Environment		
Materials (GRI)	We increase the efficiency of our plants and reduce emissions from our proprietary generation and at our customers.	We further expanded and increased the density of district heating at our locations. This also included connecting the CHP plant in Mannheim to the district heating grid. We completed the construction of our new gas-fired CHP plant in Kiel. Energy management systems ensure continuous improvement in our plants.
	We reduce our ecological footprint by expanding highly efficient combined heat and power (CHP) generation and district heating and this way reducing the use of non-renewable fuels.	The fuel efficiency rate at our fully consolidated companies rose year-on-year from 57 % to 64 %.
Energy (GRI/MVV)	We will double our proprietary electricity generation from renewable energies by the end of the 2026 financial year. (basis: start of 2017 financial year: 430 MW)	Electricity generation capacities from renewable energies and the biogenic share of waste/RDF at our fully consolidated companies and the companies we recognise at equity amounted to 531 MW, 40 MW more than a year earlier.
	We aim to reduce grid losses in our electricity and heating energy grids.	Grid losses fell year-on-year by 3 % for our electricity grids and rose by 5% for our heating energy grids.
Renewable energies (MVV)	We will connect 10,000 MW of renewable energies to the grid by the end of the 2026 financial year. (basis: start of 2017 financial year; 0 MW)	We developed projects with capacities of 262 MW.
Emissions (GRI)	We will triple our annual CO_2 savings to 1 million tonnes a year by the end of the 2026 financial year. (basis: start of 2017 financial year: around 339,000 tonnes)	Annual CO_2 savings at our fully consolidated companies and the companies we recognise at equity amounted to 766,000 tonnes.
System Transformation		
Supply reliability (MVV)	We are smartly combining renewable and highly efficient conventional energies and contributing to supply reliability.	Our new highly flexible gas-powered CHP plant in Kiel launched operations at the end of 2019. For our Mannheim and Offenbach locations, we pressed ahead with plans to safeguard supply reliability following the coal exit.
	We aim to minimise interruption-induced failure in the electricity supply.	We were able to ensure a largely interruption-free supply of electricity.
Sector coupling (MVV)	We actively contribute to sector coupling.	We launched operations with further sector coupling infrastructure projects. At the beginning of the 2021 financial year, we installed Mannheim's 100th charging point. We also expanded the e-mobility infrastructure at our locations in Offenbach and Kiel.

Topic-specific disclosure	What we aim to achieve	What we achieved in the 2020 financial year
System Transformation		
Changed energy demand (MVV)	We prepare our supply grids for changes in energy demand in the electricity and heating energy sectors as a result of the energy system conversion or energy efficiency measures.	As well as systematically accounting for this factor in our strategic investment planning, we also initiated and/or continued with innovation projects.
Changed infrastructures and smart cities (MVV)	We are contributing our expertise to make municipal infrastructures and services fit for the future on behalf of local authorities and companies.	We commissioned the Mannheim Energy Framework Study from the Wuppertal Institute.
Digital transformation (MVV)	By promoting digitalisation and networking in our own processes, at our customers and in our products, we safeguard MVV's future performance capacity.	In our digitalisation programme, we further automated our internal processes. Furthermore, we promoted the digital dialogue with our customers.
	As a competent partner, we offer all customers – from private households to industrial players – the products and services they need to implement their own energy turnarounds.	We supplemented our portfolio of solutions with newly developed services and products relating to the energy turnaround and climate neutrality.
Information security and data protection (MVV)	We work with an extensive range of technical and organisational security measures to ensure information security and data protection.	We are continually improving the processes used to protect information.
Employees and Society		
Occupational health and safety (GRI)	We support our employees in remaining healthy.	We extended our range of services for employees, particularly those suitable for home office application during the pandemic.
	We aim to keep the lost time injury frequency (LTIF) rate as low as possible.	The lost time injury frequency (LTIF) rate amounted to 6.7.
Training and education (GRI)	With our broad range of training programmes, we aim to present to young people the whole variety of professional opportunities at the company.	We employed 341 trainees as of 30 September 2020.
	We aim to further develop our employees' potential.	Our employees took part in a variety of internal and external training and development programmes.
Diversity (MVV)	By 2021, we aim to raise the share of female employees at our Group to 35 % and the share of management positions held by women to 25 %. (basis: 30 June 2015: 27 % and 14 %)	Women accounted for 28 % of the Group's workforce. At 15 %, the share of female managers is unchanged on the previous year.
Local communities (GRI)	We aim to communicate transparently and openly with our stakeholders.	We upheld our various reporting and communications instruments. Since 2020, our CO_2 targets have been SBTi-certified.
Society (MVV)	We aim to show our commitment to the society in which we operate.	We continued our sponsoring and support measures in a targeted manner.

1 (GRI): Disclosure pursuant to GRI standards; (MVV): additionally reported contents

102-48 Restatements of information

We restructured our material topics in the year under report, as we now base the structure of our reporting on the GRI structure. The changes arising as a result are presented in 102-49.

102-49 Changes in reporting

In the table below, we show how our material topics changed compared with the previous year and explain the changes made.

Changes in reporting

Structure of material sustainability topics in 2019	Structure of material sustainability topics in 2020	Year-on-year changes
	Economic Output • Economic output • Indirect economic impacts	• Value creation removed from Social Commitment and presented at the beginning in accordance with the structure of GRI standards.
Decarbonisation and Energy Turnaround • Climate protection • Renewable energies • Energy efficiency Resource Efficiency and Local Environmental Protection • Resource efficiency • Local environmental protection	Energy and Environment • Materials (resource efficiency) • Energy (energy efficiency) • Renewable energies • Emissions	• Climate protection now under emissions 305 • Resource efficiency now under materials 301 • Energy efficiency now under energy 302-5 • Local environmental protection now under emissions 305-7
System Change • Supply reliability • Sector coupling • Changed energy demand Digital Transformation • Industry 4.0: Changed patterns of consumption and customer relationships • Individual customer solutions • Information security and data protection	System Transformation • Supply reliability • Sector coupling • Changed energy demand • Changed infrastructures and smart cities • Digital transformation • Information security and data protection	• New: Changed infrastructures and smart cities (previous year: topic of high business relevance) • Merged: Changed patterns of consumption and customer relationships and individual customer solutions to: Digital transformation
Employee Concerns • Training and development • Diversity • Occupational health and safety Social Commitment • Economic output • Local communities • Society	Employees and Society • Occupational health and safety • Training and development • Diversity • Local communities • Society	• Economic output is now a separate topic

102-50 Reporting period

Unless otherwise indicated, the information we provide in this report refers to our 2020 financial year (1 October 2019 to 30 September 2020).

102-51 Date of most recent report

February 2020

102-52 Reporting cycle

Annual

102-53 Contact point for questions regarding the report

Dr. Mathias Onischka
Head of Sustainability Department
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mathias.onischka@mvv.de

102-54 Claims of reporting in accordance with the GRI Standards

This report has been compiled in accordance with the “Core” option of the GRI Standards.

102-55 GRI content index

In the GRI content index **Pages 60-62** we list both the material topics for our Group and the associated topic-related disclosures pursuant to GRI Standards. Furthermore, we also public topic-specific disclosures relevant to our own company. The page references in the index all refer to this 2020 Sustainability Report.

102-56 External assurance

In the year under report, the information provided in this report was not subject to any external assurance.

The combined non-financial declaration which we published in our 2020 Annual Report was subject to a limited assurance audit performed by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Frankfurt am Main. The information provided there on various aspects pursuant to the German Commercial Code (HGB) has been included in this Sustainability Report **www.mvv.de/GB2020e.pdf, Page 45 onwards.**

Management Approaches

103 MANAGEMENT APPROACH
103-1, 103-2, 103-3

In determining the GRI-based material topics, we proceed in accordance with the approach recommended by the GRI. When identifying topics, we took account of the perspective of MVV's specialist departments and companies, as well as of the findings of extensive stakeholder analyses. We report in detail on these GRI-based material topics **Page 33 onwards** and base our reporting on GRI standards. The results of this process were discussed on Executive Board level and their relevance confirmed. The GRI-based material topics are material both inside and outside of MVV **Pages 20-21.** We present changes compared with the previous year under **102-49 Page 22.**

Material topic: Economic Output

Background

Given the challenges presented by climate change, advancing digitalisation and the associated fundamental restructuring of the energy system, the energy industry has been undergoing a long-term transformation for years now. As a commercial enterprise, we can only shape this change process actively if our operations are sustainably profitable.

As a company with regional roots, we are part of society at the locations and in the regions in which we operate. We are aware of and actively accept this role. We assume responsibility for our decisions and actions and our products and services, and that towards our customers and capital providers, as well as towards the environment and the 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, thus securing 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.

Treatment and review

MVV is one of Germany's leading energy companies and covers all material stages of the energy industry value chain. Our objective is climate neutrality. As we head there, we will continue to seize the opportunities presented by the conversion in the energy system to generate sustainable and profitable growth. This way, we will also do justice to the requirements our stakeholders have in MVV's value creation.

MVV provides a detailed explanation of its treatment of the material topic of Economic Output in the combined management report in our 2020 Annual Report. Among other aspects, we report there on our group structure, our business model, our strategy and our value-based corporate management **www.mvv.de/GB2020e.pdf, Pages 19-25.** We also provide a detailed explanation of our business framework **www.mvv.de/GB2020e.pdf, Pages 28-35.** We account for our entrepreneurial responsibility by continually observing, analysing and assessing our opportunities and risks **www.mvv.de/GB2020e.pdf, Page 82-90.**

In our input/output balance sheet **Page 38,** we present all significant flows of materials, energy, goods and money that are associated with our business activities.

Material topic: Energy and Environment

Background

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

Climate scientists have also underlined the urgency of adopting a significantly more ambitious approach towards decarbonisation by publishing new analyses, such as the IPCC Special Report 1.5°C, not least as global warming is advancing much faster than forecast just a few years ago.

Over the past two years, far-reaching political decisions have been taken concerning climate change in response to international and national movements within society.

The great challenge is still the national and European goal of becoming climate neutral across all sectors 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 assumed. On the other hand, more renewable energies will have to planned and implemented to cover the full decarbonisation of other sectors, for example by working with power-to-gas or power-to-liquids.

Our energy generation and our products and services are still not fully compatible with these long-term ecological sustainability targets. We use limited natural resources. Not only that, the space we use and the emission of pollutants have a harmful effect on the environment. We take responsibility for this and have been pressing ahead with our own energy turnaround and that of our customers for many years now.

Treatment and review

As a company, we aim to achieve climate neutrality as quickly as possible. We aim to avoid any negative impact of our business activities on the environment or, where this is unavoidable, to significantly reduce this impact. We clearly affirmed this approach once again in autumn 2020 by participating in the “Business Ambition for 1.5°C“ initiative promulgated by the Science Based Targets Initiative and underpinning this commitment with correspondingly validated targets. With this public initiative, we are making it clear that MVV is aiming to develop its business in ways that are consistent with the ambitious decarbonisation targets required for a 1.5-degree path. In the long term, we are aiming for an energy system based on renewable energies that requires as little external input as possible. To achieve that aim, we are pursuing specific sustainability targets, which we supplemented with additional decarbonisation targets in the 2020 financial year.

We compile our greenhouse gas balance sheet on the basis of the Greenhouse Gas Protocol. The overwhelming share of the CO_2 emissions we report comes from plants governed by the emissions trading system (ETS) and is therefore certified. We collect further data with the assistance of various internal and external systems. Among others, these include energy audits and energy management systems, occupational health and safety systems such as OHSAS 18001, environmental management systems such as EMAS and compliance management systems.

Resource efficiency, local environmental protection and recycling-based economy

We use natural resources to generate energy. Our conventional generation plants also use finite resources such as natural gas and hard coal as fuels. We accord great importance to very high resource efficiency. One key indicator of efficient use involves the highest fuel efficiency rates resulting from optimised use of the energy contained in the fuel. This means that we minimise the energy losses arising when the fuels are converted into end energy, such as electricity or heating energy. It also means that we consistently invest in enhancing the energy efficiency of our generation plants and expanding Green Heat in conjunction with highly efficient combined heat and power generation **301-01 Page 35.**

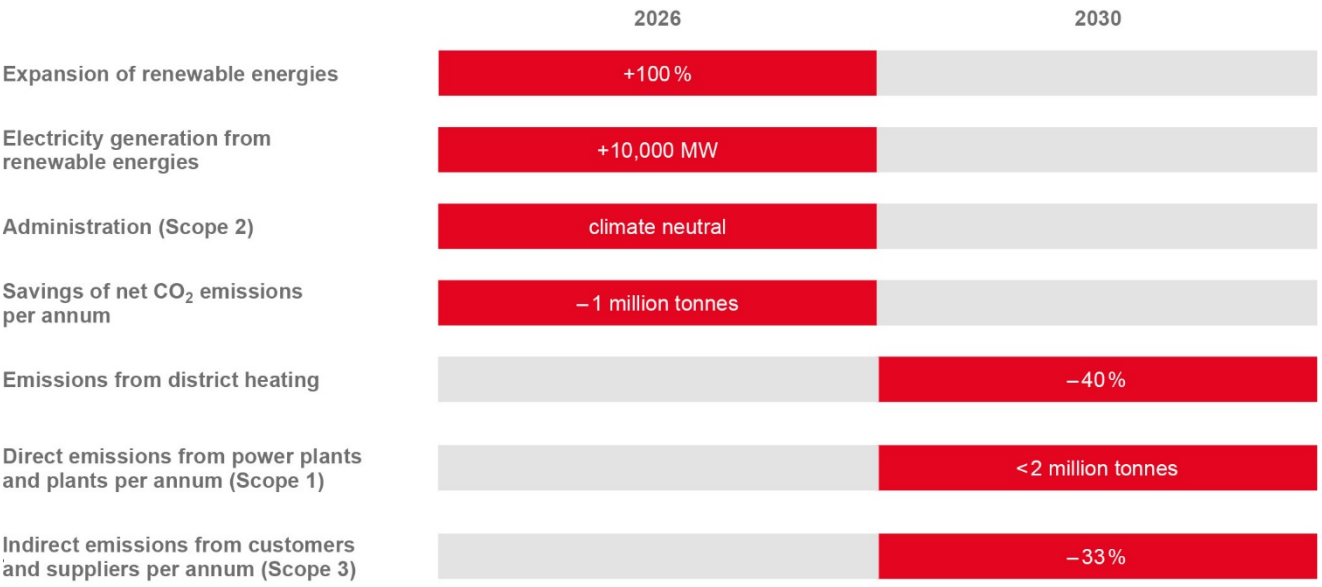
Local environmental protection is a fixed component of our management systems, into which quality and compliance aspects are also integrated. For us, environmental protection on both national and local levels is closely based on legal requirements. Approval requirements and strict threshold values form the basis for our activities, and that both when we build or modernise plants and in our day-to-day operations. Compliance with these prescribed values is monitored by the relevant authorities. Certain aspects of our operations, such as plant-specific emissions at large combustion plants, are subject to reporting requirements. Our subsidiaries and shareholdings are responsible for the operative management of environmental concerns on a decentralised basis. As they use different technologies and our stakeholders in the regions have different concerns, these companies set their own relevant focuses within the framework provided by our group-wide guidelines. We work with decentralised environmental and energy management systems for the control and operative implementation of environmental protection measures. Where possible, we avoid other harmful environmental effects resulting from the

generation and provision of our products and services or reduce these to a minimum. We pay attention, for example, to reducing other air pollutants. We treat the pollutants incurred very carefully. In the interests of recycling, unavoidable waste from energy generation and waste incineration, such as ash and slag – so-called by-products – is turned wherever possible into products for other companies. Where this is not possible, the waste is disposed of correctly.

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.

Decarbonisation and energy turnaround
As a company, we are aiming to achieve climate neutrality as quickly as possible. Climate neutrality means decarbonising not only our own generation activities, but also the upstream emissions at our suppliers and the downstream emissions at our customers. We are convinced that climate neutrality can only be achieved by working with a long-term work programme that covers all business activities along the value chain. This also means reducing the transmission losses in the grids we operate.

OUR CLIMATE PROTECTION AND SUSTAINABILITY TARGETS



With our strategic **sustainability targets,** we have set ourselves clear and measurable targets as we head for climate neutrality, in this case for the period from 2016 to 2026.

- We will triple our annual CO_2 savings to one million tonnes a year.
- We will connect 10,000 megawatts of new renewable energies capacities to the grid.
- We will double our proprietary electricity generation from renewable energies.
- The energy system of the future remains our key investment focus. In the years ahead, we will invest a total of three billion euros in the energy turnaround and decarbonisation.
- As a competent partner, we offer all customers – from private households to industrial players – the products and services they need to implement their own energy turnarounds.

Our **decarbonisation strategy** covers four areas:

- Generation positions

  We are gradually reducing emissions from our conventional energy generation positions to zero.

- Renewable energies

  We are pressing further ahead with expanding renewable energies. Furthermore, we are replacing conventional heating energy generation with low-CO_2 and renewable sources.

- Climate neutrality at our customers

  Our products and services facilitate climate neutrality at and by our customers. We will significantly cut energy-related emissions at our customers and thus improve their climate footprints.

- Handling residual emissions

  At our plants, we exploit all ways of reducing unavoidable emissions to a minimum. Any remaining residual emissions, such as those resulting from waste incineration, can currently only be offset or made usable by drawing on new technologies. This being so, we are monitoring and reviewing relevant options for capturing and storing CO_2.

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, also in terms of their contribution to decarbonisation. We report on the progress we make in decarbonising our business just as transparently as we do on our direct and indirect CO_2 emissions and CO_2 savings.

In our decarbonisation strategy, we do not exclude any sources of emissions, but rather account for all indirect emissions at our customers and suppliers, as well as the emissions from our waste incineration activities.

In the 2020 financial year, we supplemented our sustainability targets with the following decarbonisation targets which we aim to achieve by 2030 and which cover all aspects 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 generative 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 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, there is the challenge 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 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 (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 also aim to 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.

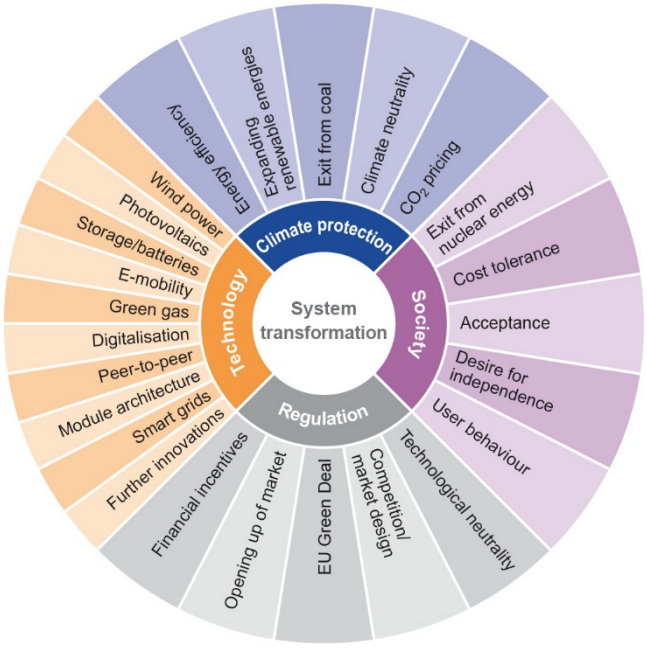
Our existing decarbonisation target, namely that MVV's CO_2 reductions should be measured in terms of their effect on the overall system and not only on MVV's climate balance sheet, remains valid. Here, we account for genuine, i.e. climate-effective CO_2 savings along the entire value chain. This target also includes our at-equity shareholdings.

Material topic: System Transformation

Background

The energy system transformation comprises numerous different aspects that are interconnected and interact with one another. Energy companies play a key role 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 upholding supply reliability. The supply of electricity, gas, heating energy and water has to remain reliable and stable. The advancing energy turnaround raises new questions, as the volume of electricity fed in from wind turbines or photovoltaics fluctuates in line with weather conditions and the time of day. For the energy turnaround to succeed, the transport and heating energy sectors will also have to use electricity from environmentally-friendly generation – and these developments will lead to changes in energy demand. Energy generation has traditionally been a demand-driven market and is now increasingly characterised by interactive relationships between supply and demand. This trend will intensify further in future. The ongoing development in energy demand impacts on strategic planning in all of MVV's business fields and on our decisions about future growth investments. Transforming the energy supply system will require numerous individual projects to be conducted on a decentralised basis. There is a need for end-to-end concepts for urban districts and quarters, for example, as the ongoing trend towards urbanisation is creating substantial environmental burdens. Growing populations in large built-up areas make it necessary to further develop town and cities into "smart cities", to further develop their infrastructures and their environmental and climate protection measures, while also offering an opportunity to implement sustainable forward-looking plans. Alongside these developments, the digitalisation of the energy industry is making further advances, and with this the networking and automation of business processes. Moreover, digitalisation always involves focusing on the security of information and data.

MATERIAL ASPECTS OF SYSTEM TRANSFORMATION



Treatment and review

The various challenges and aspects associated with the energy system transformation form part of our business activities. The Executive Board develops and adopts the corporate strategy **www.mvv.de/GB2020e.pdf, Page 21 onwards** and monitors its implementation. With an extensive investment programme that has a long-term focus and is based on our sustainability targets **Pages 26-27,** we are pressing ahead with this transformation in the energy system, largely on a project-by-project basis. Our measures cannot be viewed in isolation and allocated to just one business or organisational unit, as they involve topics that affect the whole of MVV. Here, the business fields also bear responsibility for the topics on a decentralised basis. We observe, analyse and assess the development in our market climate and carefully weigh up the opportunities and risks involved in entrepreneurial decisions.

Supply reliability
As an energy company and distribution grid operator, we ensure that we provide our customers with a secure and reliable supply of energy. This makes it necessary to smartly combine renewable energies with highly efficient, flexible and controllable power plants. The reliability, smartness and performance capacity of our grids have a key role to play in this respect. That is why we continually invest in maintaining, expanding and optimising our grids and plants and thus help to maintain supply reliability.

Sector coupling
We are actively involved in sector coupling and are pressing further ahead with this topic. In terms of the heating energy supply, our focus is currently on making conventional generation more flexible, for example by working with power-to-heat solutions such as heating energy storage facilities, and on e-mobility and activities involving the production and use of hydrogen.

Changed energy demand
As we head for the energy system of the future, renewable energies will have to be smartly linked with highly efficient conventional energies and energy storage facilities. Not only that, flexible sources of demand will also have to be integrated. For us as a company, that means we are making sure that our customers themselves can play an active role in the energy turnaround. As a competent partner, we offer all customers – from private households to industrial players – the products and services they need to implement their own energy turnarounds.

Changed infrastructures and smart cities
The trend towards smart cities is a process in which we act as a partner to local authorities and innovative municipal utility companies. Here, information and communications technology solutions can help in mastering the challenges involved.

Digital transformation
One major future trend for us is the digitalisation, networking and automation of business processes, and not just of our own processes: We provide our customers with individual solutions enabling them to align their processes even more holistically and efficiently. This way, we are also helping to reduce the long-term impact of energy consumption on the environment. Digitalisation at the company – both in terms of its own processes, products and services and with regard to digitalisation and networking at our customers – is a key driver in securing MVV's future success. Here, digital solutions offer not only economic benefits, but also opportunities to reach ecological and social targets. At MVV, the cross-divisional topic of digitalisation is being implemented across all business fields. We coordinate key aspects of this process in our digitalisation programme, an approach which also ensures a close exchange of information and ideas with our sustainability programme.

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

Material topic: Employees and society

Background

Highly qualified and motivated employees form the basis for the company's sustainable success. Given demographic change, it is important to find the right employees for us and to work together with them on a long-term basis. As an employer, we accord great importance to protecting the safety and health of our employees. We offer a wide range of training and development opportunities and are committed to fostering diversity at the company.

We are working closely on building the energy system of the future and on expanding renewable energies. To increase acceptance by people on location, one factor that is crucial for many projects is to enter into open dialogue with our stakeholders and local communities. Furthermore, making a contribution to the common good in those regions in which we operate is also important to us.

Treatment and review

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

Employees
We offer attractive and secure jobs to more than 6,200 employees. This is a great responsibility, also towards society, 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 and existing dialogue formats were changed and adapted to the new working requirements.

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

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

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

- Demographics, work-life balance, remuneration management: 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.

With a view to the company's sustainable development in future, MVV has set itself the strategic target of designing and gradually implementing "Energy for Diversity", a diversity management programme tailored to MVV's needs and in line with the times. This is based on the pillars of promoting women, work and family and demographic management.

Furthermore, with our broad range of training options we aim to offer young people a diverse range of career opportunities at the company.

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

Local communities

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

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

Topic-Specific Disclosures

Economic Output

201 ECONOMIC OUTPUT

201-1 Direct economic value generated and distributed

Creating value

In our input/output balance sheet **Page 38,** we present all significant flows of materials, energy, goods and money associated with our business activities. Our economic success is reflected in the adjusted EBIT and ROCE key figures. Consistent with the logic of business administration, these and other key earnings figures chiefly refer to the economic capital committed or created. Our value added statement supplements the perspectives provided in the input/output balance sheet, as well as those in the consolidated financial statements, as we present all the "added values" we create and measure these at market prices. Value added reflects the output generated at market prices and resulting from the efficient deployment of all resources – capital, employees and natural resources. It thus represents MVV's contribution to gross domestic product.

We aim to continue generating value and this way meet our responsibility as an economic player.

In our value added statement, we calculate the net value creation of our operations. This figure comprises our production value, from which our input costs and capital consumption are deducted. This measurement nevertheless only approximates to the value we actually create. After all, measuring net value creation on the basis of market prices does not account for non-monetary output such as intellectual capital and other external costs like adverse environmental impacts. As a company, we nevertheless aim to minimise any such implications of our activities for society, people and the natural world.

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Generation of value added

Euro million	FY 2020	FY 2019	+/– change	% change
Company performance [1, 2]	3,822	4,065	– 243	– 6
Input costs [2, 3]	– 2,692	– 2,986	– 294	– 10
Depreciation	– 215	– 184	+ 31	+ 17
Value added	915	895	+ 20	+ 2

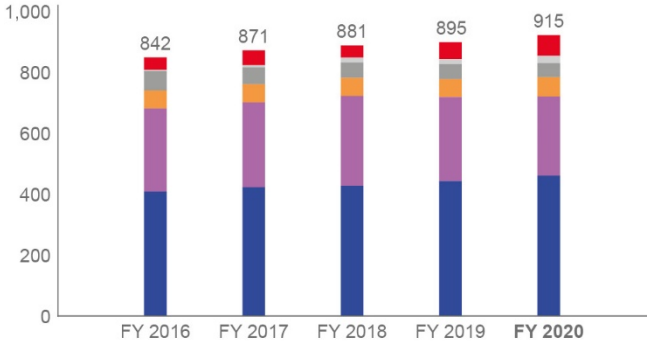
1 Mainly sales
2 Previous year's figures adjusted. Accounting method adjusted in connection with NIFRIC "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)".
3 Cost of materials/energy and fuel procurement, other expenses, other taxes

Utilisation of value added

Euro million		FY 2020	FY 2019	+/– change	% change
Recipient	Utilisation				
Employees	Wages, salaries and social security payments	456	438	+ 18	+ 4
State authorities	Taxes on income, other taxes, concession duties and levies	258	274	– 16	– 6
Shareholders	Dividend	63	59	+ 4	+ 7
Lenders	Interest expenses	46	52	– 6	– 12
Other shareholders	Share of group earnings attributable to non-controlling interests	24	17	+ 7	+ 41
MVV	Retention of earnings	68	55	+ 13	+ 24
		915	895	+ 20	+ 2

ALLOCATION OF VALUE ADDED

Euro million



	FY 2020 Shares %
MVV (retention of earnings)	7
Minority interests (share of group earnings attributable to non-controlling interests)	3
Lenders (interest expenses)	5
Shareholders (dividend)	7
State authorities (taxes on income, other taxes, concession duties and levies)	28
Employees (wages, salaries and social security payments)	50

The figures presented in the value added statement for the 2020 financial year reflect fundamental trends. Despite a slight reduction in sales and an increase in depreciation and amortisation, we were once again able to increase our value added. This reflects our long-term growth strategy.

We also present how this value added has been used. We continued to enable our shareholders to participate stably in the value added we created, and that although the trend towards low returns on capital in recent years has persisted. The high distribution quota, equivalent to 60 % of adjusted annual net income after minority interests, also demonstrates our commitment to the long-term continuity of our dividend payment. We are perpetuating this trend, not least with the proposed increase in the dividend from Euro 0.90 to Euro 0.95 per share. Just under a third of our value added benefits state authorities. Part of this sum is paid to the City of Mannheim on top of the dividend payments it receives as majority shareholder. The largest share of our value added is attributable to our employees. Here, the slight year-on-year increase is due to the higher number of employees, as well as to collectively agreed pay rises.

203 INDIRECT ECONOMIC IMPACTS

203-1 Infrastructure investments and services supported

Within our extensive investment programme, we have invested for years now in our existing plants, in expanding and maintaining our grid infrastructure, in developing smart grids and in energy storage systems. A further investment focus relates to renewable energies, where we have a constantly growing plant portfolio. These mainly involve onshore wind turbines and biomass plants to generate electricity, heating energy and biomethane. We invested a total of Euro 322 million in the 2020 financial year.

Energy and Environment

301 MATERIALS

301-1 Materials used by weight or volume

Resource efficiency

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

The fuel efficiency rate key figure shows the efficiency of generation by presenting the volume of end energy generated (electricity and heating energy) as a ratio of the energy input (primary energy). If the fuel efficiency rate increases, the generation portfolio has a higher energy yield. By continually increasing the fuel efficiency rates of our plants, we reduce the volume of fuels used and cut our emissions. In the year under report, our plants had an average fuel efficiency rate of 64 %. Our energy yield is thus ahead of the German average for generation activities. The Working Group on Energy Balances (AG Energiebilanzen) published an average fuel efficiency rate of 51 % for electricity generation at German power plants in 2019.

We operate our major generation plants almost exclusively in highly efficient combined heat and power (CHP) generation. After all, the fuel efficiency rate for CHP is significantly higher than when electricity and heating energy are generated separately. In the year under report, we launched operations at our new gas-fired power plant in Kiel, which generates electricity and heating energy using CHP **Page 39.**

The volume of fuel that has to be used in individual financial years largely depends on developments in weather conditions and market prices, as well as on the properties of the fuel in question. By-products, primarily ash and slag, arise in our waste incineration and CHP plants **Page 38.** The volume of this ash and slag is determined by technical factors or by the fuels used and does not lie within our control. Wherever technologically possible and economically viable, we put these by-products to further use. Consistent with the cascade use principle, we prepare them so that they can be returned to the economic cycle, for example as products for the construction industry. Non-recyclable residual volumes have to be sent for landfilling in line with legal requirements. Other by-products and toxic or hazardous substances, such as polychlorinated biphenyls (PBC) play no role, or only a subordinate role, in our business activities. The handling of such substances and relevant control mechanisms are regulated in our management systems for work safety and for quality and the environment.

Fuels used at power plants
Fully consolidated companies

	FY 2020	FY 2019	+/– change	% change
Biomass [1] (1,000 tonnes)	512	512	0	0
Biogenic share of waste/RDF (1,000 tonnes)	1,939	1,939	0	0
Natural gas (kWh million)	3,333	1,809	+ 1,524	+ 84
Hard coal (1,000 tonnes)	57	71	– 14	– 20
Other fossil fuels (kWh million)	277	337	– 60	– 18

1 Previous year's figure adjusted

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

	FY 2020	FY 2019	+/– change	% change
Biomass [1] (1,000 tonnes)	545	546	– 1	– 0
Biogenic share of waste/RDF (1,000 tonnes)	1,939	1,939	0	0
Natural gas (kWh million)	3,342	1,830	+ 1,512	+ 83
Hard coal (1,000 tonnes)	664	886	– 222	– 25
Other fossil fuels (kWh million)	278	338	– 60	– 18

1 Previous year's figure adjusted

Average fuel efficiency rate
Fully consolidated companies

%	FY 2020	FY 2019	+/– change	% change
	64	57	+ 7	+ 12

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

%	FY 2020	FY 2019	+/– change	% change
	66	63	+ 3	+ 5

Coal use

Political decisions on coal exit and move to “Green Heat”

By adopting the German Act to Reduce and End Coal-Fired Power Generation (German Coal Exit Act - KAG) in early July 2020, lawmakers demonstrated their clear commitment to making an economically sustainable move to a climate-neutral energy system. Its core component is the decision to decommission the final coal-fired power plant by 2038 at the latest and, if conditions in the energy industry permit, even by 2035.

A two-stage procedure applies for decommissioning hard coal-fired power plants. In Phase 1, such plants leave the market voluntarily by way of a tender process. The first round in December 2020, which was oversubscribed, led to the decommissioning of power plant capacity amounting to 4.7 GW as of 1 January 2021. In Phase 2, due to start in 2026, the remaining hard coal-fired power plants will be decommissioned by regulatory law and without compensation, with the measures already taking effect from 2024 should tender volumes not be met. Due to the high volume of lignite capacities initially remaining in the grid, the final hard coal-fired power plants are currently expected to leave the market before 2038 already.

Numerous hard coal-fired power plants are operated using combined heat and power (CHP) generation and play a key role in supplying district heating to large built-up areas. CHP power plants can in most cases only be decommissioned once a solution for replacing the heating energy generation has been secured. This requires a suitable lead time of several years to implement the necessary planning, approval and construction measures.

From a sustainability perspective, it would be desirable to replace the conventional generation used to supply heating energy directly with renewable or climate-neutral technologies and to skip the interim stage of gas-based generation plants. This on the one hand confronts the district heating supply with technical challenges, as it will be necessary to access sufficient renewable potential in a short timeframe and grid technology requirements will also have to be met. On the other hand, Green Heat should and indeed has to remain competitive. This will only be possible by creating the necessary administrative and financial conditions.

A draft version of the “Federal Subsidy Programme for Efficient Heating Energy Grids” (BEW) is due to be presented in the first half of 2021. This will deal both with subsidies for investments in green heating energy generation and with 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.

Coal-based generation decreasing at MVV

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

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

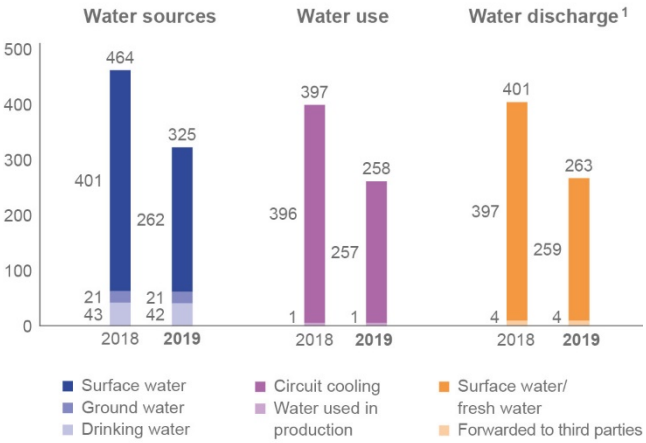
We are a minority shareholder in the large power plant in Mannheim (Grosskraftwerk Mannheim AG – GKM), with a 28 % stake, and do not operate the plant ourselves. The GKM plant currently still operates three hard coal-fired CHP blocks. In the past financial year, GKM AG registered coal-fired Block 7 for decommissioning, i.e. it is no longer available for regular operations. The dates by which Blocks 6 and 8 will be decommissioned are still due to be set by GKM and its shareholders in accordance with the requirements of the German Coal Exit Act (KAG). One factor in this decision will be the speed at which green replacement technologies will be available to generate district heating in the coming years. Block 9 at GKM is one of the newest and most efficient hard coal-fired power plants in Germany. The KAG legislation does not stipulate the precise modalities and decommissioning dates for the newest hard coal-fired power plants. Based on current information, we expect this plant to be decommissioned in the first half of the 2030s.

To decarbonise the district heating supply, we are compiling various concepts which account for all significant forward-looking technologies. We took one first step to reduce heating energy generation from the GKM plant in February 2020 by linking up our waste-fired CHP plant in Mannheim to the regional district heating grid. This means that up to 30 % of annual district heating volumes for Mannheim and the region are generated on a CO_2-neutral basis. In the next stage of decarbonising district heating, we are extending our biomass-fired power plant (waste timber) in Mannheim to include a district heating decoupling facility. Starting in 2024, this CHP plant will make an additional contribution to the district heating supply. Further options are currently being investigated in detail. Among others, they include solutions such as geothermal energy, river heat pumps, the use of biomass, biomethane plants and of waste industrial heat.

Water use

On a global basis, the availability of clean fresh water and drinking water is an increasingly important topic, partly as a result of climate change and partly due to the increasing overuse of groundwater and surface water. At our locations in Mannheim and Kiel, we supply our customers with drinking water from our own waterworks. MVV's water balance sheet clearly shows that most of our water use relates to cooling purposes at power plants.

WATER VOLUMES
m^3 million



1 Due to the low shares involved, water discharged to sewage plants has been omitted from this overview.

Sustainable recycling-based economy

Even when it has been correctly separated, household and commercial waste is by no means "rubbish", but can rather be "recycled" as energy. Treating the waste in strictly controlled conditions at an energy from waste plant offers threefold benefits. Firstly, the waste is sanitised, meaning that materials harmful to people's health or the environment are destroyed. Secondly, the energy contained in the waste is used to produce steam for industry, 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. Thirdly, incineration in this way makes an active contribution to climate protection. The alternative – landfilling – would lead to the emission of large volumes of methane, which is harmful to the climate. The thermal treatment of the waste avoids this. 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. We operate a total of eight energy from waste plants in Germany, the UK and the Czech Republic. At these plants, we incinerated around 2.4 million tonnes of waste and refuse-derived fuels in the 2020 financial year. In the Scottish city of Dundee, we are building a new highly efficient CHP plant that will initially supplement and later replace the existing energy from waste plant.

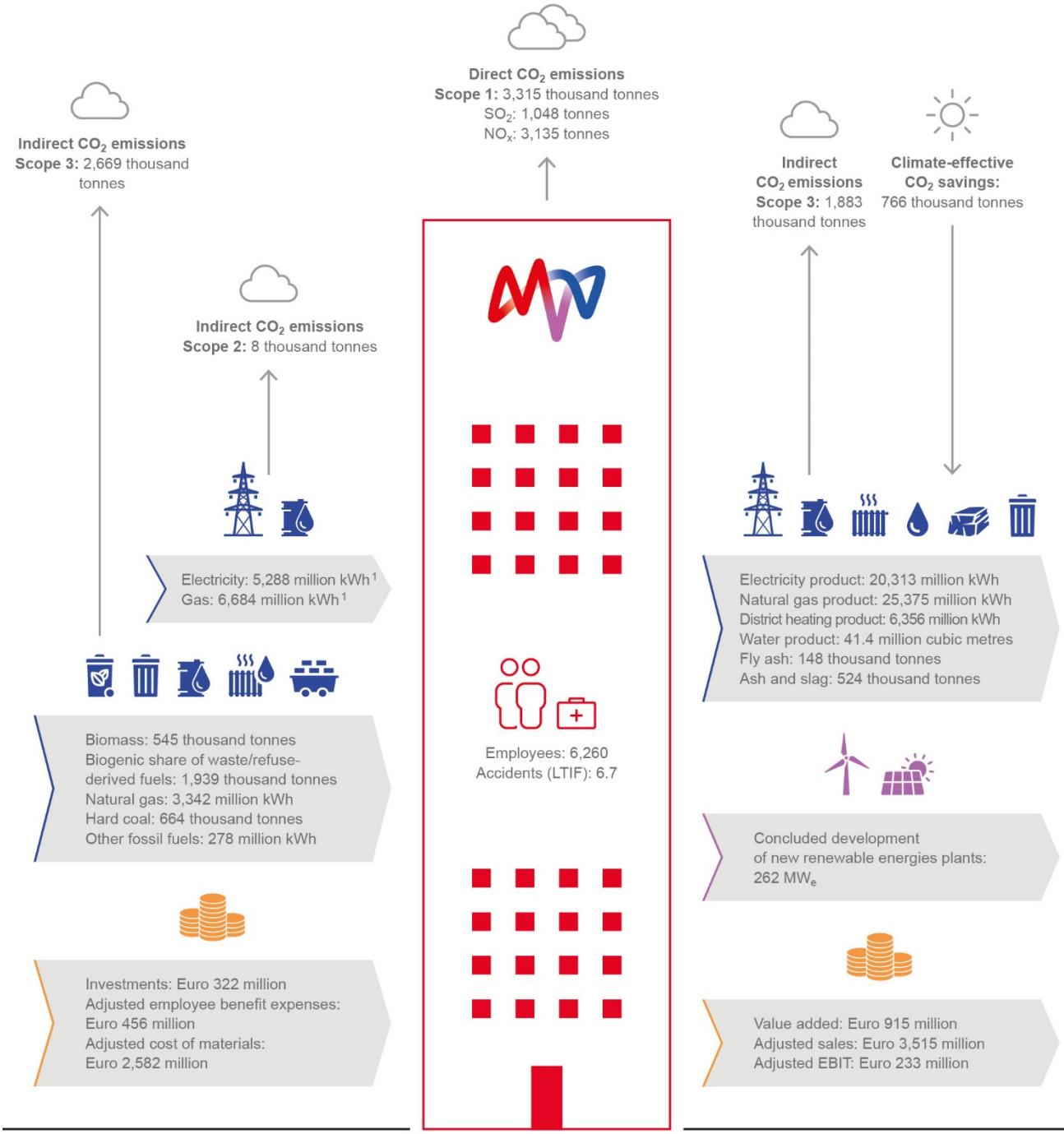
Environmental impacts in our input/output balance sheet

We have compiled an input/output balance sheet each year for several years now **Page 38.** This compares our most important environmental impacts with our value added.

Over the past four years, we have reduced CO_2 emissions at our fully consolidated companies and our at-equity companies by 26 %. Due to the lower volume of conventional electricity generation, the volume of dust and other emissions has also decreased. At the same time, we expanded our electricity generation from renewable energies. The increase in value added over the same period clearly shows that we managed to increase the productivity of our factors (natural resources, capital and employees).

MVV'S INPUT/OUTPUT BALANCE SHEET

Fully consolidated and at-equity companies



1 Excluding sales volumes from trading transactions

302 ENERGY

302-5 Reductions in energy requirements of products and services

Energy efficiency

Energy efficiency involves reducing both the amount of end energy consumed and the volume of primary energy used for generation. We aim to enhance energy efficiency at our plants and at our customers.

By making targeted investments, we are enhancing the efficiency of our generation plants and minimising grid losses resulting from the operation of our electricity and heating energy grids. With our products and services, we in turn support our customers not only to reduce the energy used by their own plants but also to optimise their energy management. We assess the increase in energy efficiency at our generation plants due to modernisation measures on a project-by-project basis. The projects listed below are examples and show how rising levels of energy efficiency at the plants are also accompanied by lower CO_2 emissions.

Increasing the efficiency of our own generation and our infrastructure

Primary energy

The primary energy factor (PEF) indicates the efficiency of infrastructure. It presents the ratio of primary energy used to the volume of end energy yielded and is relevant for meeting legal requirements in terms of heating insulation and building facility technology. We calculate the PEF for our major district heating supply systems in Mannheim, Offenbach and Kiel. The lower the PEF is, the more environmentally-friendly and efficient the energy use is.

Under the German Building Energy Act (GEG), decentralised natural gas or oil-fired heating systems are currently assessed with a PEF of 1.1, while uncertified district heating from combined heat and power has a standardised PEF of 0.6. The new GEG legislation adopted at the end of 2019 also updated the methodological basis used to calculate the primary energy factors, which may lead to slight adjustments in our PEF figures in the medium term.

PEF certification for district heating grids

	FY 2020	Valid until
Mannheim district heating supply system	0.42	2024
Offenbach district heating supply system	0.47	2021
SWKiel [1] district heating supply system	0.28	2024

1 The most recent certification for the SWKiel district heating supply system was conducted as of 1 November 2020 and now amounts to 0.28.

Fuel use at our conventional power plants is managed on the basis of economic criteria. In absolute terms, our primary energy consumption is determined by demand levels on the wholesale markets, i.e. by wholesale electricity prices and the generation margin (clean dark spread or clean spark spread). Moreover, weather-dependent electricity and heating energy demand has a major influence on capacity utilisation rates at our CHP plants. We therefore only have limited ability to control this factor. We report on the fuels used at our power plants on **Page 35**.

Energy efficiency projects

In February 2020, we connected our waste-fired CHP plant on Friesenheimer Insel in Mannheim to the existing district heating grid. This enabled us to raise the energy efficiency of the plant from 57 % to 73 %. Up to 30 % of annual heating energy needs in Mannheim and the municipalities connected to the regional district heating grid now come from the plant on Friesenheimer Insel, and thus from a renewable source. Connecting this plant has also enabled us to generate net savings of 61,000 tonnes of $CO_{2\ eq}$ a year. In the next stage, we are extending the CHP plant to include a facility that represents a further component of a sustainable recycling-based economy. A mono sewage incineration plant will enable us to incinerate municipal sewage while simultaneously recovering phosphorous. This is a valuable raw material in the production of manure. A corresponding plant at Energieversorgung Offenbach is already in the process of launching operations and further plants are set to follow at other locations.

Now that the multiyear planning and construction phase has been successfully completed, Stadtwerke Merseburg is also being supplied with environmentally-friendly waste heat from the TREA Leuna non-recyclable waste incineration plant. This covers 50 % of total district heating requirements at Stadtwerke Merseburg. This way, the municipal utility company can avoid using around 80 million kWh of natural gas and thus do without a major share of the fossil fuels required to provide heating energy. Moreover, the measure will enable CO_2 emissions of up to 16,000 tonnes a year to be avoided. After successful trials, operations were officially launched in the first quarter of our 2021 financial year.

Increasing energy efficiency at customers

We support our customers in the industrial, retail, commercial and real estate sectors in reducing energy input in their systems and optimising their energy management. Our portfolio includes, for example, transparent electricity and gas procurement, solutions for sustainable energy generation, digital energy data management, billing services, contracting, smart metering, e-mobility and LED solutions for lighting concepts. We build energy efficiency partnerships with our customers in which we combine modern measurement technology, software and services. We can make all energy and process costs and all consumption visible to our customers, automate their monitoring and reporting and compile and implement plans to optimise all these factors. This way, we provide our customers with comprehensive solutions and services for all aspects of energy efficiency.

Grid losses

Grid losses arise when electrical energy is transported in electricity grids. They particularly arise due to electrical resistance in the transmission cables and transformation losses between various voltage levels. Grid losses in heating energy grids are due to technical factors and mainly relate to the transport route between the source of the heating energy and the heat sink. The scale of grid losses depends on how well insulated the transport pipes are. The most important factors determining the scale of losses nevertheless involve natural circumstances, such as the temperature and weather conditions.

Grid losses at MVV

kWh million	2019 [1]	2018 [1]	+/– change	% change
Electricity	135	139	– 4	– 3
Heating energy	515	491	+ 24	+ 5

1 Calendar year

Grid losses can be reduced with long-term infrastructure measures, such as improved insulation and other technical methods. The year-on-year change for heating energy grid losses is mainly due to grid losses at Energieversorgung Offenbach. Due to the time lag between metering and the deferral of volume data, changes may arise in the volume of heating energy losses calculated in individual years.

MVV TOPIC RENEWABLE ENERGIES

Renewable energies: backbone of energy turnaround

Electricity generation in Germany will be based almost entirely on renewable energies by 2050 at the latest. For our company, this situation harbours growth potential; 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 to achieving climate protection targets on behalf of society as a whole.

In this area as well, we set two specific sustainability targets in 2016 already and intend to reach these by the end of the 2026 financial year:

On the one hand, we will double our proprietary electricity generation from renewable energies in the period from 2016 to 2026. This target of doubling our generation to more than 800 MW also includes the shareholdings we recognise at equity. To enable us to reach our target, we are consistently investing in expanding our proprietary renewable energies generation portfolio. Here, our focus is above all on onshore wind turbines.

Including companies recognised at equity, our renewable energies electricity generation capacity stood at 531 MW at the end of the 2020 financial year, 40 MW higher than in the previous year. This increase was mainly due to the fact that we expanded our wind power portfolio.

Moreover, between 2016 and 2026 we will be connecting 10,000 MW of renewable energies to the grid. Due in particular to Juwi and Windwärts, we have all-round expertise in developing, building and launching operations with renewable energies plants. We aim to reach the projecting target in particular by installing onshore wind turbines and photovoltaics systems both in Germany and abroad. Biomass and photovoltaics systems at customers' locations will contribute smaller amounts.

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 new capacities of 262 MW.

Transformation of the generation portfolio

Proprietary electricity generation at MVV
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 %). Electricity generation volumes at our renewable energies plants increased compared with the previous year, but the share of electricity generation resulting from combined heat and power (CHP) generation rose 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 generates electricity and heating energy using CHP. 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)
Fully consolidated companies

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

Electricity generation capacity from renewable energies and energy from waste (EfW)/refuse-derived fuels (RDF)
Fully consolidated companies and companies recognised at equity

MW_e	FY 2020	FY 2019	+/– change	% change
Biomass and biogas plants [1, 2]	117	114	+ 3	+ 3
EfW/RDF	165	160	+ 5	+ 3
Wind power	243	211	+ 32	+ 15
Hydroelectricity	2	2	0	0
Photovoltaics	4	4	0	0
Total	531	491	+ 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.

Proprietary heating energy generation at MVV

Our renewable energies plants generated 1,977 million kWh of heating energy in the 2020 financial year, corresponding to an increase of 2 % compared with the previous year.

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

Heating energy generation capacity from renewable energies and energy from waste (EfW)/refuse-derived fuels (RDF)
Fully consolidated companies and companies recognised at equity

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

Great 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 new renewable energies plants

MW_e	FY 2020	FY2019	+/– change	% change
Wind power	74	62	+ 12	+ 19
Photovoltaics	188	398	– 210	– 53
Total	262	460	– 198	– 43

The project development business is volatile by its nature. 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

305 EMISSIONS

305-1 Direct (Scope 1) GHG emissions and

305-2 Indirect (Scope 2) GHG emissions and

305-3 Other indirect (Scope 3) GHG emissions

CO_2 KEY FIGURES BY REPORTING SCOPE

Within reporting scope of MVV's climate balance sheet

Origin	Suppliers	MVV	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

Our climate balance sheet for the 2020 financial year

MVV's 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 developments in wholesale electricity prices. These factors cannot be influenced by MVV but are reflected in capacity utilisation rates at our generation plants. On the other hand, the medium to long-term development in 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 led to 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 an at-equity shareholding 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, since operations were launched, 100 % of its emissions have been reported under our direct CO_2 emissions.

Climate balance sheet
Fully consolidated companies

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 (EfW/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
of which from purchased goods and assets (GHG category 1)	471	303	+ 168	+ 55
of which from fuel and energy procurement (GHG category 3)	3,036	4,431	– 1,395	– 31
of which from transport and distribution (GHG category 9)	156	173	– 17	– 10
of which from use of products sold (GHG category 11)	1,596	1,439	+ 157	+ 11
Net CO_2 saving	794	486	+ 308	+ 63

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.

Climate balance sheet
Fully consolidated companies and companies recognised at equity

1,000 tonnes CO_{2eq}	FY 2020	FY 2019	+/– change	% change
Direct CO_2 emissions (Scope 1) [1]	3,315	3,582	– 267	– 7
Energy industry activities	2,386	2,631	– 245	– 9
Disposal activities (EfW/RDF)	929	951	– 22	– 2
Indirect CO_2 emissions (Scope 2) [2]	8	8	0	0
Indirect CO_2 emissions (Scope 3)	4,552	5,119	– 567	– 11
of which from purchased goods and assets (GHG category 1)	471	303	+ 168	+ 55
of which from fuel and energy procurement (GHG category 3)	2,198	3,054	– 856	– 28
of which from transport and distribution (GHG category 9)	185	204	– 19	– 9
of which from use of products sold (GHG category 11)	1,698	1,558	+ 140	+ 9
Net CO_2 saving including companies recognised at equity	766	439	+ 327	+ 74

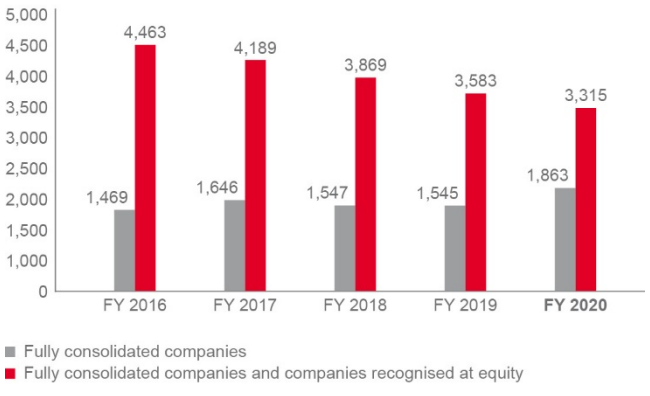
1 We refer to industry-typical factors from GEMIS/Öko-Institut for fuel-related emissions; the emissions factors issued by the Federal Environment Agency (UBA) for electricity and the certified emissions factors of the respective locations for district heating.

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

The 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.

DIRECT CO_2 EMISSIONS (SCOPE 1)

1,000 tonnes $CO_{2\ eq}$

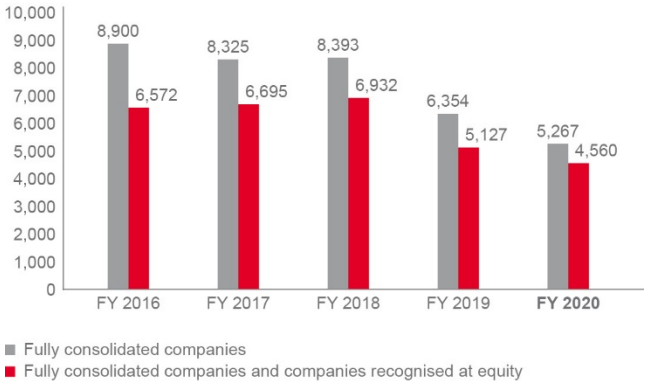


Indirect CO_2 emissions (Scope 2) mainly result from the energy we use for our business operations outside energy generation.

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 mainly involve the use of natural gas which MVV supplies to customers.

INDIRECT CO_2 EMISSIONS (SCOPE 2+3)

1,000 tonnes $CO_{2\ eq}$



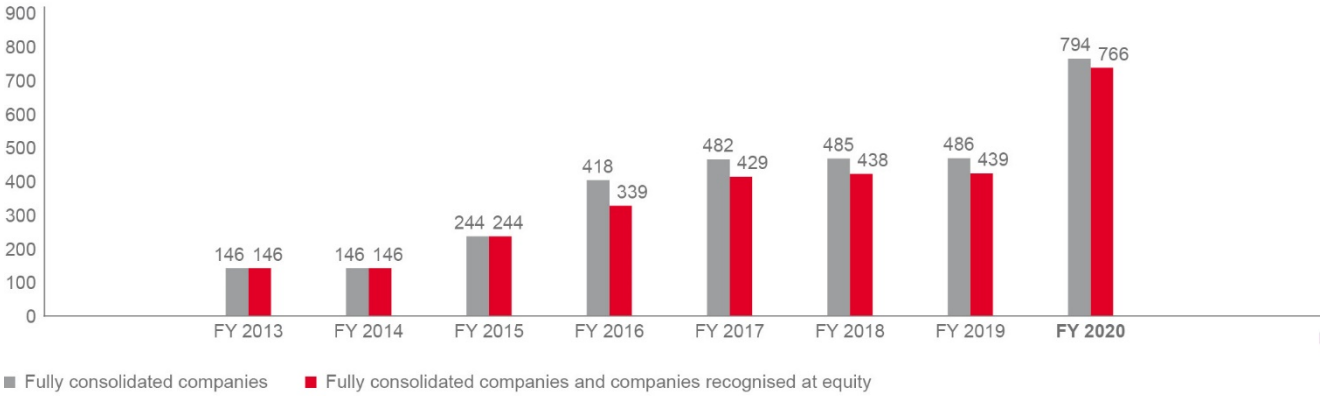
The annual development in Scope 3 emissions is chiefly determined by sales volumes for electricity, gas and heating energy, as well as by volumes in the renewable energies project development business. In this respect, the reduction in the 2020 financial year mainly reflects the lower sales volumes and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

305-5 Reduction of GHG emissions

In 2013, we worked together with the Institute of Applied Ecology (Öko-Institut) in Freiburg to develop a method to calculate net CO_2 avoidance and reviewed this in 2017. The net CO_2 avoidance figure includes the emissions avoided throughout the value chain. This figure reflects the genuine savings actually taking effect in the climate system. We assess how all new strategic activities, projects and investments at our group of companies impact on their direct and indirect greenhouse gas emissions. In this, all additional emissions (charge) and CO_2 reductions (credit) are netted within and outside our accounting entity. This means that, alongside electricity, account is also taken of heating energy, services and efficiency measures for third parties. We record all CO_2 emissions avoided for a maximum of ten years from the beginning of the respective measure. No account is taken of historic reduction projects and financial transactions.

REDUCTION IN GREENHOUSE GAS EMISSIONS

1,000 tonnes $CO_{2\ eq}$



Net CO_2 savings

The short-term development in direct and indirect CO_2 emissions provides only a limited picture of our efforts to protect the climate. Even an increase in CO_2 emissions in absolute terms in the climate balance sheet may be compatible with the long-term objective of climate neutrality in cases where our activities replace those of other more CO_2-intensive emitters and thus reduce the CO_2 intensity of the overall system. For this reason, in 2016 we already set ourselves the climate protection target of tripling our annual CO_2 savings in the overall system to 1 million tonnes a year by 2026.

The target also includes our at-equity shareholdings. However, the path towards the 2026 target year will not follow a linear trajectory. It will depend on the time at which new plants commence operations, as well as on the market and regulatory climate, as these factors influence the attractiveness of investments and emission-cutting projects and the speed at which they can be implemented.

In the year under report, the net CO_2 savings at our fully consolidated companies and companies recognised at equity amounted to 765,801 tonnes of $CO_{2\ eq}$ (previous year: 439,360 tonnes of $CO_{2\ eq}$). We achieve additional savings with energy efficiency projects and by launching operations at new renewable energies plants.

Specific CO_2 emissions for district heating

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. This impacted positively on our CO_2 intensity. Viewed from a long-term perspective, this trend is set to continue, as we plan to link up further low-CO_2 generation sources to the district heating grid.

Specific CO_2 emissions for district heating [1]

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

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

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

CO_2 intensity

Alongside absolute CO_2 savings, the CO_2 intensity of our business activities may also indicate whether, and to what extent, MVV is succeeding in decarbonising its activities. For this reason, we use CO_2 intensity key figures to offer visibility concerning the long-term success of our decarbonisation measures on the level of our reporting segments as well. Compared with the group-wide presentation of CO_2 intensity, this has the added advantage that potentially opposing items in various business fields can be identified more easily. We use value added as the reference figure here, as the total value of the company's output provides a better indication for the development in business volumes than sales or operating earnings, for example. The reduction in CO_2 intensities in the 2020 financial year was due both to the increase in value added and to the reduction in CO_2 emissions.

CO_2 intensity

	For direct emissions		For direct and indirect emissions	
kg CO_2 per Euro of value added	FY 2020	FY 2019	FY 2020	FY 2019
Customer Solutions	0.5	0.6	9.1	11.0
New Energies	2.0	2.0	3.3	2.9
Supply Reliability	5.8	6.5	6.8	7.4
Strategic Investments	4.5	5.0	8.0	9.6

305-7 Nitrogen oxides (NOX), sulphur oxides (SOX) and other significant air emissions

Local environmental protection

All our plants were operated once again in the 2020 financial year in accordance with the requirements of the German Federal Immissions Protection Ordinance and of the respective local approval authorities. We continually monitored compliance with the relevant threshold values.

A major share of our environmental protection activities on local level consists of investments to modernise our plants. By enhancing their efficiency, we save resources. In addition to large-scale projects, such as connecting the power plants to district heating grids in Mannheim and Merseburg **Page 39,** energy management activities at MVV Umwelt also include planning and implementing numerous smaller efficiency measures on an ongoing basis. In the 2020 financial year, for example, we reduced our own electricity requirements at the CHP plant in Mannheim by technically converting a heat exchanger. This will save 16 tonnes of CO_2 a year. Optimising air condenser cleaning at the biomass power plant in Mannheim has in turn enabled us to avoid around 43 tonnes of CO_2 a year and here as well to use less energy than previously. We also further minimised our resource requirements by implementing additional measures in Königswusterhausen and Mannheim, which have achieved savings of around 317 tonnes of CO_2. Measures implemented at MVV Industriepark Gersthofen included improving the distribution of pressure in a steam distribution facility, installing speed-controlled pumps in the drinking fountain and introducing consistent steam trap inspections. These measures have enabled us to achieve CO_2 savings of more than 1,800 tonnes a year.

Our generation plants emitted around 1.6 million tonnes of climate-neutral biogenic CO_2 in the year under report. This results from the direct use of timber, other biogenic waste and other regenerative materials used as fuels at our plants.

In our operating business, the use of natural resources in energy generation has the largest environmental impact. Compared to this, other business processes at our plants, buildings and business operations, such as administration, have a notably smaller impact. As a result, the environmental protection measures we take to improve our own direct electricity and water consumption and our use of other materials or to reduce our own waste volumes have only a relatively limited effect in terms of their environmental benefits. We nevertheless promote several aspects in our decentralised environmental management systems.

Other emissions and residues
Fully consolidated companies

tonnes	2019 [1]	2018 [1]	+/– change	% change
NO_x [2]	2,285	2,224	+ 61	+ 3
SO_2 [2]	607	773	– 166	– 21
Dust [2]	12	32	– 20	– 63
Fly ash	53,273	38,667	+ 14,606	+ 38
Ash and slag	520,807	519,502	+ 1,305	0

1 Calendar year
2 Previous year's figures adjusted

Other emissions and residues
Fully consolidated companies and companies consolidated at equity

tonnes	2019 [1]	2018 [1]	+/– change	% change
NO_x [2]	3,135	3,423	– 288	– 8
SO_2 [2]	1,048	1,445	– 397	– 27
Dust [2]	38	83	– 45	– 54
Fly ash	148,411	150,792	– 2,381	– 2
Ash and slag	524,313	522,648	+ 1,665	0

1 Calendar year
2 Previous year's figures adjusted

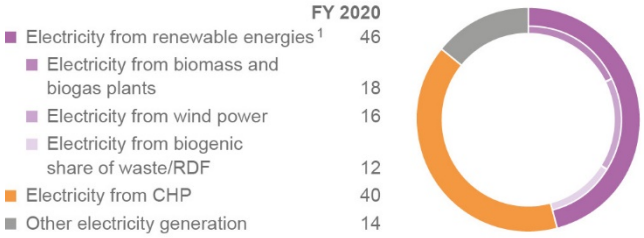
Further environmental protection aspects form part of the environmental management systems at our companies, which are responsible for these on a decentralised basis and set their own accents. MVV Netze and Stadtwerke Kiel, for example, play an active role in protecting ground water and water surfaces.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

System Transformation

MVV TOPIC
SUPPLY RELIABILITY

In order to shape the conversion in the energy system 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 in the period from 2016 to 2026 **Page 27** will change our generation portfolio, which is set to become even more diversified. This kind of generation portfolio will help us 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 (%)



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

Electricity generation volumes
Fully consolidated companies

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

Electricity generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2020	FY 2019	+/– change	% change
Biomass and biogas plants	508	452	+ 56	+ 12
Biogenic share of waste/RDF	314	309	+ 5	+ 2
Wind power	439	387	+ 52	+ 13
Hydroelectricity	5	2	+ 3	>+ 100
Photovoltaics	4	4	0	0
	1,270	1,154	+ 116	+ 10
Electricity from CHP	1,417	1,121	+ 296	+ 26
Other electricity generation [1]	1,092	1,187	– 95	– 8
Total	3,779	3,462	+ 317	+ 9

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) is 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 rise from a full consolidation perspective 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 from a full consolidation perspective 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
Fully consolidated companies

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

Heating energy generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2020	FY 2019	+/– change	% change
Biomass and biogas plants [1]	72	208	– 136	– 65
Biogenic share of waste/RDF	1,906	1,725	+ 181	+ 10
	1,978	1,933	+ 45	+ 2
Other heating energy generation	4,517	4,625	– 108	– 2
Total	6,495	6,558	– 63	– 1

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
Fully consolidated companies

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

Biomethane generation volumes
Fully consolidated companies and companies recognised at equity

kWh million	FY 2020	FY 2019	+/– change	% change
Biomethane generation	222	234	– 12	– 5

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.

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

We 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 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.

MVV TOPIC SECTOR COUPLING

Smartly combining electricity, heating energy and mobility

One of the changes in the energy market that is set to play a major role is sector coupling. Only this way will it be possible to turn the existing electricity turnaround into a comprehensive energy turnaround. First and foremost, this is about making electricity from renewable energies fit for use in the transport and heating energy sectors and about networking the entire system. One sub-goal involves distributing and storing surplus electricity from fluctuating renewables-based generation volumes in ways that make sense. Here, use can also be made of energy storage facilities outside the electricity sector, such as innovative power-to-heat solutions like heat storage units and electrode boilers. E-mobility is another core component of the energy system transformation and of a resource-efficient lifestyle **www.mvv.de/energie.**

Sector coupling will also have repercussions in terms of demand for renewables-based generation, as well as for grid loads and expansion. In view of this, the expansion of sector coupling is a factor of strategic significance for us, particularly in the fields of project development, generation, grids and sales.

Promoting heat storage and decentralised energy management

We are pressing ahead with sector coupling and are currently focusing on enhancing flexibility by working with heat storage facilities and power-to-heat. One major component involves large-scale heat storage facilities, enabling CHP power plants to shut down their electricity generation for up to 24 hours when required by the market or grid situation. We have corresponding district heating storage facilities in operation in our major district heating grids. One key field of application for us is the development of urban districts and quarters. Such units are one area in which decentralised generation, e.g. from photovoltaics systems, can be smartly combined with covering heating energy requirements, for example by working with heat pumps or other technologies. The FRANKLIN conversion site in Mannheim is one example where we are testing these kinds of technical and business concepts **www.mvv.de/GB2020e.pdf, Page 24.**

Heating energy storage capacity

Cubic metres	FY 2020	FY 2019
MVV Energie	45,000	45,000
Stadtwerke Kiel	42,000	42,000
Energieversorgung Offenbach	8,000	8,000
Stadtwerke Ingolstadt	3,200	3,200

We are actively promoting decentralised energy management and sector coupling and act as a one-stop source of smart and decentralised energy management services and products for our industrial, retail and housing customers, as well as for business and private customers.

Expanding e-mobility

Making renewables-based electricity suitable for use by the transport sector as well requires smart needs-based charging solutions. We installed the 100th charging point in Mannheim at the beginning of the 2021 financial year and new charging points are being added on an ongoing basis. We are also expanding e-mobility at our locations in Offenbach and Kiel. Our Stadtwerke Kiel subsidiary has currently linked up 38 public locations with more than 100 charging points. A total of 38 charging points are available at the company's premises, where we currently have 113 cars in the vehicle pool, of which 10 hybrid and 51 electric vehicles. This way, we are combining the energy of the future with the mobility of the future.

MVV TOPIC CHANGED ENERGY DEMAND

Structural changes accounted for in our strategic planning

Demand for energy will change significantly in the years ahead. This is true both of the energy sources used to generate heating energy and of electricity. On the one hand, we expect demand for heating energy to gradually decrease throughout the economy, with this being driven in particular by rising building efficiency. By 2050, buildings will require around 40 % to 50 % less heating energy. At the same time, the energy mix used for heating energy will also change – away from fossil fuels such as heating oil and natural gas. On the other hand, demand for electricity will also continue to change, with this being mainly due to the regulatory framework. The shift to renewable energies in the electricity mix and reduction in end energy consumption are backed up with ambitious political targets. In parallel, our customers are increasingly interested in covering their electricity needs with their own generation plants.

Alongside the increased provision of renewable energies, two factors that are particularly gaining in significance are the enhanced flexibility and storage of energy. We systematically account for foreseeable changes in demand in our strategic investment planning and continually adapt our business in line with actual market developments. We report on research projects in our 2020 Annual Report **www.mvv.de/GB2020e.pdf, Pages 24–25.**

We are preparing our supply grids for changes in energy demand in the electricity and heating energy sectors as a result of the energy system conversion or energy efficiency measures.

Energy framework study points to potential solutions for climate neutrality in the City of Mannheim

In the first quarter of 2021, we will be publishing the energy framework study for Mannheim, which has been compiled by the Wuppertal Institute on behalf of MVV and in which the City of Mannheim was also involved in the advisory committee. This shows how the City of Mannheim can become climate neutral by 2050 and what requirements are necessary for that. The “Energy Framework Study for Mannheim” accounts for all major sectors in Mannheim, including transport and industry.

The results show that by the mid-2030s the CO_2 emissions generated within Mannheim’s boundaries will decrease gradually, with a drastic reduction overall. In the long term, emissions could fall by 99 % compared with the 2020 figure. This finding is based on the following assumptions: no conventional successor solution is built for the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM), further advances are made with the energy turnaround on national level, the change in drive systems succeeds in the transport sector and the unavoidable emissions from waste incineration are captured. Even if these emissions are not captured, it will be possible to achieve a reduction of 92 %. This drastic drop is due above all to the decommissioning of individual blocks at the GKM plant. As a result, the share of Mannheim’s CO_2 emissions that are attributable to the transport sector will become a far more important factor.

Various forms of generation are conceivable when it comes to reliably addressing the shortfall in the central district heating supply resulting from the coal exit. These are particularly based on renewable energies. As well as the most important pillar – waste incineration – a broad mix of biomass, river heat pumps, waste heat and geothermal energy could safeguard the heating energy supply. In the field of decentralised heating energy, heat pumps, solar thermal energy and micro-CHP solutions are gaining in significance.

The study also reveals the potential for generating electricity from renewable energies within Mannheim’s boundaries. In total, almost 1 terrawatt hours of green electricity generation would be possible, mostly by way of photovoltaics. It is not feasible to make an industrial city such as Mannheim entirely independent in terms of its supply, but around 40 % of its electricity consumption could (nominally) be covered this way.

MVV is one of Germany’s largest district heating suppliers

As well as industrial district steam grids, in Mannheim, Kiel and Offenbach we also operate integrated district heating systems and provide our customers with a supply of environmentally-friendly, centrally generated heating energy. We aim to further decarbonise the heating energy supply for which we are responsible – not least in view of the climate protection targets for the building sector. The German Climate Protection Act (KSG) provides for a 40 % reduction in emissions in this sector by 2030 compared with 2014. The building heating energy turnaround can be realised in three areas: energy efficiency, low-CO_2 heating energy grids and renewable energies located close to the respective properties. The task for us will be to reduce CO_2 emissions in our district heating supply, which is already operated using highly efficient CHP, to enable us to meet future customer requirements. We are therefore working consistently on concepts for a climate-neutral supply of heating energy. We have expanded Green Heat in Mannheim and the region, for example, by connecting our waste-fired CHP plant on Friesenheimer Insel to our existing district heating grid. This is based on the conviction that, since a central heating energy supply system is already in place, decarbonisation can be achieved more quickly and efficiently on the supply side than it can by implementing numerous decentralised measures on the demand side.

Alongside these three integrated district heating grids, we also operate several smaller district heating, district steam and property-specific grids in Germany, the Czech Republic and the UK.

MVV TOPIC CHANGED INFRASTRUCTURES AND SMART CITIES

The growth in populations in large built-up areas, i.e. the trend towards urbanisation, is giving rise to substantial environmental burdens. There is a need for cities to further develop their infrastructures, as well as to improve their environmental and climate protection.

The trend towards smart cities is a process in which we act as a partner to local authorities and innovative municipal utility companies. Here, MVV is constantly developing its concepts further. Based on the heating energy supply that we have already implemented in the FRANKLIN district in Mannheim, for example, MVV Smart Cities has compiled a further concept for a CO_2-neutral district where the heating energy, warm water and electricity used by residents are CO_2-neutral in the annual energy balance sheet. For this, a low-temperature grid is connected to the existing district heating grid using a heat exchanger. Energy generated from renewable sources on a decentralised basis is fed into the local low-temperature grid and the local electricity grid. Both grids include storage facilities and are coupled via a district energy management system (sector coupling). In the first construction stage, the district will include around 500 residential units. Once the concept has been implemented, the CO_2 emissions resulting from heating, warm water and electricity consumption will amount to around 15 kg per person per year, compared with the national average of around 3.6 tonnes per person per year.

Alongside optimised energy concepts, the topic of mobility also has to be thought anew. As resource consumption grows, sharing services, i.e. the sharing of vehicles among several persons, is attracting increasing numbers of users in the mobility sector. At the FRANKLIN district, we operate the FRANKLIN Mobile e-carsharing scheme and offer a sustainable multimodal mobility concept. Our top priority here is to remove the need for a second car. Moreover, in SQUARE, a project financed by the European Fund for Regional Development, 15 charging points have been made available to the general public in FRANKLIN-Mitte. Between June and November 2020, FRANKLIN residents made 427 bookings, with 2,981 kilometres driven and thus 0.55 tonnes of CO_2 saved in November 2020 alone.

Smart infrastructures harbour numerous benefits for cities and local authorities, as they are more efficient to maintain and use. This applies to the digital management of green space, parking areas and waste, for example, as well as to public lighting, municipal buildings and optimising traffic flows. The Internet of Things (IoT) enables local authorities to sustainably improve life in built-up areas and to structure processes more efficiently. With our MVV IoT platform, we provide a data platform which accesses various data sources and evaluates the data thereby obtained and processes this in line with requirements. One particular feature of this IoT platform is its comprehensive integration of LoRaWAN wireless technology.

MVV TOPIC DIGITAL TRANSFORMATION

For the future energy system, we need a decentralised communications infrastructure that networks generators, marketers and consumers with each other. This gives rise to consistent end-to-end processes. As the industrial transformation already begun – Industry 4.0 – progresses further, all industrial equipment and tools down to end points will in future be connected both to each other and to the internet and thus become the Internet of Things (IoT). The aim then will be for end consumers to use large amounts of electricity when it is available in large quantities and thus inexpensive. At times when less electricity is available due to more significant fluctuations at renewable energies plants, electricity demand will also have to fall. The electricity price will thus fluctuate in the course of the day. In summary: In the past, power plant production was aligned towards electricity demand. In the future, the electricity supply will be influenced by wind and sun conditions, meaning that electricity demand will have to adapt in line with these. This process, which involves demand side management, will lead to changes both in patterns of consumption and in customer relationships.

Combining digitalisation, automation and networking should make it possible to coordinate generation and consumption in real time. This will create further benefits, as data aggregation and analysis will enable business processes to be structured more efficiently, thus reducing CO_2 emissions. Early warning indicators will also make it possible for plant maintenance processes to be planned more effectively. Moreover, the avoidance of peak loads means that the investment costs needed to expand Germany's grids can be expected to turn out lower.

Digitalisation on end customer level and Industry 4.0 on B2B level – both form part of the energy system of the future. In view of this, we are systematically evaluating technological options resulting from these trends and extending the range of solutions for our customers. Qivalo and Econ, the two metering specialists within MVV's service provider portfolio, are pooling their strengths and facilitating automatic data transfer via a dedicated interface. In particular, the combination of the advantages offered by Qivalo in operating metering points and billing and by Econ for sub-

metering and analysis is extremely attractive for companies who, alongside customary billing requirements, also have an increased need for analytic options. Linking these two strengths already convinced some companies with chain operations in the year under report.

The digital transformation will also further increase the degree of networking between energy sources and with other industries. These factors will be accompanied by the trend towards end consumers increasing their proprietary electricity and heating energy generation from renewable energies – a trend that applies both to business and to retail customers. On the one hand, we have to record our customers' energy data in real time and network this with applications intended, for example, to optimise energy consumption or enhance energy efficiency. On the other hand, we must enable our customers to supply themselves and to integrate, and thus secure, this supply in ways that make best sense.

As an energy service provider, we have a key role to play here. Our customers require individual advice accompanied by increasingly automated solutions. That is clearly relevant for our business and commercial customers, but we also expect to see similar developments in our relationships with retail customers. Here, automation will affect all interfaces from customers right up to the energy system as a whole.

Our business models are consistently focused on service, smart networking and maximum flexibility. Here, long-term partnerships are the structure that best enable us to support our customers in mastering the complex energy-related challenges they face, taking part in the energy turnaround and meeting their own individual decarbonisation targets. We report on technology and innovation in our 2020 Annual Report **www.mvv.de/GB2020e.pdf, Pages 24–25.**

MVV TOPIC
INFORMATION SECURITY AND DATA PROTECTION

Information security and data protection are indispensable foundations for any successful business activity. To account in particular for the further advance in digitalisation, we continuously review, question and optimise our processes to protect personal data and information. This was more relevant than ever in the year under report, in which digitalisation rapidly gained further momentum, not least due to employees working from home and taking part in online conferences.

We act on the basis of applicable data protection law. In the year under report, we again worked on further implementing the extensive requirements resulting from the European General Data Protection Regulation (GDPR) and the German Federal Data Protection Act (BDSG) in all areas of the company and in all business processes and reviewed them for forthcoming implementations. The central point of contact we have established to deal with all internal and external enquiries and issues relating to data protection once again assessed and processed a large number of incoming enquiries in the year under report.

We regularly train our employees with a variety of measures, inform them about the steadily rising standards applicable to information security and data protection and work to raise their awareness both of existing risks and threats and of the need to treat personal data and information with due care.

Employees and Society

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 international workforce includes 493 employees at our Czech subgroup, 261 at Juwi's foreign shareholdings and 144 at the British subsidiaries of MVV Umwelt.

403 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 all 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.

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.

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 too many. This is the only way we can help to ensure that safety is actually lived within our company and beyond.

The coronavirus pandemic presented us with particular challenges in this respect, as we were unable to hold planned physical events surrounding the launch of "Lived Safety". Thanks in particular to the use of digital media, we nevertheless managed to communicate the core aspects of our new safety philosophy to our employees and to improve our safety culture.

403-2 Hazard identification, risk assessment and incident investigation

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

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

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

403-4 Worker participation, consultation, and communication on occupational health and safety

Our work safety committees are formed by the companies on location. Consistent with the German Occupational Safety Act (ArbSichG), they comprise employer and employee representatives, safety experts, and company doctors. We liaise closely with professional associations and employee representatives and agree our occupational safety and accident prevention strategies with them.

We communicate important information about occupational health and safety on a regular basis in the organisational units and, via the intranet, make this information available to most company departments. We also make the findings of the risk assessments available to staff via a software tool. By attending regular meetings, participating in inspections and investigations into accidents or submitting proposals via the company suggestion scheme, our employees always have the opportunity to be actively involved in the further development of occupational health and safety.

403-5 Worker training on occupational health and safety

We aim to prevent accidents and health risks by raising awareness among our managers and employees for the risks and dangers of accidents. In our instructions, we explain the interrelationships involved and lay down work safety requirements. We supplement personal training by offering work safety training using a software tool. This is based on the results of the risk assessment and is tailored to individual workplaces. This way, our employees can flexibly and individually address a variety of basic topics relating to work safety.

403-9 Work-related injuries

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

Accident statistics

	FY 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 reduced our accident frequency year-on-year by 13 % in the 2020 financial year. There were no accidents with fatal consequences in the year under report.

The accident statistics and accident prevention measures taken are evaluated on Executive Board and Group level on a quarterly basis, with additional measures also being discussed and planned.

Protecting health and preventative measures

We have set ourselves the goal of boosting the health of our employees with a prevention-based approach and therefore support them with a variety of company health management measures. Alongside the extensive range of services available at our occupational health service, we also offer employees at our major locations further health promotion opportunities that go far beyond legal requirements. Before restrictions were introduced in connection with the coronavirus pandemic from March 2020 onwards, we made therapeutic devices available, for example, and experienced coaches guided participants in health-related courses. We offered a very wide range of sports groups. We also have cooperations with fitness centres and offer nutritional advice. Our range of services also includes extensive prevention measures, such as flu vaccinations, skin cancer screening and laboratory diagnostics services for the early detection of detect common metabolic illnesses. By organising courses and presentations on topics such as nutrition or exercise, we help our employees to obtain the specific information they need. The focuses and services on offer vary in line with the requirements and circumstances at our individual locations. Employees at all of our locations have shown great interest in the services on offer. With the onset of the first lockdown, we offered alternative online information, training and individual telephone advice, with a focus on addressing the particular psychological strain resulting from the required reduction of contacts.

404 TRAINING AND EDUCATION

404-2 Programs for upgrading employee skills and transition assistance programs

Training and development

Training with promising prospects for the future

In Mannheim alone, we offer training to the next generation of employees 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.

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.

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 comprises 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.

We also offer further training on an internal basis by compiling an interdisciplinary team of university graduates from a variety of disciplines. Within MVV, our Junior Consulting Team (JCT) acts as an internal consulting unit and independently acquires its own projects and tasks. In the year under report, the JCT dealt with the topic of hydrogen and its compatibility with existing business fields. The team's strength lies in its independence of departments and divisions. This enables it to gain fresh perspectives and provide momentum. With their analytical and theoretically sound approach, team members base their activities on their internal client's objectives and develop and propose qualified solutions. At the same time, the participants themselves also gain experience and obtain a good overview of our individual business fields.

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 further develop the potential of our employees. When it comes to the individual 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. To retain high-potential employees, we have set up a separate talent advisory function. 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.

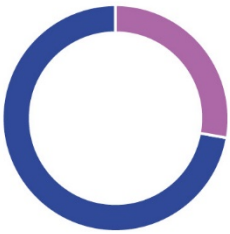
MVV TOPIC DIVERSITY

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.

WOMEN AND MEN
Shares (%)

	FY 2020
Women	28
Men	72



Status: 30 September 2020

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 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 benefit, for example, from free contingents of places in presentations and seminars.

Since the 2018 financial year, we have offered an internal lecture series specially targeted at women. These lectures, which have attracted great interest, deal with career-related topics such as how to deal with power and status, as well as body language.

Combining work and family commitments

Our aim is for our employees to be able to successfully combine their family and work commitments, and that on an ongoing basis. We offer a variety of working hour models at the company, such as flexible working hours. Digitalisation and the use of modern communications appliances facilitate mobile work in line with specific needs. Parents in Mannheim, Offenbach and Wörrstadt have the option of taking their children to care facilities at or close to company locations. In Mannheim, Kiel and Offenbach, we have set up parent and child rooms which can be used if any childcare difficulties arise at short notice.

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

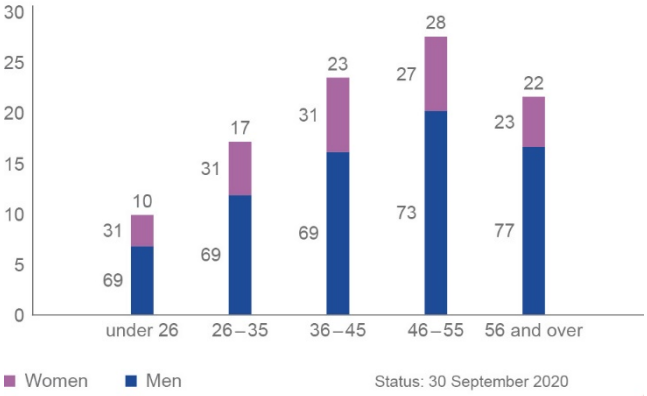
We aim to permanently improve our family-oriented personnel policies. That is why we have drawn for many years on the impetus provided by the berufundfamilie® programme offered by the Hertie Foundation. This assists companies in their efforts to improve the compatibility of their employees’ work and family commitments. In its audits, catalogues of measures are compiled and bindingly agreed for the respective locations. Checks are performed at a later date to ascertain whether and how these agreements have been implemented. At our Mannheim location, we have had our activities audited and certified since 2008 already. Audits have been performed in Offenbach since 2009 and in Kiel since 2012. In Wörrstadt, the audit was introduced in 2017.

Over their working lives, our employees pass through many different stages of their private lives. We aim to support them in mastering the daily challenges in their working and private environments. From the 2021 financial year, we will be offering a “family service” – at first only to employees at the Mannheim location. For this, we will be working together with an experienced service provider who offers advice on professional, family or financial problems. This advice is of course strictly confidential. Family members living in the same household can also draw on this service.

Active demographic management

With the third pillar of “Energy for Diversity”, we address the demographic challenges we face. In select departments in Mannheim, for example, we perform so-called “parallel runs”, in which employees due to retire from the company help to train their new colleagues over an extended period of time.

AGE STRUCTURE OF EMPLOYEES
(%)



413 LOCAL COMMUNITIES

413-1 Operations with local community engagement, impact assessments, and development programs

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. Constructing new generation plants, extensively converting and expanding the electricity grid and implementing far-reaching modernisation projects for existing plants – all these measures change the local environment and often involve restrictions for local residents. We already give systematic and comprehensive consideration to these challenges when selecting suitable locations. Our companies weigh up the conservation, economic and social aspects on a decentralised basis on location for each individual case. In the project planning stage, they perform environmental compatibility audits in accordance with approval requirements. These deal, for example, with emission loads, conservation requirements and immission protection. Not only that, they also look into the potential implications of the projects for the surrounding countryside or for architectural and natural monuments. The results of these analyses are mostly published. Various authorities and project partners are involved in the approval process. We actively involve residents, local clubs, associations and citizens' initiatives, and that to an extent that goes beyond minimum legal requirements. Our companies provide information about projects, for example in their general press work and on their respective homepages. Representatives of our companies attend information events and are on hand to answer any questions. These activities are important for ensuring the necessary degree of acceptance among local residents. Particularly for infrastructure projects, such as onshore wind turbines, we have observed growing resistance to the associated interventions in the natural world and changes to the appearance of the countryside. The best way to counter concerns and reservations is to enter into face-to-face dialogue. 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.

All our existing generation plants continually benefit from technical supervision in line with legal requirements. Should any interruptions to operations arise that could affect local populations, we proactively and quickly inform all affected parties. Here, all companies have routine processes in place to protect the safety of local communities.

MVV TOPIC SOCIETY

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.

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 institutions 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.

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 region. Its largest partners in the Rhine-Neckar metropolitan 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.

Further Information

GRI Content Index

GRI content index

GRI Standard	Designation	Page	Notes
GRI 101: Foundation 2016			
GRI 102: General Disclosures 2016			
Organisational profile			
102-1	Name of the organisation	10	
102-2	Activities, brands, products and services	10	
102-3	Location of headquarters	11	
102-4	Location of operations	11	
102-5	Ownership and legal form	11	
102-6	Markets served	11	
102-7	Scale of the organisation	11	
102-8	Information on employees and other workers	11	
102-9	Supply chain	12	
102-10	Significant changes to the organisation and its supply chain	13	
102-11	Precautionary principle or approach	13	
102-12	External initiatives	13	
102-14	Membership of associations	14	
Strategy			
102-14	Statement from senior decision-maker	14	
Ethics and integrity			
102-16	Values, principles, standards and norms of behaviour	14	
Governance			
102-18	Governance	15	

GRI Standard	Designation	Page	Notes
Stakeholder engagement			
102-40	List of stakeholder groups	16	
102-41	Collective bargaining agreements	16	
102-42	Identifying and selecting stakeholders	16	
102-43	Approach to stakeholder engagement	16	
102-44	Key topics and concerns raised	17	
Reporting practice			
102-45	Entities included in the consolidated financial statements	19	
102-46	Defining reporting content and topic boundaries	19	
102-47	List of material topics	20	
102-48	Restatement of information	22	
102-49	Changes in reporting	22	
102-50	Reporting period	23	
102-51	Date of most recent report	23	
102-52	Reporting cycle	23	
102-53	Contact partner for questions regarding the report	23	
102-54	Claims of reporting in accordance with the GRI Standards	23	
102-55	GRI content index	23 60-62	
102-56	External assurance	23	
GRI 103: Management approach 2016			
103-1	Explanation of the material topic and its boundary	24-32	
103-2	The management approach and its components	24-32	
103-3	Evaluation of the management approach	24-32	
Topic-specific disclosures			
Economic Output			
GRI 201 2016			
201-1	Direct economic value generated and distributed	33	
GRI 203 2016			
203-1	Infrastructure investments and services supported	34	

GRI Standard	Designation	Page	Notes
Energy and Environment			
GRI 301 2016			
301-1	Materials used by weight or volume	35	
GRI 302 2016			
302-5	Reductions in energy requirements for products and services	39	
MVV topic	Renewable energies	41	
GRI 305 2016			
305 1	Direct (Scope 1) GHG emissions	43	
305-2	Energy indirect (Scope 2) GHG emissions	43	
305-3	Other indirect (Scope 3) GHG emissions	43	
305-5	Reduction of GHG emissions	45	
305-7	Nitrogen oxides (NOX), sulphur oxides (SOX) and other significant air emissions	47	
System Transformation			
MVV topic	Supply reliability	48	
MVV topic	Sector coupling	50	
MVV topic	Changed energy demand	50	
MVV topic	Changed infrastructures and smart cities	52	
MVV topic	Digital transformation	52	
MVV topic	Information security and data protection	53	
Employees and Society			
GRI 403 2018			
403-2	Hazard identification, risk assessment, and incident investigation	54	
403-4	Worker participation, consultation, and communication on occupational health and safety	55	
403-5	Worker training on occupational health and safety	55	
403-9	Work-related injuries	55	
GRI 404 2016			
404-2	Programs for upgrading employee skills and transition assistance programs	56	
MVV topic	Diversity	57	
GRI 413 2016			
413-1	Operations with local community engagement, impact assessments, and development programs	59	No disclosures on scope
MVV topic	Society	59	

Progress Report for UN Global Compact

MVV is committed to the ten principles of the UN Global Compact. By way of a progress report, in the following table we link our material sustainability topics to the principles of the UN Global Compact.

Progress report for UN Global Compact

Principle	Topic	Page
Human rights		
1. Businesses should support and respect the protection of internationally proclaimed human rights.	Human rights policy	💻 www.mvv.de/responsibility
2. Businesses should make sure that they are not complicit in human rights abuses.	Compliance	14
Labour		
3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	Employees and Society; Employees	32
4. Businesses should be committed to the elimination of all forms of forced and compulsory labour.	Value chain	12
5. Businesses should be committed to the effective abolition of child labour.	Value chain	12
6. Businesses should be committed to the elimination of discrimination in respect of employment and occupation.	Compliance Employees and Society; Diversity	14 57
Environment		
7. Businesses should support a precautionary approach to environmental challenges.	Topic-specific disclosures	33
8. Businesses should undertake initiatives to promote greater environmental responsibility.	Topic-specific disclosures	33
9. Businesses should encourage the development and diffusion of environmentally-friendly technologies.	Topic-specific disclosures	33
Corruption		
10. Businesses should work against corruption in all its forms, including extortion and bribery.	Compliance	14

UN Sustainable Development Goals (SDG)

In 2015, the United Nations created a basis for jointly tackling global challenges with its “Sustainable Development Goals”, the 17 targets set out in its “2030 Agenda for Sustainable Development”. In the 2020 financial year, we once again performed a review to identify those Sustainable Development Goals to which we can make a substantial contribution. With our business activities, we contribute in particular to the following six SDGs:

Sustainable Development Goals – MVV’s contribution

SDG		Chapter/content	Page
	Sustainable and modern energy for everyone – securing access to affordable, reliable and up-to-date energy for everyone.	General disclosures: Organisational profile; 102-9 Supply chain Topic-specific disclosures: Energy and Environment; MVV topic renewable energies Human rights:	 12 41 www.mvv.de/responsibility
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	Topic-specific disclosures: Employees and Society; Occupational health and safety Training and development Diversity	 54 56 57
	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.	Topic-specific disclosures: System Transformation; Supply reliability Sector coupling Changed infrastructures and smart cities	 58 50 52
	Sustainable cities and communities – shaping cities and communities to make them inclusive, resilient and sustainable.	Topic-specific disclosures: System Transformation; Changed infrastructures and smart cities	 52
	Ensure sustainable consumption and production patterns.	Topic-specific disclosures: Energy and Environment; Materials	 35
	Take immediate measures to combat climate change and its implications.	Topic-specific disclosures: Energy and Environment; Energy Renewable energies Emissions	 39 41 43

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

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