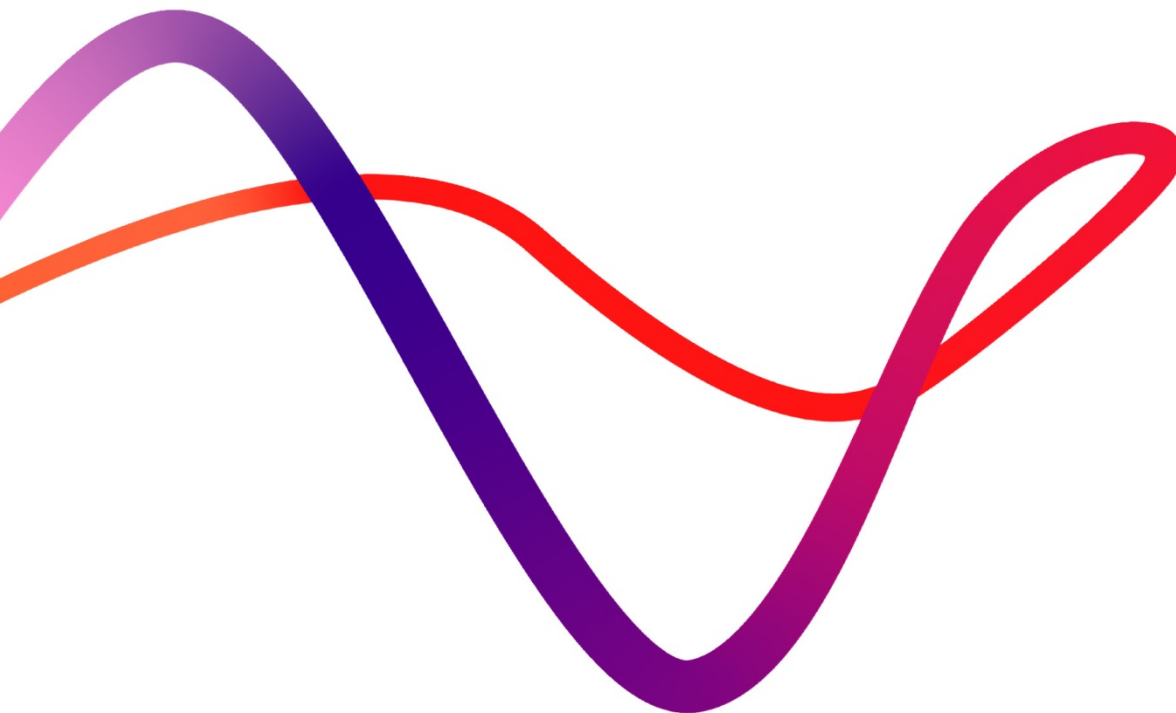




**We inspire
with energy.**

Sustainability Report 2021





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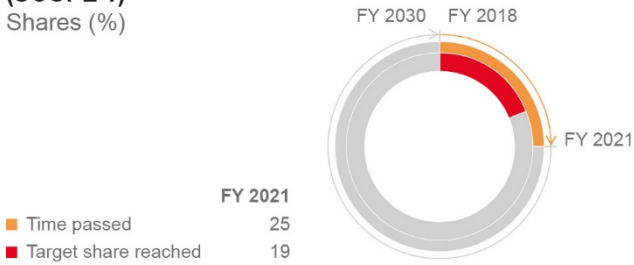
MVV at a Glance

ADJUSTED SALES	4.1 Euro billion	ADJUSTED EBIT	278 Euro million
INVESTMENTS	306 Euro million	EMPLOYEES	6,470
DIRECT CO₂ EMISSIONS (SCOPE 1) ¹	3,440 tonnes 000s	INDIRECT CO₂ EMISSIONS (SCOPE 2 AND 3) ¹	5,432 tonnes 000s
ELECTRICITY GENERATION CAPACITY FROM RE-NEWABLE ENERGIES ¹	564 MW _e	ELECTRICITY GENERATION VOLUMES FROM RE-NEWABLE ENERGIES ¹	1,217 kWh million
GREEN HEAT GENERATION CAPACITY ¹	793 MW _t	GREEN HEAT GENERATION VOLUMES ¹	2,541 kWh million
COMPLETED DEVELOPMENT OF NEW RENEWABLE ENERGIES PLANTS	610 MW _e	OPERATIONS MANAGEMENT FOR RENEWABLE ENERGIES PLANTS	3,811 MW _e

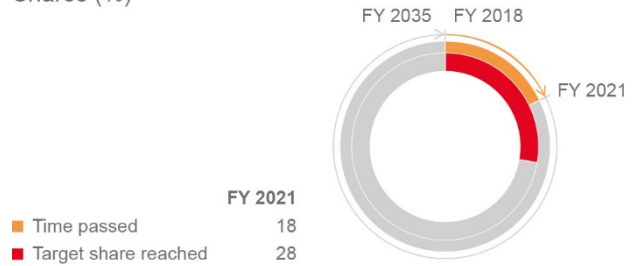
¹ Fully consolidated and at-equity companies

Target achievement for our sustainability and decarbonisation targets FY 2021

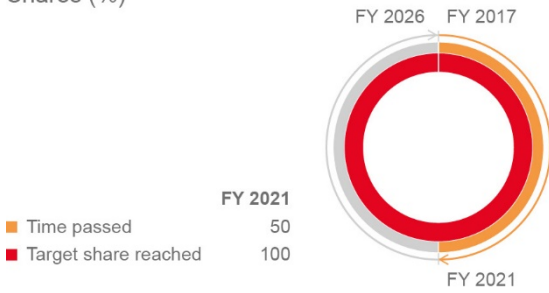
REDUCTION IN ENERGY INDUSTRY CO₂ (SCOPE 1)¹ Shares (%)



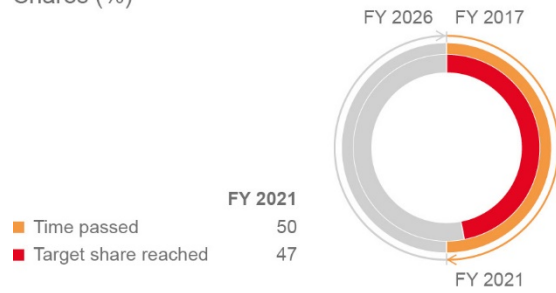
REDUCTION IN CO₂ (SCOPES 2 AND 3)¹ Shares (%)



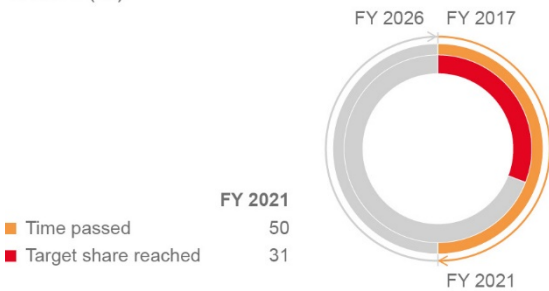
NET CO₂ SAVING PER YEAR¹ Shares (%)



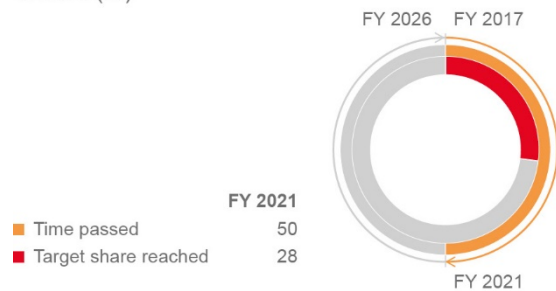
INVESTMENTS Shares (%)



RENEWABLE ENERGIES ELECTRICITY GENERATION CAPACITY¹ Shares (%)



COMPLETED DEVELOPMENT OF NEW RENEWABLE ENERGIES PLANTS Shares (%)



¹ Fully consolidated and at-equity companies

2021

MVV in Figures

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

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

² Excluding non-operating measurement items for financial derivatives

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

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

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

1 Fully consolidated and at-equity companies

2 Previous year's figure adjusted

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

4 Figures for 2020 and 2019 calendar years

Foreword



Dr. Georg Müller
CEO of
MVV Energie AG

Dear Ladies and Gentlemen,

The aim of the Paris Climate Agreement is to limit global warming to 1.5 degrees. To master this global challenge, numerous actors will have to plan, prepare and implement countless measures. Climate protection and the energy turnaround require consistent and rapid action. We intend to make our contribution and, in the year under report, set MVV's targets even higher: By 2030, we will reduce our CO₂ emissions by at least 80 percent compared with 2018. We aim to be climate neutral by 2040 and climate positive from then onwards, i.e. we will remove greenhouse gases from the atmosphere. This stepping up in our own reduction trajectory is backed up by the political climate: That is apparent both in the Coalition Agreement signed by the new Federal Government and the Immediate Climate Action Programme presented by the Federal Ministry for Economic Affairs and Climate Action. The regulatory requirements needed to achieve this are to enter effect at the end of 2022 already. This clearly signals that Germany is taking a new approach and will act at great speed to explore new paths. Overall, we see this combination of the Coalition Agreement and the Immediate Climate Action Programme as a credible start on the part of the Federal Government. The success of this core "energy turnaround" project will now depend above all on coordinated management, not least because it will largely be implemented on a decentralised basis.

As a pioneer of the energy turnaround, we have already shown on many occasions that we take climate protection very seriously. We did so once again in the 2021 financial year: In 2016, we set ourselves the target of reducing CO₂ emissions in the energy system by one million tonnes a year with our initiatives. For this, we planned a 10-year timeframe. Thanks to MVV's investment and efficiency measures, we met this target in the year under report, and thus within half the original schedule.

We refer to the course we are taking to a climate-positive future as the "Mannheim Model". This is based on three aspects: the heat turnaround, the electricity turnaround and green products and solutions for our customers.

Let me explain in more detail. We see the heat turnaround as the most important key to achieving greater climate protection. After all, warm water and building heat still account for more than a third of Germany's CO₂ emissions. As the country's third-largest supplier of district heating, we intend to convert our generation to renewable and climate-friendly sources, i.e. to green heat. By 2030, we will have achieved this goal in full for the district heating supply in Mannheim

and those areas within the Rhine-Neckar metropolitan region that are connected to the system, while maintaining the customary high level of supply reliability. We have already come one third of the way and will complete the second third in 2024. Among other factors, this will be driven by the construction of a river heat pump, a project we are currently pressing ahead with. For the final third, we have a broad range of green technologies at our disposal, in particular geothermal heat, biomasses, further large-scale heat pumps and waste industrial heat.

As well as accelerating the expansion of renewable energies, we are also stepping up the pace for the electricity turnaround. Between 2009 and 2016, we already doubled our proprietary generation volumes from renewable energies and aim to do so again by 2026. Here, we are building above all on onshore wind power and photovoltaics. With Juwi and Windwärts, our project development companies, we are adding numerous further windfarms and solar parks to international markets. As a partner, we support our customers, whether they are private households, commercial and business customers or industrial players, with innovative concepts enabling them to advance their own decarbonisation. Key focuses here are on energy efficiency and climate neutrality.

Our activities are focused on becoming climate positive from 2040. Over and above the use of forward-looking green technologies and new technological options, we will achieve this by capturing unavoidable residual CO₂ emissions from our plants and thus converting these into CO₂ sinks.

Our Mannheim Model means that we are absolutely in line with the 1.5-degree trajectory set out in the Paris Climate Agreement. This was confirmed to us in November 2021 by the international "Science Based Targets initiative" (SBTi) following an extensive scientific review. This makes us the first German energy company to hold confirmation from the SBTi that we are acting in accordance with the 1.5-degree target of the Paris Climate Agreement.

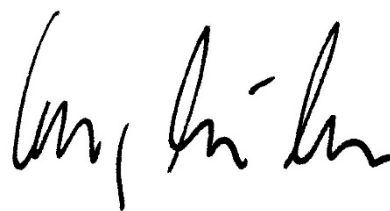
To achieve our targets, we are continually investing large sums and again invested more than Euro 300 million in the 2021 financial year. We connected our energy from waste plant in Leuna to the district heating grid at Stadtwerke Merseburg. This municipal utility company can therefore cover up to 50 percent of its district heating needs with energy from climate-neutral generation. In Mannheim and Offenbach, we are building phosphorous recycling plants capable of recovering the phosphorous contained in sewage sludge. We have boosted our own portfolio of green generation capacities with further wind turbines and for the first time photovoltaics parks as well, which we acquired from Juwi and Windwärts. In Saxony-Anhalt, we are extending our capacities for fermenting and generating energy

from organic waste by building a second plant. The bi-methane generated here will be fed into the regional gas grid. In December 2021, we extended the portfolio of solutions at our Enamic subsidiary by acquiring all the shares in Avantag Energy and its associate company Philipp Rass Energy. This means we now also offer one-stop turnkey solutions for roof-top photovoltaics systems for industry, businesses and the housing industry. And last month we took a successful stride forward in Scotland by launching commercial operations at our new highly efficient energy from waste plant in Dundee.

All these investments have one thing in common: They all contribute to our "Mannheim Model" and move us closer to a climate-positive future. That is crucially due to the efforts made by our employees, whose unfailing commitment and superb teamwork make all this possible. For this, I would like to voice my great appreciation and thanks on behalf of the whole Executive Board!

I would also like to thank you, our readers, for your interest in our Sustainability Report, which also constitutes our Progress Report to the UN Global Compact. We signed the UN Global Compact because we are absolutely committed to human rights, fair working conditions and environmental protection and determined to combat corruption and bribery. We would be delighted to receive your feedback on our Sustainability Report!

Yours faithfully,



Dr. Georg Müller
CEO

About This Report

In this 2021 Sustainability Report, we have documented information about sustainability at MVV in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI). This report is published in electronic form on our website at www.mvv.de/en. This report simultaneously represents our Progress Report pursuant to the UN Global Compact **Page 72** and shows how we are contributing to the UN Sustainable Development Goals **Page 73**.

The 2021 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 can be downloaded from our website at www.mvv.de/en, as can the 2021 MVV Magazine www.mvv.de/en/magazine **2021**.

We meet the obligation imposed on us by the German Commercial Code (HGB) to publish a combined non-financial declaration (nfD) in our 2021 Annual Report www.mvv.de/en/AR **2021, Page 48**.

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 68**, the Progress Report for the UN Global Compact **Page 72** and the UN Sustainable Development Goals **Page 73** also refer to this 2021 Sustainability Report.

In the interests of simplicity and to enhance legibility, all references to people, and in particular to our employees, 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

GRI 102 GENERAL DISCLOSURES

Organisational Profile

GRI 102-1 Name of the organisation

MVV Energie AG

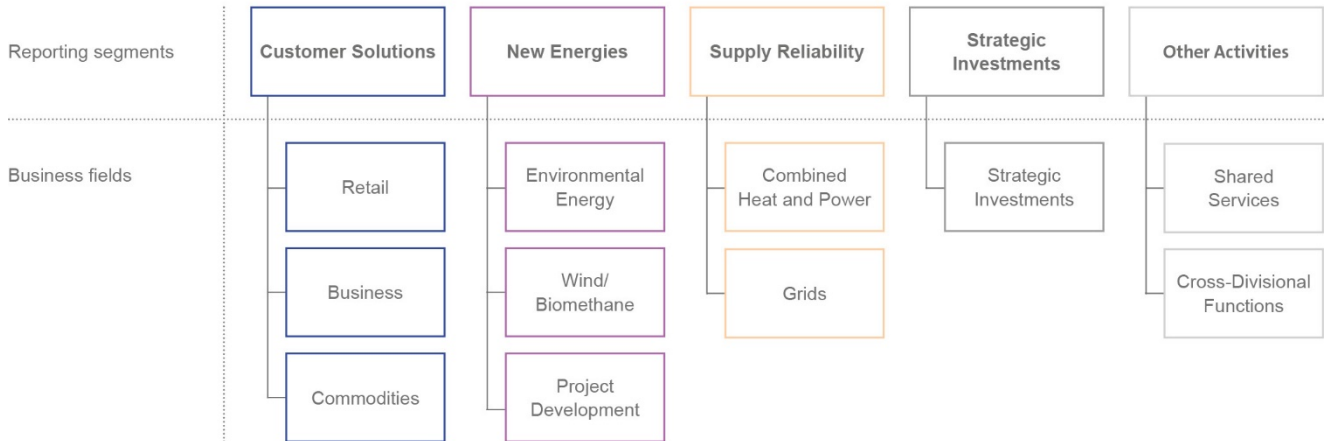
GRI 102-2 Activities, brands, products and services

We cover all major stages of the energy industry value chain and are one of Germany’s leading energy companies. We generate energy, trade with it and distribute it via proprietary grid companies, market energy solutions to various customer groups and have activities in the field of environmental energy. We also produce and supply water.

We have a particular focus on renewable energies. Here, we are active in the fields of project development and operations management for windfarms, solar parks and biomass power plants. Not only that, we have plants of these kinds in our proprietary generation portfolio and market electricity from such plants on our account and on behalf of third parties, in this case also within so-called PPA/PSA models.

We manage MVV in five segments on which we also base our external reporting. Business fields are allocated to the segments. The chart below provides an overview.

REPORTING SEGMENTS AND BUSINESS FIELDS



GRI 102-3 Location of headquarters

Mannheim, Germany

GRI 102-4 Location of operations

The largest locations of our group of companies, namely Mannheim, Kiel, Offenbach and Wörrstadt, are in Germany. We are present in around 20 countries, of which the most important are Germany, the UK and the Czech Republic.

GRI 102-5 Ownership and legal form

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

GRI 102-6 Markets served

MVV operates in all major stages of the energy industry value chain in Germany and abroad. We describe our value chain under GRI 102-9 [Page 12](#).

GRI 102-7 Scale of the organisation

The key figures on [Pages 5 to 6](#) (MVV in Figures) provide an overview of our company's size. In addition to MVV Energie AG, all material German and foreign subsidiaries in which MVV Energie AG directly or indirectly holds a majority of the voting rights have been included in MVV's consolidated financial statements. Furthermore, subsidiaries at which contractual provisions result in control by MVV are included in the consolidated financial statements irrespective of whether MVV holds a majority of voting rights. As of 30 September 2021, these involved 133 fully consolidated companies and 35 companies consolidated using the equity method (at-equity companies).

GRI 102-8 Information on employees and other workers

As of 30 September 2021, we had a group-wide total of 6,470 employees, of which 950 employees abroad.

Our employees abroad include 498 employees at our Czech subgroup, 292 at Juwi's foreign shareholdings and 152 at the British subsidiaries of MVV Umwelt.

Employee key figures		
	FY 2021	FY 2020
Number of employees	6,470	6,260
of which		
Germany	5,520	5,351
Abroad	950	909
of which		
Women	1,825	1,760
Men	4,645	4,500
of which trainees¹		
Women	87	89
Men	253	252
Total	340	341
of which part-time employees (%)		
Women	10.5	10.6
Men	4.3	4.4
Total	14.8	15.0
of which permanent employees		
Women	1,620	1,561
Men	4,173	4,054
Total	5,793	5,615
Average age (years)		
Women	42.8	42.6
Men	44.4	44.4
Total	43.9	43.9
Average length of service (years)		
Women	12.7	12.1
Men	13.0	13.1
Total	12.9	12.9
Number of employees on childcare leave²		
Women	94	97
Men	106	69
Total	200	166
Staff turnover rate² (%)	8.9	8.4
Employees with severe disabilities² (%)	4.3	4.5

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

² In Germany

We report extensively on the concerns of our employees on [Pages 60 to 67](#). We also deploy a small number of third-party company employees for various activities. We do not collect any data about these employees, however, as we assess their share as immaterial and the collection of such data would not provide us with any benefits.

GRI 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, heat and biomethane
- Developing new generation plants, especially onshore wind and photovoltaics plants, for proprietary use and for third parties
- Operating and maintaining electricity, natural gas, district heating and water grids, as well as energy storage facilities
- Supplying electricity, gas, heat and water to end customers and secondary distributors
- Producing, processing and supplying drinking water
- Incinerating and recovering resources from waste, including planning, building, operating and maintaining suitable plants
- Planning and building IT data centres and providing digital and other services
- Providing energy-related services for buildings, private customers, 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, for example, we can decide who we wish to do business with and which minimum requirements we place in our suppliers. Key factors influencing our supplier selection from a non-financial perspective include the topics of anticorruption measures, human rights, employee rights, including work safety, and environmental and climate protection. We aim to avoid any situation in which activities along our value chain have or favour any harmful effects in terms of human rights or the environment and climate.

The energy industry supply chain is greatly influenced by fuel trading, which is handled on energy exchanges or in bilateral agreements. A far lower share of our total procurement volumes relates to suppliers who provide us with goods or perform services for us. These suppliers have often been known to us for many years. We perform detailed analyses on the CO₂ footprints of the products and solutions we procure and of our strategy suppliers and account for the findings in our climate balance sheet.

The majority of our procurement volumes involve energy carriers such as electricity and natural gas for our customers. In most cases, these are not physically procured from producers but rather via wholesale markets. Moreover, we typically hedge energy supplies by way of financial transactions. In recent years, there has been increasing public interest in the greenhouse gas emissions resulting from the production and transport of natural gas. This relates in particular to natural gas from Russia and LNG gas from overseas. We analyse the issues involved very closely but cannot directly influence these or the origin of the natural gas. We procure agricultural and forest biomass in accordance with the criteria set out in Article 29 of Directive (EU) 2018/2001, as well as biomass meeting the concept of waste and old timber in Classes I to IV.

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

Our cooperation with suppliers and service providers in Germany and the European Union is based on applicable laws and regulations, including the German Act on Corporate Due Diligence Obligations for the Prevention of Human Right Violations in Supply Chains (LkSG), which will apply to us from 1 January 2023, as well as on those compliance regulations, forms of conduct and work practices relevant to us. Among others, these include the international conventions of the United Nations (UN), the International Labour Organization (ILO) and the Organisation for Economic Cooperation and Development (OECD), as well as the UN Global Compact. Our suppliers are obliged to comply both with our Compliance Code of Conduct, which we updated in December 2021, and with our Suppliers Code of Conduct, both of which are published on our website

www.mvv.de/central-purchasing. Our suppliers undertake to comply with legal requirements and with internationally recognised standards governing measures to combat corruption and money laundering, the protection of human and workers' rights, as well as environmental and climate protection, and grant us rights to information and verification in this respect. If these obligations are breached, then contractual sanctions, including contractual penalties, termination and damages payments, are provided for.

Suppliers to MVV Energie, Energieversorgung Offenbach, Juwi and Stadtwerke Kiel are regularly assessed in terms of their sustainability, risks and compliance, as are the subcontractors we approve, and will in future also receive training. In the year under report, we began compiling training material for employees and suppliers and will initiate training processes in the near future. In our supplier management system, all suppliers are required to provide disclosures on whether they have compliance or anticorruption requirements and a code of conduct, as well as on whether they are committed to the UN Global Compact. Moreover, they must disclose whether they have a sustainability concept and, if so, how this is implemented. Corresponding information and certificates are deposited in our supplier management system. These aspects are monitored within our compliance management system. For the most important of our strategic suppliers, we perform additional in-depth analyses of their strategy and of the climate protection and sustainability measures they have in place. Compliance with social welfare standards also forms part of our contract awarding process. As a general rule, we do not obtain data from suppliers located further upstream in the supply chain. Together with external experts, in the 2021 financial year we performed an extensive analysis of the human rights risk profile on product group level for those products we procure, as well as a hotspot analysis for strategic suppliers. We are drawing on the findings to further develop our existing sustainability-related procurement processes.

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

Acquisitions of companies or shareholdings are subject to painstaking due diligence that also covers compliance with human and workers' rights, including work safety, adherence to compliance requirements and further sustainability aspects, such as environmental and climate protection.

If we access new regions or markets outside Europe, this mostly relates to our project development business, i.e. in particular to customers requesting the construction of renewable energies plants. These also include projects in developing and emerging economies in order to provide access to clean energy there as well. In these countries, we are service providers, meaning that we neither own any plants nor act as operators. To safeguard respect for human rights even more clearly along the value chain in countries outside Europe as well, 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/en/responsibility, our Suppliers Code of Conduct and our Compliance Code of Conduct. Moreover, the internal process used to identify potential human rights risks was adapted in terms of its contents and processes to the German Act on Corporate Due Diligence Obligations for the Prevention of Human Right Violations in Supply Chains (LkSG) and integrated into regular processes.

Employees and third parties can contact MVV's Compliance Officer, who also acts as the company's Human Rights Officer, or an external confidence lawyer directly via an anonymous "whistle-blower hotline" and provide tip-offs on potential misconduct. The confidence lawyer, whose telephone number is published on our website at www.mvv.de/en, is able to accept tip-offs concerning material incidents of corruption, criminal offenses and misdemeanours. Tip-offs concerning actual or suspected human rights violations and actual or suspected infringements of our Suppliers Code of Conduct can also be reported by anyone at any time, also on an anonymous basis. We have published the relevant information in German and English on our homepage.

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

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 climate-neutral decentralised energy solutions.

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

There were no significant changes to the organisation or its supply chain in the year under report.

GRI 102-11 Precautionary principle or approach

We account for the precautionary approach to dealing with potential negative environmental impacts by recording relevant developments in our risk management system at an early stage. Details about this can be found in our 2021 Annual Report [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR_2021), Page 99.

GRI 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., the Baden-Württemberg Sustainable Business Initiative and the Baden-Württemberg Climate Alliance. Moreover, we occasionally participate in studies and surveys on matters relating to the energy industry. These are published and our involvement is suitably signalled. We commissioned the Wuppertal Institute, for example, to compile an energy framework study for Mannheim. This shows how existing energy infrastructures and services can contribute to the electricity, heat and transport turnarounds and indicates which new infrastructure measures are needed for Mannheim to achieve its ambitious climate protection targets. This study, which was initiated together with the City of Mannheim, was published in the first quarter of 2021. www.mvv.de/energy-framework-study

GRI 102-13 Membership of associations

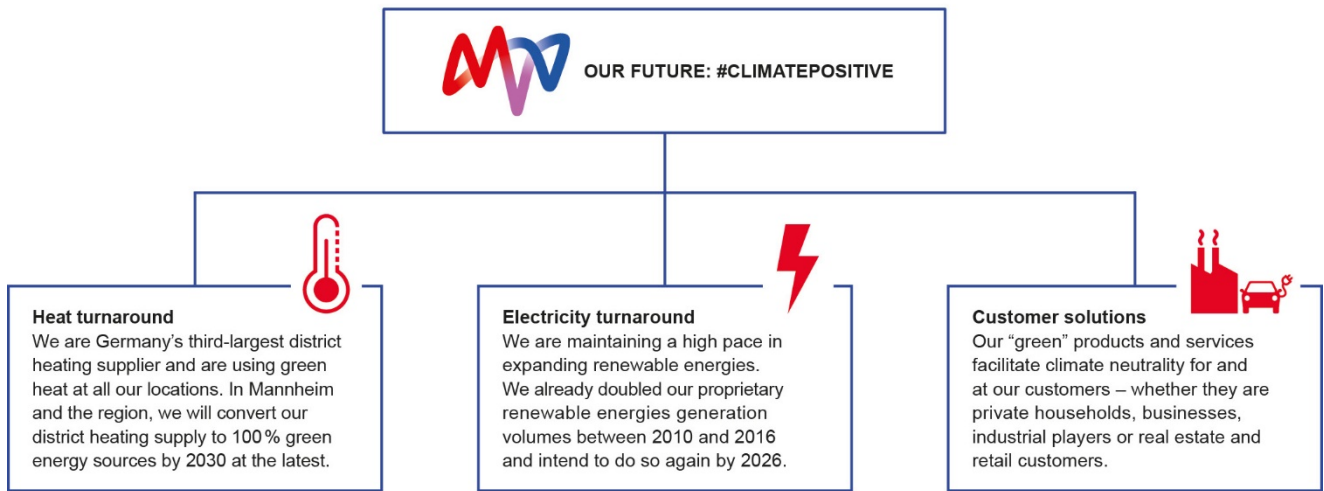
Via our membership in industry associations, we participate in energy policy and energy industry discussions. We are members, for example, in the following associations relevant to the areas in which we operate: Bundesverband der Energie- und Wasserwirtschaft e. V. (BDEW), Verband kommunaler Unternehmen e. V. (VKU), 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.

GRI 102-14 Statement from senior decision-maker

With our business activities, we aim to make a positive contribution towards the achievement of the Paris Climate Agreement. We made intensive use of our 2021 financial year to further develop our existing decarbonisation targets [Page 4](#).

We are significantly stepping up our pace to achieve even more climate protection. We present MVV’s strategy in the Foreword [Page 7](#) and in detail in the current 2021 Annual Report [www.mvv.de/en/AR 2021](http://www.mvv.de/en/AR_2021), [Page 21 onwards](#).

THE MANNHEIM MODEL: THREE PILLARS OF A CLIMATEPOSITIVE FUTURE



Ethics and Integrity

GRI 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. By actively implementing preventative measures within business processes, we are committed to averting criminal or grossly improper violations of the law. In this respect, we have a zero-tolerance policy towards bribery and all other forms of corruption. With regard to corruption prevention, we provide extensive training to our employees, particularly those working in sales, related areas and procurement. We show them, for example, how to deal with gratuities and invitations, which we record and check. These measures enable us to minimise the risk of soft bribery. Furthermore, we continually monitor all business fields, specialist divisions, group departments and subsidiaries to ascertain whether compliance requirements have been adhered to. Moreover, employees and third parties can contact the Compliance Officer, who is also the Human Rights Officer, or an external confidence lawyer directly via anonymous whistle-blower hotlines and thus provide tip-offs on potential misconduct. This anonymity ensures that whistle-blowers need not fear any repercussions. We provide information in German and English about the confidence lawyer on our website www.mvv.de/en. We report in detail on this in our 2021 Annual Report www.mvv.de/en/AR 2021, **Page 82 onwards** (Corporate Governance Declaration) and **Page 48 onwards** (Combined Non-Financial Declaration).

Our cooperation and our interactions are supported by our “Lived Energy” corporate culture. Our cultural values at our Mannheim location are:

- **Courage:** We set out on dynamic new paths, see changes as an opportunity and seize the initiative for our future.
- **Responsibility:** We have a forward-looking mindset and act accordingly, take quick decisions and build trust.
- **Appreciation:** We openly share praise, are constructive in our criticism and treat one another with respect.
- **Community:** We build on diversity, learn from each other and work together to reach our common goals.

Numerous discussions held in connection with Lived Energy showed that our understanding of management plays a highly significant role in our interactions. To account for this, we supplemented our cultural values by devising a shared understanding of management for all employees. After all, we are convinced that all employees bear responsibility – in projects and sub-projects, for processes and for tasks.

Governance

GRI 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 2021 Annual Report, we report extensively on shareholders' rights of involvement and supervision [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR%2021), **Page 83 onwards**. We also report in detail in the 2021 Annual Report on the dual management system required by law, the composition and mode of operation of the Executive and Supervisory Boards, the diversity concepts and the work performed by the Supervisory Board's committees [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR%2021), **Page 86 onwards**. The Supervisory Board Report provides information about the work performed by the Supervisory Board in the 2021 financial year [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR%2021), **Page 11**.

Sustainability management

Our sustainability management is anchored on various levels of the Group. The Executive Board bears overall strategic responsibility. The sustainability department, which is located in organisational terms in our group strategy, energy industry and M&A department, coordinates the sustainability strategy, reports to the Executive Board and relevant bodies and manages the group-wide sustainability programme. As well as sharing information across business fields, this department also plans and implements projects and measures, including implementation of the EU Taxonomy Regulation and of the future Corporate Sustainability Reporting Directive. Moreover, sustainability management is responsible for major aspects of MVV's stakeholder management. The specialist departments continually review, evaluate and manage MVV's performance based on sustainability indicators and medium-term targets. We evaluate investment projects by reference to sustainability criteria. The relevant measures are implemented on an operative level, also by the business fields acting under their own responsibility. 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 [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR%2021), **Page 21 onwards**, Corporate strategy. Our goal is for our activities to make a positive contribution towards meeting the Paris Climate Agreement. We made intense use of the 2021 financial year to further develop our existing [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR%2021), **Page 4**, and significantly increased the pace in order to achieve even greater climate protection. This way, we have supplemented our [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR%2021), **Page 4**, which we set for a 10-year period in 2016 already.

Stakeholder Engagement

GRI 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 shareholders, employees and customers are among our most important stakeholders, as are government and political representatives. Other major stakeholders include non-government organisations (NGOs), analysts, local residents at our locations, media, associations and suppliers. These are joined by cooperation partners, business partners and research institutes.

GRI 102-41 Collective bargaining agreements

Of our employees in Germany, 71 % work at companies that have concluded collective bargaining agreements. In Germany, the principle of employee codetermination is legally anchored in the German Codetermination Act (MitbestG) and the German Works Constitution Act (BetrVG). As a member of the UN Global Compact, we also feel obliged to uphold freedom of association and effective recognition of the right to collective bargaining. We underline our commitment to this in our Human Rights Policy

 www.mvv.de/en/responsibility.

GRI 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 for us to assess a variety of perspectives and concerns more closely and to factor these into our company's activities. In preparation for the first GRI report in the 2015 financial year, the company identified and determined the groups of stakeholders listed in 102-40; these decisions were based on the varied forms of exchange we had with stakeholders. We review the relevance of the respective concerns in the materiality analysis; we attach importance to including all groups.

GRI 102-43 Approach to stakeholder engagement

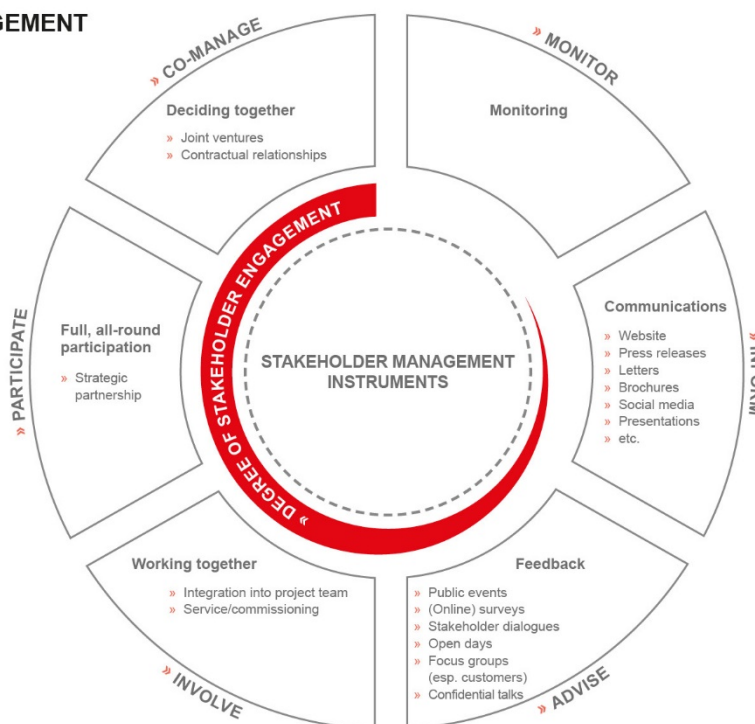
MVV's stakeholder management is coordinated by the sustainability department. We take our regular, ongoing or incident-specific discussions and interviews with stakeholders as an opportunity to review our material topics. In this, we also actively contact various groups of stakeholders, such as customers, employees and NGOs, to discuss specific developments and 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 report on the concerns of our stakeholders under Point GRI 102-44. Since 2020, we have been entered in the Transparency Register of the European Commission. We will also be entered in the lobby register for the representation of interests to the German Federal Parliament and the German Federal Government within the respective deadline in the 2022 financial year. One component of our internal compliance requirements is that donations and payments to parties and political organisations are strictly prohibited.

We aim to maintain an open and transparent dialogue with our stakeholders: That applies both to our personal contacts with them and to 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 select areas, we involve stakeholder groups in our materiality analysis. We particularly note their feedback on our Sustainability Report in order to factor these considerations into the subsequent report.

We usually hold a Sustainability Day for all our internal stakeholders once a year and enter into close dialogue with them concerning current sustainability topics. We also share expertise with the City of Mannheim to address specific topics, such as the Energy Framework Study in March 2021 or the application for "100 climate neutral cities" at the end of January 2022.

In the light of the coronavirus pandemic, most stakeholder activities were held on a virtual basis in the 2021 financial year.

STAKEHOLDER ENGAGEMENT



GRI 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 36 to 67](#).

Overview of stakeholder concerns			
Stakeholder group	Principal degrees of interaction	Material sustainability topics in 2021	Select concerns brought to MVV's attention
Customers	Monitor, inform, advise	Energy and Environment	<ul style="list-style-type: none"> Renewable energies and energy efficiency (products and services for own energy turnaround) Climate-neutral products and services
		System Transformation	<ul style="list-style-type: none"> Energy prices Position regarding coal exit Climate protection and climate neutrality Long-term role of natural gas
Employees	Inform, advise, involve, participate	Economic Performance	<ul style="list-style-type: none"> Company performance, value creation
		Energy and Environment	<ul style="list-style-type: none"> Position regarding green heat Climate protection and climate neutrality Local environmental protection
		System Transformation	<ul style="list-style-type: none"> Sector coupling (including e-mobility products)
		Employees and Society	<ul style="list-style-type: none"> Occupational health and safety Hybrid and virtual cooperation Diversity
Shareholders, analysts	Monitor, inform, advise	Economic Performance	<ul style="list-style-type: none"> Company performance, value creation Dividend Green growth
		Energy and Environment	<ul style="list-style-type: none"> Position regarding climate neutrality/1.5-degree trajectory Role of CO₂ capturing (BECCUS) Climate protection and climate neutrality
		Employees and Society	<ul style="list-style-type: none"> Occupational health and safety
Government and political representatives, non-government organisations (NGOs), associations	Monitor, inform, advise, involve	Energy and Environment	<ul style="list-style-type: none"> Position regarding climate neutrality/1.5-degree trajectory Transformation to green heat Corporate transparency (EU Taxonomy) Fossil-based district heating backup Role of CO₂ capturing (BECCUS)
		System Transformation	<ul style="list-style-type: none"> Hydrogen industry
		Employees and Society	<ul style="list-style-type: none"> CSR/sponsoring Human rights and supply chains
Residents at our locations	Monitor, inform, advise	Energy and Environment	<ul style="list-style-type: none"> Emissions and influence of pollutants GKM plant exit and long-term role of natural gas
		System Transformation	<ul style="list-style-type: none"> Supply reliability (heat)
		Employees and Society	<ul style="list-style-type: none"> Society (sponsoring measures)
Suppliers, cooperation and business partners	Monitor, inform, advise	Energy and Environment	<ul style="list-style-type: none"> Climate-neutral supply chain Energy prices
		System Transformation	<ul style="list-style-type: none"> Digital transformation Innovations
		Employees and Society	<ul style="list-style-type: none"> Human rights in the supply chain
Research institutes	Monitor, advise, involve	System Transformation	<ul style="list-style-type: none"> Sector coupling and digital transformation, studies and projects CO₂ capturing (BECCUS)

Focus on customer satisfaction

We aim both to attract new customers and to retain our existing customers on a long-term basis. In view of this, their satisfaction was a key priority for us once again in the 2021 financial year. In the year under report, we further developed the measurement systems we use to obtain direct and campaign-based customer feedback.

We measure customer satisfaction both with support from independent market research institutes and directly in dialogue with our customers. In the 2021 financial year, we once again took part in the BDEW service monitor for some of our locations. Starting from a good level, we were able to achieve further improvements in all KPIs (customer satisfaction, willingness to remain, willingness to recommend) compared with the previous year. The positive results from this survey confirm the success of our work to date on quality assurance and continuous improvement.

Furthermore, for important points of contact we have implemented new methods and measurement points for customer satisfaction. We will further expand and automate these in future, as we have detected further potential for improvement in this respect. The methods and measurement points provide us with direct, prompt and convenient feedback on relevant customer experiences. In this, we record key figures relevant to our management of the company, such as customer satisfaction or willingness to recommend us to others. Moreover, we systematically ask our customers about any criticisms and suggestions. Based on this input, we obtain further ideas and devise measures to enhance customer experiences which we then implement in a continuous process.

We are also extending our expertise in the area of customer management by investing in personnel resources. Among other measures, we set up the new central "Customer Experience Management" department. This is promoting strategic and operational steps to increase our customers' satisfaction with MVV's services. Not only that, in the 2021 financial year we further expanded 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 Practice

GRI 102-45 Entities included in the consolidated financial statements

Including MVV Energie AG, as of 30 September 2021 the MVV Group comprised 133 fully consolidated companies and 35 companies recognised using the equity method (at-equity companies). An overview of all companies in which we hold interests can be found in the list of shareholdings in MVV's 2021 Annual Report. [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR_2021), **Page 175 onwards**.

Our reporting generally refers to MVV and all subsidiaries that are fully consolidated in the consolidated financial statements. To supplement this information, in 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.

GRI 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 inter-

faces with our external stakeholder groups. In addition, in the year under report we also held workshops and interviews with select stakeholders. We review all aspects of the materiality process every three to four years, most recently in the 2021 financial year. Moreover, we also update the main characteristics and prioritisations on an annual basis. In terms of its contents, the materiality analysis accounts for global challenges and megatrends, Sustainable Development Goals (SDG) **Page 73**, 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. 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.

GRI 102-47 List of material topics

List of material topics		
Topic-specific disclosures	What we aim to achieve	What we achieved in the 2021 financial year
Economic Performance		
GRI 201 Economic performance 2016	We aim to increase our value added.	We achieved a significant increase in our net value added, which rose year-on-year by Euro 104 million to Euro 1,022 million.
GRI 203 Indirect economic impacts 2016	We will invest a further total of Euro 3 billion in the energy turnaround in the years ahead. (basis: start of 2017 financial year)	Since the 2017 financial year, we have invested a total of Euro 1,422 million; in the 2021 financial year, we invested Euro 306 million.
Energy and Environment		
GRI 301 Materials 2016	We increase the efficiency of our plants and reduce emissions from our proprietary generation and at our customers.	We connected our energy from waste plant in Leuna to the district heating grid at Stadtwerke Merseburg. In the Scottish city of Dundee, we launched trial operations with our new energy from waste plant. This is one of the most efficient plants of its kind in Europe. By working with energy management systems, we ensure continuous improvement at our plants.
	We reduce our ecological footprint by expanding green heat, scaling back fossil-based generation and this way reducing the use of non-renewable fuels.	The fuel efficiency rate at our fully consolidated companies rose year-on-year from 66 % to 67 %.
GRI 302 Energy 2016	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 564 MW at the end of the 2021 financial year, 33 MW more than a year earlier.
	We aim to reduce grid losses in our electricity and heat grids.	Grid losses fell year-on-year by 3 % for our electricity grids and by 1 % for our heat grids.
MWV topic: Renewable energies	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)	Since the 2017 financial year, we have connected renewable energies plants with capacities of 2,755 MW to the grid; in the 2021 financial year, we connected new projects with capacities of 610 MW.
GRI 305 Emissions 2016	We will triple our 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)	Thanks to our investment initiatives, we reached this target ahead of schedule in the 2021 financial year.
System Transformation		
MWV topic: Sector coupling	We actively contribute to sector coupling.	In May 2021, we offered the first integrated sector coupling solutions on the market in the retail and business segment in the Rhine-Neckar metropolitan region. We further expanded our e-mobility infrastructure at our locations in Mannheim, Offenbach and Kiel.
MWV topic: Supply reliability	We are smartly combining renewable and highly efficient conventional energies and contributing to supply reliability. We aim to minimise interruption-induced failure in the electricity supply.	We pressed ahead with our planning to secure the heat supply at the Mannheim and Offenbach locations in the period after the coal exit. We were able to ensure a largely interruption-free supply of electricity. The SAIDI key figure for electricity in our grid regions amounted to 9 minutes/year in the 2020 calendar year.

Topic-specific disclosure	What we aim to achieve	What we achieved in the 2021 financial year
System Transformation		
MVV topic: Changed energy demand	We prepare our supply grids for changes in energy demand in the electricity and heat sectors as a result of 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.
MVV topic: Changed infrastructures and smart cities	We are contributing our expertise to make municipal infrastructures and services fit for the future on behalf of local authorities and companies.	The Mannheim Energy Framework Study, which was commissioned by MVV and published in February 2021, provided a key foundation for the 2030 Climate Action Plan and for more far-reaching municipal planning.
MVV topic: Innovation	As a partner for decarbonisation and the energy turnaround, we aim to convince customers with continuously new and innovative products and services that make a major contribution towards sustainable development.	We expanded our range of climate neutrality solutions. We provide our B2B customers, for example, with in-depth advisory services on their own climate accounting, sustainability management and decarbonisation strategies.
MVV topic: Digital transformation	By promoting digitalisation and networking in our own processes, at our customers and in our products, we safeguard our future performance capacity.	In our digitalisation programme, we further automated our internal processes and boosted our digital cooperation. 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.
	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		
GRI 403 Occupational Health and Safety 2018	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 avoid any accidents arising at all in future.	The lost time injury frequency (LTIF) rate amounted to 4.1, compared with 6.7 in the previous year. We thus maintained the positive trend seen in recent years.
GRI 404 Training and Education 2016	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 2021.
	We aim to further develop our employees' potential.	Our employees took part in a variety of internal and external training and development programmes; due to the pandemic, we extended our digital programmes.
GRI 405 Diversity and Equal Opportunity 2016	By 30 September 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 as of 30 September 2021, while the share of women managers stood at 14 %. In September 2021, the Executive Board resolved to retain the existing targets and to reach these by 30 September 2026.
GRI 413 Local Communities 2016	We aim to communicate transparently and openly with our stakeholders and are available to speak to all of our stakeholders.	We upheld our various reporting and communications instruments. Our climate protection targets have been certified by the SBTi.
MVV topic: Society	We aim to show our commitment to the society in which we operate.	We continued our sponsoring and support measures in a targeted manner.

GRI 102-48 Restatements of information

In the year under report we reviewed our material topics and left them largely unchanged. We adjusted previous year's figures to account, for example, for changes in specialist allocations and reported such adjustments by adding footnotes to the relevant tables.

GRI 102-49 Changes in reporting

In the material topic of System Transformation, we have added the MVV topic of "Innovation", while the former MVV topic of "Information security and data protection" has been removed. In the material topic of Employees and Society, we now report on GRI 405 Diversity and Equal Opportunity 2016 rather than on the MVV topic of "Diversity". All other topics are unchanged compared with the previous year.

GRI 102-50 Reporting period

Unless otherwise indicated, the information we provide in this report refers to our 2021 financial year (1 October 2020 to 30 September 2021). In individual cases, we report on data based on the calendar year; where applicable, we have indicated this in the relevant tables. More up-to-date information was not available as of the publication date. That is due, for example, to the fact that certain technical parameters are only collected on a calendar year basis.

GRI 102-51 Date of most recent report

February 2021

GRI 102-52 Reporting cycle

Annual


GRI 102-53 Contact point for questions regarding the report

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GRI 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.

GRI 102-55 GRI content index

In the GRI content index  **Pages 68 to 71** we list both the material topics for our Group and the associated topic-related disclosures pursuant to GRI Standards. Furthermore, we also publish topic-specific disclosures relevant to our own company. The page references in the index all refer to this 2021 Sustainability Report.

GRI 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 2021 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/en/AR 2021](http://www.mvv.de/en/AR_2021), Page 48 onwards.**

Management Approaches

GRI 103 MANAGEMENT APPROACH

GRI 103-1, GRI 103-2, GRI 103-3

Material topic: Economic Performance
(GRI 201 Economic performance, GRI 203 Indirect economic impacts)

Background

Given the requirements posed by climate protection, 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. With our sustainability management [□ Page 17](#), we assume responsibility for our decisions and actions, as well as for 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 over and above our own requirements 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 provides a detailed explanation of its treatment of the material topic of Economic Performance in the combined management report in our 2021 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/en/AR 2021, Page 19 onwards](#). We also offer details of our business framework [□ www.mvv.de/en/AR 2021, Page 30 to 37](#). We account for our entrepreneurial responsibility by continually observing, analysing and assessing our opportunities and risks [□ www.mvv.de/en/AR 2021, Page 96 onwards](#).

In our input/output balance sheet [□ Page 42](#), we present all significant flows of materials, energy, goods and money that are associated with our business activities.

Material topic: Energy and Environment
(GRI 301 Materials, GRI 302 Energy, MVV topic: Renewable energies, GRI 305 Emissions)

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.

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

Politicians, economic players and society as a whole all agree that achieving climate neutrality is the global task for the decades ahead. In the EU, climate neutrality is to be achieved by 2050. In the German Climate Protection Act (KSG), the Federal Government stipulated in 2021 that Germany should become climate neutral by 2045 already. We have described the associated developments in energy policy in our 2021 Annual Report www.mvv.de/en/AR2021, **Page 30 onwards** (Business Framework). MVV has accorded great importance to climate protection, decarbonisation and renewable energies for many years already.

The great challenge is still the European goal of becoming climate neutral across all sectors by 2050. To achieve climate neutrality, the energy industry has to reduce its direct emissions to zero. This means doing entirely without fossil fuels. The great challenges for the 2020s involve rapidly exiting from coal-based power generation and the use of heating oil, and that in parallel with the completion of the nuclear energy exit. At the same time, it will be necessary to build or modernise the infrastructures needed to safeguard a fully climate-neutral energy supply by 2040 at the latest. This involves the accelerated expansion in renewable energies and the infrastructures needed to generate, transport and use climate-neutral gases. These are the technical preconditions enabling the use of fossil-based natural gas to be gradually phased out in the 2030s while simultaneous-

ly upholding supply reliability. Due to the complexity involved and the pace required, the installation of a new energy infrastructure in less than a generation also represents a challenge for society as a whole.

Like all other sectors, the energy industry will also have to reduce its indirect emissions to zero. These are emissions arising at upstream suppliers and end customers. In this regard, full climate neutrality will only be achieved when other economic sectors also succeed in protecting the climate. Our climate balance sheet, in which we also explain our direct and indirect CO₂ emissions in Scopes 1, 2 and 3, can be found on [Page 29](#).

Our energy generation and our products and services are still not fully compatible with these long-term ecological sustainability targets or the EU's taxonomy requirements. We use limited natural resources. Not only that, the space we use and the emission of pollutants have a harmful effect on the environment and people. We take responsibility for this. With our targets, we will promote our own energy turnaround and that at our customers and become climate neutral by 2040 already.

Treatment and review

As a company, we made intense use of the 2021 financial year to further develop our sustainability strategy with our sustainability management [Page 17](#) and to plan medium-term and long-term measures. In terms of our decarbonisation targets, we now go well beyond the decarbonisation trajectory set out in the KSG legislation: Whereas the KSG provides for a 64 % reduction in CO₂ emissions in the energy industry between 2018 and 2030 and calls for climate neutrality by 2045, we aim to be notably more ambitious in implementing climate protection and to reduce our CO₂ emissions faster than the sector. To achieve this, we are pressing ahead with the electricity turnaround and associated expansion in renewable energies, as well as supporting our customers in their own decarbonisation; above all, we are promoting the heat turnaround. We aim to be one of the first climate-positive energy companies in Germany.

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

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

We compile our greenhouse gas balance sheet in accordance with the Greenhouse Gas Protocol. More than 80 % of the CO₂ emissions which we report come from plants that are governed by the emission trading system (ETS) and are therefore certified.

We use various internal and external systems to collect further data on sustainability; among others, these include energy audits (DIN EN 16247) and energy management systems (ISO 50001), work safety management systems (ISO 45001), environmental management systems such as EMAS and compliance management systems.

Renewable energies, energy turnaround and climate neutrality

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. To become climate positive, we intend to create proprietary CO₂ sinks for unavoidable residual emissions or facilitate the permanent and secure storage or utilisation of the greenhouse gases (BECCUS).

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 CO₂ 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 and achieve climate neutrality.

Thanks to investment initiatives at MVV, we met the first target in this list in the 2021 financial year already. The fact that we achieved this half-way through the timeframe originally planned shows how seriously we take decarbonisation and the extent to which we have stepped up the pace of our decarbonisation in recent years.

Having reached our net CO₂ savings target ahead of schedule, in the 2021 financial year we further developed our existing decarbonisation targets and reviewed them in the light of a 1.5-degree trajectory. We will step up our efforts to save CO₂ in our own energy generation (Scope 1) by 2030. The existing interim target for emissions from district heating generation has become obsolete, as it is included in our overall target for Scope 1 emissions. The target paths adopted by lawmakers in the year under report confirmed our climate protection strategy.

When it comes to reducing our district emissions, we are guided by the decarbonisation trajectory for the overall energy sector in Germany, and that despite our young power plant portfolio. The reduction trajectory set out in the 2021 German Climate Protection Act (KSG) represents a potential approximation to a 1.5-degree trajectory. For our company-specific CO₂ reduction targets, we have for several years now taken 2018 as our base and reference year and set milestone year-based targets to document our progress. At the same time, on a company-internal basis we are also guided by budget-based analyses even though neither the European nor the national climate legislation include cumulative emission budgets for the energy industry sector.

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

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.

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

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

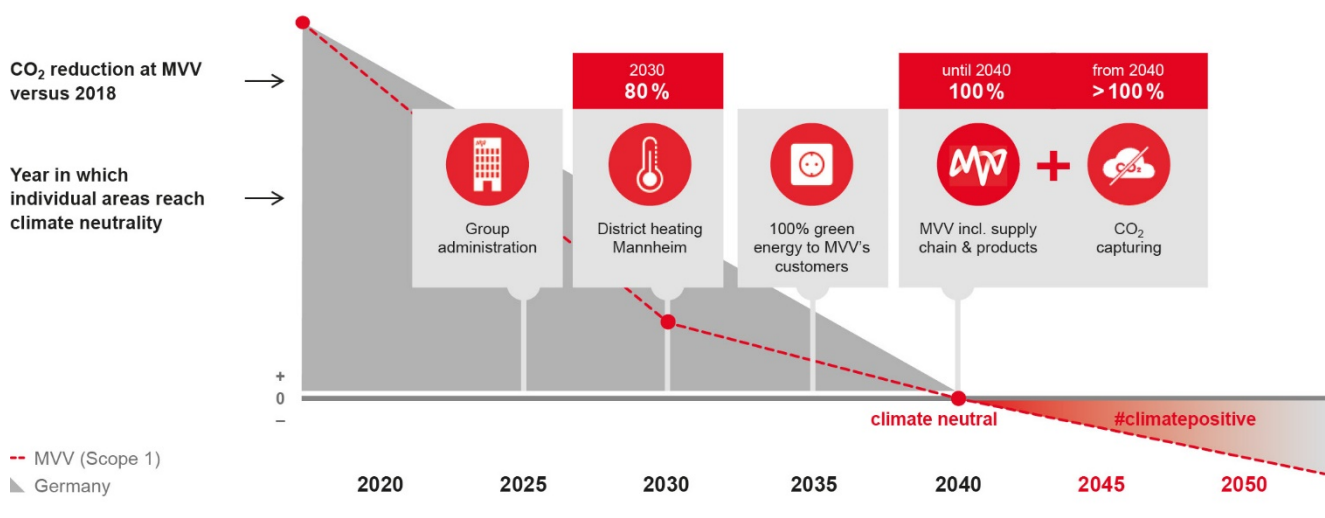
- We will maintain a high pace of expansion for renewable energies to generate electricity and green heat with the aim of offering our customers a fully-climate neutral, failsafe and affordable energy supply.
- We will convert our district heating supply for Mannheim and the region to 100 % green energy sources by 2030 at the latest.
- We will consistently press ahead with the coal exit decided by lawmakers. [📄 Page 39.](#)
- We are reducing the use of fossil-based natural gas at existing plants by adding renewable energies and using green gases.
- We will not build any new (CHP) power plants fired by fossil-based natural gas for the general public supply, i.e. electricity and district heating.

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

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

- We support our customers in achieving their own climate neutrality by promoting the procurement and supply of green energy and offering services and solutions for their own energy turnarounds and energy efficiency.
- We are gradually making our products and services 100 % climate neutral. When it comes to supplying green energy to our customers, we are already able to offer all necessary products and services.
- In our procurement of goods and services right through to power plants, we ensure that our suppliers aim for ambitious reductions in their CO₂ footprints.
- We are enhancing our own energy efficiency and using green energies in our own buildings and to operate our grids.

OVERVIEW OF MVV'S DECARBONISATION TARGETS



Handling unavoidable residual emissions

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

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

The energy acquired from the waste heat makes a material contribution towards protecting the climate as it reduces the use of fossil-based fuels harmful to the climate. For this reason, the law states that district heating from energy from waste plants, for example, counts as CO₂ neutral and is on a par with renewable energies when it comes to building energy assessments. Compared with other players in the sector, our energy from waste plants also have very high energy efficiency levels: According to the members' overview of the Association of Energy from Waste Plants in Germany (ITAD), the energy from waste plant in Mannheim is one of the best plants in Germany in terms of the R1 criterion in the Waste Framework Directive.

By adding CO₂ capture facilities and storing or using CO₂ on a long-term basis, energy from waste plants can also achieve physical climate neutrality. When biogenic emission sources are used, end-to-end concepts of this nature are referred to as Bio-Energy Carbon Capture Utilisation and Storage (BECCUS) solutions. If the CO₂ thereby captured is permanently stored, the biogenic share of emissions can be viewed as "negative emissions". This way, energy from waste plants not only become climate neutral in the long term; they even turn climate positive, i.e. become large-scale industrial CO₂ sinks. Thanks to BECCUS, the CO₂ previously bound in the biomass is no longer returned to the atmosphere. This helps to reduce the global concentration of CO₂. The technology used to capture CO₂ is already mature, yet options for sustainable implementation are still limited by a current lack of political regulation, inadequate acceptance within society, downstream value chains and economic viability. Widespread application is not expected before the 2030s.

We are closely reviewing the technical, economic and ecological feasibility of fitting our own energy from waste plants with CO₂ capture and downstream CO₂ storage paths. We will deploy this technology on a permanent basis as soon as long-term, sustainable and secure storage or long-term recirculation of the CO₂ can be ensured and the political and social framework permits its use. BECCUS will play a key role in turning MVV into a climate-positive company. We currently expect this to be the case in 2040. Should it be technically, politically and economically viable to capture and store the CO₂ at an earlier date, then we will accelerate the implementation of our activities in this area.

Key decarbonisation measures for unavoidable residual emissions are:

- We are extending our own expertise in the field of BECCUS for energy from waste and biomass plants and seeking to exchange views and experience with relevant players in business and science, within society and in the political arena.
- We are planning to build a first CO₂ capture pilot plant at the Mannheim location in the medium term.
- We are pressing ahead with feasibility analyses and plans through to preparing plant technology at our energy from waste and biomass power plants with the aim of making it possible to implement BECCUS from the 2030s.
- We aim to create proprietary CO₂ sinks for unavoidable residual emissions or facilitate the permanent and secure storage/use of greenhouse gases (BECCUS).

Resource efficiency, local environmental protection and circular 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 we minimise the energy losses arising when the fuels are converted into end energy, such as electricity or heat. It also means 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 **▣ Page 38, GRI 301-01.**

Local environmental protection is a fixed component of our management systems, into which quality and compliance aspects are also integrated. For us, environmental protection on both national and local levels is closely based on legal requirements. The approvals granted and legal requirements form the basis for our activities, and that both when we build or modernise plants and in our day-to-day operations. Compliance, particularly with the prescribed threshold values, is monitored by the relevant authorities. Certain aspects of our operations, such as plant-specific emissions at large combustion plants, are subject to reporting requirements. Our subsidiaries and shareholdings are responsible for the operative management of environmental concerns on a decentralised basis.

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 have laid down clear responsibilities in the environmental management system for plant-specific threshold values for air pollutants. We continually monitor our emissions figures and perform targeted modernisation measures on our flue gas cleaning facilities. We treat the pollutants incurred very carefully. In the interests of building a circular economy, unavoidable waste from energy generation and waste incineration, such as ash, metals and slag – so-called by-products – is turned wherever possible into products for other companies. Where this is not possible, the waste is disposed of correctly.

Using the materials and energy contained in waste makes a major contribution towards reaching the target of building an economy that is as circular as possible. The best solution should always be to design products in such a way that they can remain in the cycle on a permanent basis, for example due to recycling, and do not become waste. In our environmental energy, business customers and strategic investments business fields, we are making a major contribution to saving resources and building a circular economy.

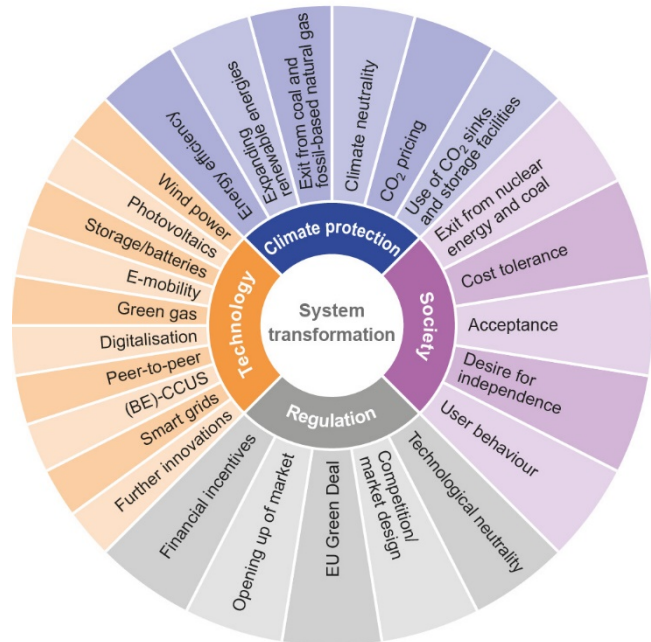
Material topic: System Transformation

(MVV topics: Sector coupling, Supply reliability, Changed energy demand, Changed infrastructures and Smart cities, Innovation, Digital 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, heat 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 heat 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 towns 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, which we present in detail in our 2021 Annual Report [www.mvv.de/en/AR 2021](http://www.mvv.de/en/AR_2021), **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 **Page 4**, we are promoting 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. During the conversion in the energy system it will therefore still be 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 heat supply, our focus is currently on making conventional generation more flexible, for example by working with power-to-heat solutions such as heat 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 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.

Innovation

The change processes required to promote the development towards greater sustainability have to be driven and implemented by companies in particular. For the energy industry, the potential for innovation especially involves new technologies and digitalised services. Here, energy companies are not the prime movers who themselves develop new technologies based on their own fundamental research. Their role is rather to find the right fields of application in an energy system that is complex in terms of its technology and regulation and to ensure that such technologies are put to as sustainable use as possible.

We have set ourselves the goal of developing smart energy products and innovative solutions that satisfy the needs of our customers.

Digital transformation

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

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.

Material topic: Employees and Society
(GRI 403 Occupational health and safety, GRI 404 Training and education, GRI 405 Diversity and equal opportunity, GRI 413 Local communities, MVV topic: Society)

Background

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. 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. www.mvv.de/career

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

Employees

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

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

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


Our personnel strategy focuses on the following areas:

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

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

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

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

We aim to protect the physical and mental wellbeing of our own employees and of those who work on our behalf. To this end, we are making ongoing efforts to improve work safety at the Group. Consistent with this objective, we have established groupwide programmes to increase safety at work. These programmes are taken up by the work safety officers on a decentralised basis and then backed up and supplemented with suitable measures. Further information about this management approach can be found in the reporting on GRI 403  **Page 60**. The current status is reported on Group level and discussed by the Executive Board on a quarterly basis.

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 locations, promoting acceptance for these projects on the basis of dialogue and reaching decisions that also convince third parties. We remain closely in contact with the approval authorities for our projects and, following suitable agreement, make our planning documents, and in particular the relevant environmental compatibility aspects, available to local residents and the representatives of public concerns. Major building sites are announced by way of dialogue-based measures and, where necessary, backed up with events such as public question and answer sessions. 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 Performance

GRI 201 ECONOMIC PERFORMANCE

GRI 201-1 Direct economic value generated and distributed

Creating value

In our input/output balance sheet [Page 42](#), 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 represents MVV’s contribution to gross domestic product.

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 impacts of our activities for society, people and the natural world.

Generation of value added				
Euro million	FY 2021	FY 2020	+/- change	% change
Company performance ^{1, 2}	4,507	3,825	+ 682	+ 18
Input costs ³	- 3,273	- 2,692	+ 581	+ 22
Depreciation	- 212	- 215	- 3	- 1
Value added	1,022	918	+ 104	+ 11

1 Mainly sales

2 Previous year’s figure adjusted

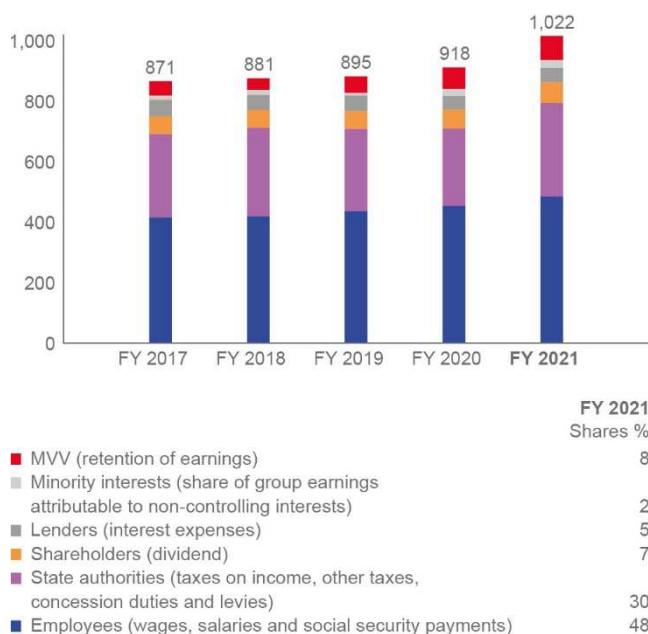
3 Cost of materials/energy and fuel procurement, other expenses, other taxes

Utilisation of value added					
Euro million		FY 2021	FY 2020	+/- change	% change
Recipient	Utilisation				
Employees	Wages, salaries and social security payments	487	456	+ 31	+ 7
State authorities	Taxes on income, other taxes, concession duties and levies	311	258	+ 53	+ 21
Shareholders	Dividend	69	63	+ 6	+ 10
Lenders ¹	Interest expenses	48	45	+ 3	+ 7
Other shareholders	Share of group earnings attributable to non-controlling interests	27	24	+ 3	+ 13
MVV ¹	Retention of earnings	80	72	+ 8	+ 11

¹ Previous year's figures adjusted

ALLOCATION OF VALUE ADDED

Euro million



FY 2021
Shares %

■ MVV (retention of earnings)	8
■ Minority interests (share of group earnings attributable to non-controlling interests)	2
■ Lenders (interest expenses)	5
■ Shareholders (dividend)	7
■ State authorities (taxes on income, other taxes, concession duties and levies)	30
■ Employees (wages, salaries and social security payments)	48

The figures presented in the value added statement for the 2021 financial year reflect fundamental trends. Sales rose significantly, a development largely attributable to price and volume effects for input costs, particularly for commodities. At the same time, we were able to increase our value added by 11 %, and thus significantly. This development reflects our long-term growth strategy.

We also present how this value added has been used. We continued to maintain the share of value added distributed to our shareholders at a stable level, and that although the trend towards low returns on capital in recent years has persisted. The high distribution quota, equivalent to 46 % 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 0.95 to Euro 1.05 per share, thus enabling our shareholders to benefit from the significant increase in value added. The largest share of our value added is still attributable to our employees, even if the relative rise in this share is slightly lower than for shareholders and the state authorities. The slight year-on-year increase was due above all to the higher number of employees, as well as to collectively agreed pay rises.

The total volume of donations or funds invested in broader local communities is not calculated on group level, as this key figure is not relevant to our management of the company and the cost of collecting such information would be disproportionate to the benefit. This regional commitment is organised on a decentralised basis, as are the respective responsibilities [Page 66](#).

GRI 203 INDIRECT ECONOMIC IMPACTS

GRI 203-1 Infrastructure investments and services supported

In 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. This mainly involves onshore wind turbines, photovoltaics systems and biomass plants to generate electricity, heat and biomethane. We invested a total of Euro 306 million in the 2021 financial year.

Energy and Environment

GRI 301 MATERIALS

GRI 301-1 Materials used by weight or volume

Resource efficiency

At our conventional power plants, we generate electricity and heat by using fossil fuels, especially natural gas and hard coal. At our energy from waste plants, we incinerate waste and refuse-derived fuels (RDF). These do not meet any narrower definition of fuels, as they are not used primarily to generate energy, but rather to fulfil the waste disposal mandate. Typically, half the waste results from biogenic sources and therefore counts as renewable.

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 emissions. In the year under report, our plants had an average fuel efficiency rate of 67 %. Our energy yield is thus ahead of the German average for generation activities. The Working Group on Energy Balances (AG Energiebilanzen) published an average fuel efficiency rate of 52.7 % for electricity generation at German power plants in 2020.

We operate our major generation plants almost exclusively with highly efficient combined heat and power (CHP) generation. After all, the fuel efficiency rate for CHP is significantly higher than when electricity and heat are generated separately. In the 2020 financial year, Stadtwerke Kiel launched operations at its new gas-fired power plant in Kiel, which generates electricity and heat using CHP. In the year under report, this plant was therefore included in our key figures for the first full-year reporting period [Page 43](#).

The volume of fuel used in individual financial years largely depends on developments in weather conditions and market prices, as well as on the properties of the fuel in question. By-products, primarily ash and slag, arise in our energy from waste and CHP plants [Page 42](#). The volume of this ash and slag is determined by technical factors or by the fuels used and does not lie within our control. Wherever technologically possible and economically viable, we put these by-products to further use. After suitable treatment, they are returned to the economic cycle, for example as products for the construction industry. 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 (PCBs) only play 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 2021	FY 2020	+/- change	% change
Biomass ¹ (1,000 tonnes)	528	506	+ 22	+ 4
Waste/RDF (1,000 tonnes)	2,014	1,939	+ 75	+ 4
Natural gas (kWh million)	3,490	3,333	+ 157	+ 5
Hard coal (1,000 tonnes)	65	57	+ 8	+ 14
Other fossil fuels (kWh million)	307	277	+ 30	+ 11

¹ Previous year's figure adjusted

Fuels used at power plants Fully consolidated companies and companies recognised at equity				
	FY 2021	FY 2020	+/- change	% change
Biomass ¹ (1,000 tonnes)	566	540	+ 26	+ 5
Waste/RDF (1,000 tonnes)	2,014	1,939	+ 75	+ 4
Natural gas (kWh million)	3,501	3,342	+ 159	+ 5
Hard coal (1,000 tonnes)	688	664	+ 24	+ 4
Other fossil fuels (kWh million)	307	278	+ 29	+ 10

¹ Previous year's figure adjusted

Average fuel efficiency rate Fully consolidated companies				
%	FY 2021	FY 2020	+/- change	% change
Average fuel efficiency rate	67	64	+ 3	+ 5

Average fuel efficiency rate Fully consolidated companies and companies recognised at equity				
%	FY 2021	FY 2020	+/- change	% change
Average fuel efficiency rate	67	66	+ 1	+ 2

Coal use

Targets set out in German Climate Protection Act require exit from coal use by 2030

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

Moreover, in its Coalition Agreement the Federal Government newly elected in 2021 agreed that Germany would “ideally” exit from coal-based energy generation by 2030. To achieve this, it will be necessary to streamline the relevant legislative procedures and bring forward the decommissioning of coal-based power plants either with market-based measures or on the basis of regulatory requirements. At the same time, the Federal Government aims to promote investments in renewable generation capacities. In the heat sector, the relevant target provides for a 50 % share of climate-neutral heat by 2030.

These targets present great challenges for district heating systems in large built-up areas. Within nine years, the operators of these systems will have to convert practically all of their heat generation to renewable sources. Gas-based plants will also be used on a transitional basis. As the exit from all fossil fuels is foreseeable, however, the energy industry will have to rely here on “H2-ready” technology, i.e. plants capable of conversion at relatively low cost to high shares of hydrogen in the fuel used. The manufacturers have committed to making such plants available in the foreseeable future. We will skip this interim stage and convert the heat generation for the district heating grid in Mannheim

and parts of the Rhine-Neckar region directly to green heat sources.

To promote the decarbonisation of district heating grids, by August 2021 the Federal Government developed the “Federal Funding for Efficient Heating Networks” (BEW) subsidy guidelines. These provide for supporting individual investments in green heat generation and for projects to decarbonise entire district heating grids. These subsidy guidelines, whose structure meets the needs of the industry, are currently still undergoing the relevant state aid review at the EU Commission.

Coal-based generation decreasing at MVV

In the 2020 financial year, the decommissioning in 2019 of Gemeinschaftskraftwerk Kiel, a hard coal-fired power plant which we owned with Uniper, also became clearly visible in our non-financial figures. This means that Stadtwerke Kiel has completed the first point of its 8-Point Programme for Climate Neutrality. Operations with the first large-scale heat pump in Kiel Fjord are scheduled to begin in 2026.

With its capacity of 60 MW_e, the power plant in Offenbach is therefore 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-CO₂ heat generation capacity, which amounts to several years, we expect this plant to be decommissioned during the 2020s.

In the Czech Republic, we operate several small coal-based plants to generate and secure the supply of heat. In recent years, we have gradually reduced the use of coal and thus gradually decarbonised the heat supply. We will accelerate this process and discontinue all use of coal at the latest by the end of this decade.

We are a minority shareholder in Grosskraftwerk Mannheim AG (GKM), with a 28 % stake, and do not operate this plant ourselves. GKM currently still operates three hard coal-fired CHP blocks. In the past financial year, GKM registered Block 7 for decommissioning, i.e. it is no longer available for regular operations. Given the latest developments, we are basing our plans and measures on the assumption that coal-based electricity generation will be phased out by the end of the 2020s. The setting of specific decommissioning dates for the individual power plant blocks is subject to the proviso of supply reliability, as well as to the legal framework and the agreements reached between GKM and its shareholders. The speed at which substitute green technologies and backup capacities for district heating generation become available in the years ahead also plays a role in this respect. Block 9 at GKM is one of the newest and most efficient hard coal-fired power plants in Germany. The German Coal Exit Act (KAG) does not stipulate the precise modalities and decommissioning dates.

To decarbonise the district heating supply, we are compiling various concepts which account for all significant forward-generation from GKM in February 2020 by linking up our waste-fired CHP plant in Mannheim to the regional district heating grid. This means that up to 30 % of annual district heating volumes for Mannheim and the region are already generated on a CO₂-neutral basis. The next specific steps we will take to decarbonise district heating in Mannheim and the region are:

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

These measures will already enable us to provide more than 60 % of the necessary heat capacity with green heat sources.

Intensive preparations are currently underway for further options as we head for 100 % green heat. Examples include solutions such as geothermal energy, further river heat pumps, the use of biomass, biomethane CHP plants and the use of further waste industrial heat potential. We are also working on green heat concepts at MVV's other locations with heat activities.

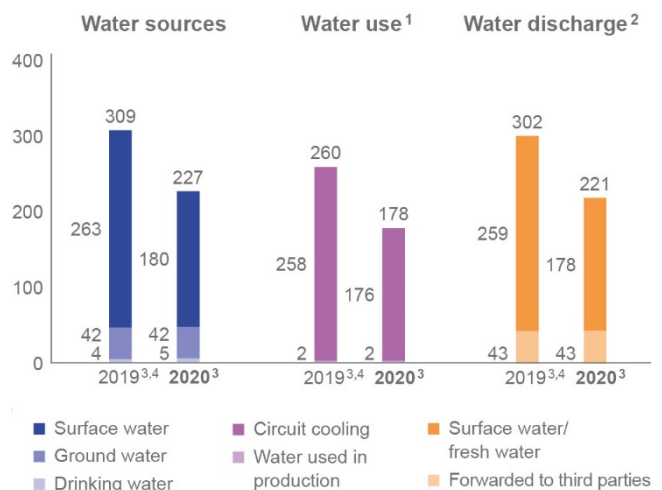
looking technologies. We took a first step to reduce heat

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. MVV Netze and Stadtwerke Kiel play an active role in protecting ground water and water surfaces. As they are responsible for the supply of drinking water in their regions, their supply systems have to be regularly analysed and checked. Here, the production, treatment and distribution of drinking water are not only of economic significance; the public supply mandates serve the common good. As a crucial source of life, drinking water is governed by strict quality standards. The most important objective for the water supply is to comply with these quality standards and minimising relevant contents. We have formulated the targets for our drinking water supply in detail in our Water Policy [mvv.de/water-policy](https://www.mvv.de/water-policy). MVV's water balance sheet clearly shows that the majority of our water use relates not to the production of drinking water, but rather to circuit cooling at power plants. Here, we chiefly take water from rivers and channel it back following cooling. As the volume of our conventional generation gradually decreases, the amount of cooling water used will also drop, as is clear from the comparison of 2018 and 2019.

WATER VOLUMES

Fully consolidated and at-equity companies
m³ million



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

Sustainable circular economy

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

We operate a total of eight energy from waste plants in Germany, the UK and the Czech Republic. At these plants, we incinerated around 2.5 million tonnes of non-recyclable waste and refuse-derived fuels in the 2021 financial year. In the Scottish city of Dundee, we have built a new energy from waste plant that has successfully launched operations.

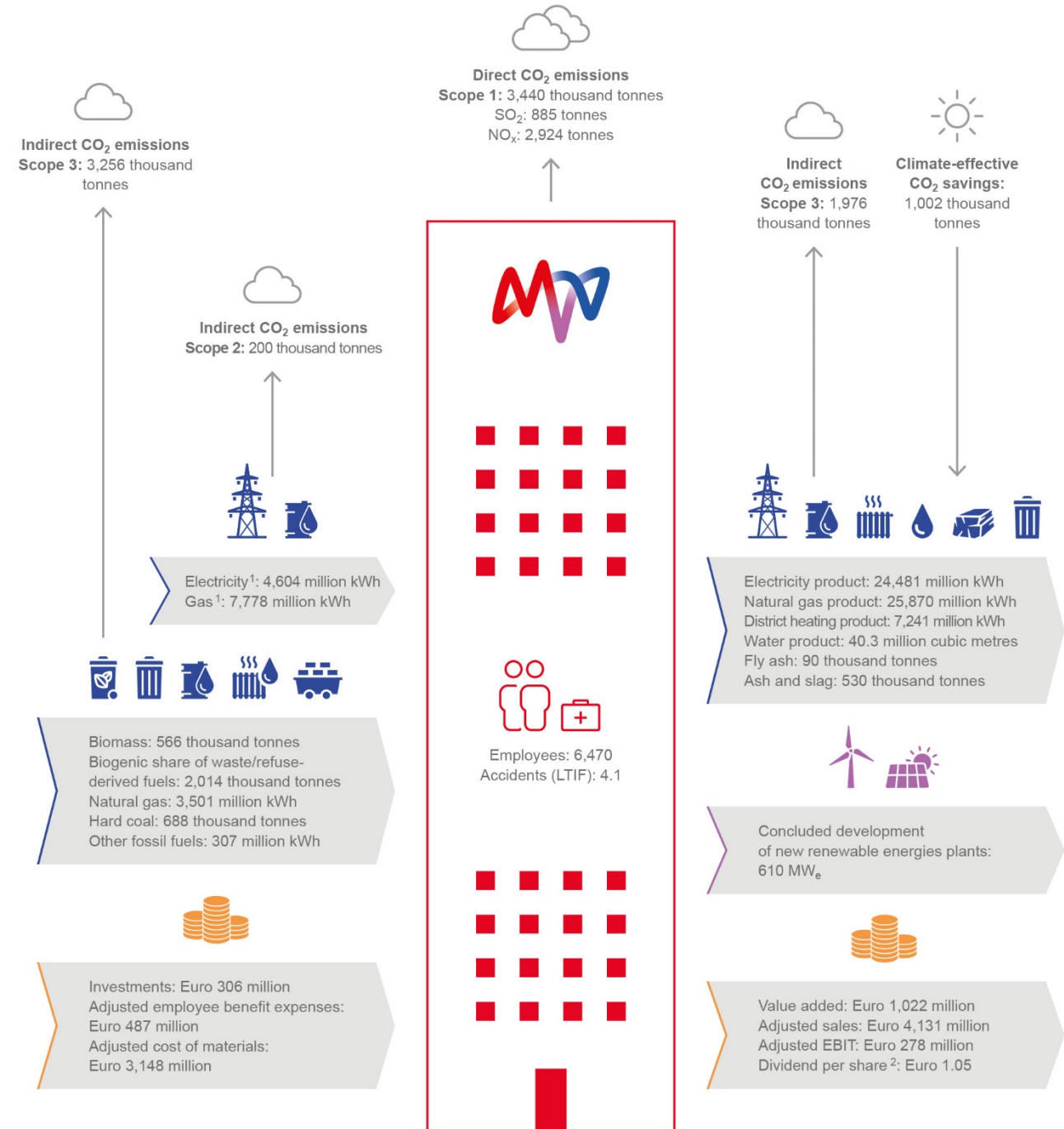
Environmental impacts in our input/output balance sheet

We have compiled an input/output balance sheet each year for several years now [▶ Page 42](#). This compares our most important environmental impacts with our value added.

We have reduced our CO₂ emissions at fully consolidated companies and our at-equity companies by around one quarter in recent years. Due to the lower volume of conventional electricity generation, the volume of dust and other emissions has also decreased. At the same time, we have 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).

MVW'S INPUT/OUTPUT BALANCE SHEET

Fully consolidated and at-equity companies



1 Excluding sales volumes from trading transactions
 2 Subject to approval by Annual General Meeting on 11 March 2022

GRI 302 ENERGY

GRI 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 CO₂ 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 fuel 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 0.7. 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.

Primary energy factor for district heating grids		
	FY 2021	FY 2020
Mannheim district heating supply system	0.42	0.42
Offenbach district heating supply system	0.25	0.47
SWKiel district heating supply system	0.28	0.28

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). We report on the fuels used at our power plants on [Page 38](#).

Energy efficiency projects

In Mannheim and Offenbach, we are building phosphorous recycling plants that will provide an additional component of a sustainable circular economy. These plants will incinerate municipal sewage sludge while at the same time making it possible to recover phosphorous, a valuable resource that is used in fertiliser production. Further plants of this kind are set to follow.

In the year under report, we connected our energy from waste plant in Leuna to the district heating grid at Stadtwerke Merseburg, enabling that municipal utility company to cover up to 50 % of its total district heating requirements with energy from climate-neutral generation.

After more than three years of construction work, we launched operations with our new energy from waste plant in the Scottish city of Dundee. This is one of the most efficient plants of its kind in Europe.

A further example of a modern and sustainable circular economy is currently arising in Saxony-Anhalt: Here, we are building our second plant to ferment and generate energy from organic waste. The biomethane produced at the plant will be fed into the regional gas grid.

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, LED solutions for lighting concepts and energy-efficient data centres. 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. We perform all of the above economic activities in accordance with the EU Taxonomy Regulation, as a result of which our customers can state the associated investments and operating costs in their reporting and, where applicable, benefit from more favourable borrowing conditions.

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	2020 ¹	2019 ¹	+/- change	% change
Electricity	131	135	- 4	- 3
Heat ²	481	485	- 4	- 1

¹ Calendar year

² Previous year's figure adjusted

Grid losses can be reduced with long-term infrastructure measures, such as improved pipe insulation, temperature reduction and other technical methods. The year-on-year change for heat 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 heat losses calculated in individual years.

MVV TOPIC RENEWABLE ENERGIES

Renewable energies: backbone of energy turnaround

Electricity generation in Germany should be based almost entirely on renewable energies by 2045 at the latest. These will play a key role in enabling the national climate protection targets to be met. 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, in the period from 2016 to 2026 we will double our proprietary electricity generation from renewable energies from more than 400 MW to more than 800 MW. This target of doubling our generation also includes the shareholdings we recognise at equity. To enable us to reach our target, we are consistently investing in expanding our renewable energies generation portfolio. Main focuses here relate above all to onshore wind turbines and, more recently, photovoltaics systems as well.

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

On the other hand, between 2016 and 2026 we are connecting 10,000 MW of renewable energies to the grid. 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 2,755 MW to the grid. In the 2021 financial year, we connected new capacities of 610 MW [Page 46](#).

Transformation of the generation portfolio

Electricity generation capacity Fully consolidated companies				
MW _e	FY 2021	FY 2020	+/- change	% change
Biomass and Biogas plants ¹	105	105	0	0
EfW/RDF	176	165	+ 11	+ 7
Wind power ²	250	228	+ 22	+ 10
Photovoltaics	3	3	0	0
Hydroelectricity	2	2	0	0
Renewables and EfW/RDF	536	503	+ 33	+ 7
Conventional CHP and other activities	329	339	- 10	- 3
Total	865	842	+ 23	+ 3

1 Including biomethane plants

2 Previous year's figure adjusted

Electricity generation capacity Fully consolidated companies and companies recognised at equity				
MW _e	FY 2021	FY 2020	+/- change	% change
Biomass and biogas plants ^{1,2}	117	117	0	0
EfW/RDF	176	165	+ 11	+ 7
Wind power	265	243	+ 22	+ 9
Photovoltaics	4	4	0	0
Hydroelectricity	2	2	0	0
Renewables and EfW/RDF	564	531	+ 33	+ 6
Conventional CHP and other activities	702	712	- 10	- 1
Total	1,266	1,243	+ 23	+ 2

1 Including biomethane plants

2 Previous year's figure adjusted

Heat generation capacity Fully consolidated companies				
MW _t	FY 2021	FY 2020	+/- change	% change
Biomass and biogas plants ¹	34	33	+ 1	+ 3
EFW/RDF	759	719	+ 40	+ 6
Green heat capacity	793	752	+ 41	+ 5
Conventional CHP and other activities	1,737	1,910	- 173	- 9
Total	2,530	2,662	- 132	- 5

¹ Previous year's figure adjusted

Heat generation capacity Fully consolidated companies and companies recognised at equity				
MW _t	FY 2021	FY 2020	+/- change	% change
Biomass and biogas plants ¹	34	33	+ 1	+ 3
EFW/RDF	759	719	+ 40	+ 6
Green heat capacity	793	752	+ 41	+ 5
Conventional CHP and other activities	3,292	3,445	- 153	- 4
Total	4,085	4,197	- 112	- 3

¹ Previous year's figure adjusted

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

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, as well as for hybrid projects, i.e. systems combined with battery storage facilities.

Completed development of new renewable energies plants				
MW _e	FY 2021	FY 2020	+/- change	% change
Wind power	92	74	+ 18	+ 24
Photovoltaics	518	188	+ 330	+ 176
Total	610	262	+ 348	>+ 100

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

Operations management for renewable energies plants				
MW _e	FY 2021	FY 2020	+/- change	% change
Wind power	1,282	1,343	- 61	- 5
Photovoltaics	2,529	2,386	+ 143	+ 6
Total	3,811	3,729	+ 82	+ 2

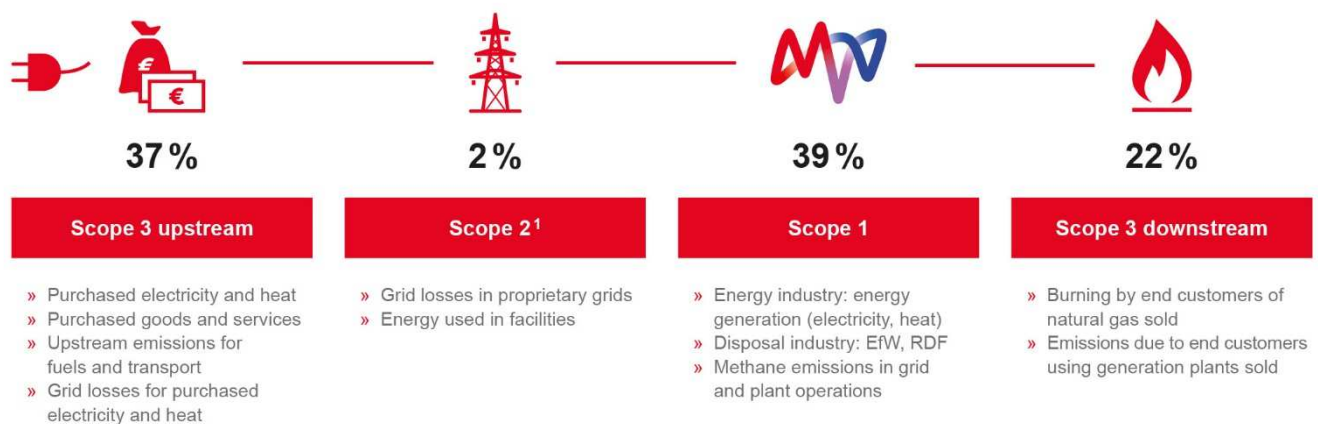
GRI 305 EMISSIONS

GRI 305-1 Direct (Scope 1)
GHG emissions, and

GRI 305-2 Indirect (Scope 2)
GHG emissions, and

GRI 305-3 Other indirect (Scope 3)
GHG emissions

STRUCTURAL COMPOSITION OF OUR CLIMATE BALANCE SHEET



¹ Market-based

Our climate balance sheet for the 2021 financial year

MVV's climate balance sheet

In our climate balance sheet, we distinguish between direct and indirect CO₂ emissions. The generation of energy at our proprietary plants or at plants from which we procure contingents gives rise to **direct CO₂ emissions**. These are designated as **Scope 1** under the Greenhouse Gas Protocol.

On the one hand, direct CO₂ emissions are influenced by weather-based demand for heat, 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 on the new plants required to uphold the supply.

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

Indirect CO₂ emissions, Scope 3, comprise greenhouse gases arising in upstream and downstream stages of the value chain. CO₂ emissions in upstream value chain stages arise at suppliers manufacturing products and services purchased by MVV. These relate, for example, to the production of photovoltaics systems and wind turbines or to the procurement of electricity not generated by MVV. Emission activities in downstream stages of the value chain chiefly involve the use of natural gas supplied by MVV to its customers. The annual development in Scope 3 emissions is chiefly determined by sales volumes for electricity, gas and heat, as well as by volumes in the renewable energies project development business. In the 2021 financial year, this key figure also for the first time includes emissions from non-commodities procurement activities.

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

We include CO₂, CH₄, N₂O, HFC, PFC, SF₆ and NF₃ in the calculation of CO₂ emissions (CO₂ equivalents). Including the shareholdings we recognise at equity, our generation plants emitted around 1.7 million tonnes of climate-neutral biogenic CO₂ in the year under report. This results from the direct use of timber, other biogenic waste and other regenerative resources that are deployed at our plants.

Climate balance sheet				
Fully consolidated companies				
1,000 tonnes CO _{2eq}	FY 2021	FY 2020	+/- change	% change
Direct CO ₂ emissions (Scope 1) ¹	1,943	1,863	+ 80	+ 4
Energy industry activities	994	934	+ 60	+ 6
Disposal activities (EfW/RDF)	949	929	+ 20	+ 2
Indirect CO ₂ emissions (Scope 2) ^{2,3}	171	190	- 19	- 10
of which energy procured for proprietary plants	4	5	- 1	- 20
of which energy used for grid operations	167	185	- 18	- 10
Indirect CO ₂ emissions (Scope 3)	5,959	5,103	+ 856	+ 17
of which for purchased goods and services (GHG Category 1)	986	471	+ 515	+ 109
of which for fuel and energy-related activities (GHG Category 3)	3,108	3,036	+ 72	+ 2
of which for use of sold products (GHG Category 11)	1,865	1,596	+ 269	+ 17
Net CO ₂ savings	1,030	794	+ 236	+ 30

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 and, from the 2021 financial year, also include grid losses.

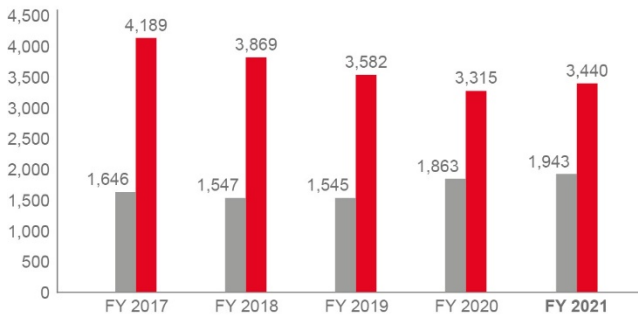
3 The emissions for energy losses in grid operations, which were recognised in Scope 3.9 through to the 2020 Annual Report, have been reported pursuant to the GHG Protocol in Scope 2.

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

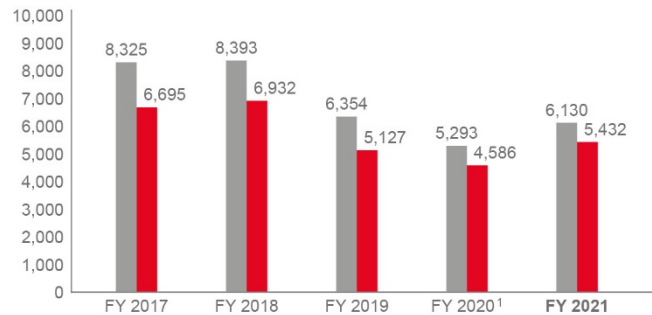
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3 The emissions for energy losses in grid operations, which were recognised in Scope 3.9 through to the 2020 Annual Report, have been reported pursuant to the GHG Protocol in Scope 2.

DIRECT CO₂ EMISSIONS (SCOPE 1)1,000 tonnes CO₂ eq

■ Fully consolidated companies
 ■ Fully consolidated companies and companies recognised at equity

INDIRECT CO₂ EMISSIONS (SCOPE 2+3)1,000 tonnes CO₂ eq

■ Fully consolidated companies
 ■ Fully consolidated companies and companies recognised at equity

¹ Previous year's figure adjusted

GRI 305-4 Intensity of GHG emissions**Specific CO₂ emissions**

The specific CO₂ emissions for our generation portfolio showed only marginal changes compared with the previous year. The CO₂ intensity figure presents the Group's direct CO₂ emissions in Scope 1 as a proportion of its electricity and heat generation volumes. The specific heat emissions represent the volume-weighted average of the certified and published specific emission factors for the individual district heating grids.

Specific CO₂ emissions in the groupwide generation portfolio

g CO ₂ /kWh	FY 2021	FY 2020
Electricity generation	422	416
Heat generation	124	125
Energy generation in the generation portfolio	231	232

GRI 305-5 Reduction of GHG emissions

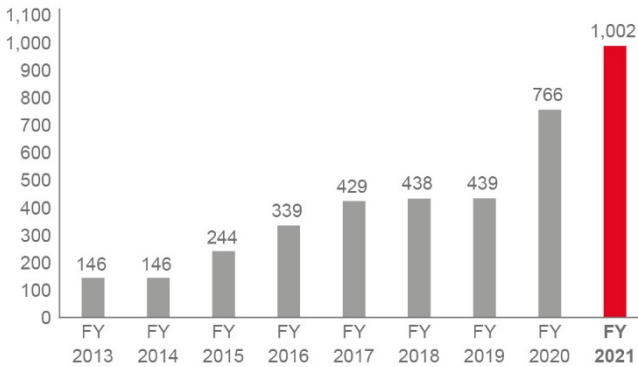
Together with the Institute of Applied Ecology (Öko-Institut) in Freiburg, we developed a method to calculate net CO₂ savings in 2013 already. This figure includes the emissions avoided throughout the value chain and reflects the genuine savings actually taking effect in the climate system. We assess how all new strategic activities, projects and investments at our group of companies impact on their greenhouse gas emissions.

In this, all additional emissions (charge) and CO₂ 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 CO₂ savings for a maximum of ten years from the beginning of the respective measure. In the calculation, we did not take any account of historic reduction projects and financial transactions.

Net CO₂ saving

NET CO₂ SAVING

Fully consolidated and at-equity companies
1,000 tonnes CO₂eq



In 2016, we set ourselves the target of tripling our CO₂ savings in the entire climate system to 1 million tonnes a year. Thanks to investment initiatives at MVV, we reached this target in the 2021 financial year already.

The significant increase in net CO₂ savings in the 2021 financial year is mainly due to the successful launch of operations at renewable energies plants, especially wind turbines and open-space photovoltaics systems, the linking up of our energy from waste plant on Friesenheimer Insel to Mannheim's district heating grid and further energy efficiency projects.

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

Local environmental protection and management systems

All our plants were operated once again in the 2021 financial year in accordance with the approvals granted and relevant legal requirements. 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 programmes, such as the decarbonisation of district heating in Mannheim, energy management activities (ISO 5001) at MVV Umwelt also include planning, auditing and implementing numerous smaller efficiency measures on an ongoing basis. In this respect, the 2021 financial year was spent planning further efficiency steps. Further preparatory conceptual work was performed with the aim of achieving full use of waste heat, as was a specific feasibility study investigating the use of waste heat from a further turbine at the Mannheim location. The measures already implemented have enabled us to increase the R1 value, the criteria referred to in the Waste Framework Directive, by around 21 %. Making use of further sources of waste heat will enable us to improve this value even further.

Further environmental protection aspects form part of the environmental and energy management systems at our companies, which are responsible for these on a decentralised basis. At MVV Umwelt, all plants have been certified in accordance with the norms ISO 14001 and 50001. In Germany, the Mannheim, Leuna, Flörsheim-Wicker and Königs Wusterhausen locations were successfully recertified, as were the plants in Plymouth and at Ridham Dock in the UK, while all biomethane and organic waste fermentation plants were successfully recertified in accordance with ISO 50001. At the Kroppenstedt location, the first biomethane plant at MVV Umwelt was certified in accordance with REDCert. Furthermore, the decision was taken to have the other three plants certified under RED II as well.

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 noticeably 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 by-products
Fully consolidated companies

Tonnes	2020 ¹	2019 ¹	+/- change	% change
NO _x ²	2,367	2,285	+ 82	+ 4
SO ₂ ²	528	607	- 79	- 13
Dust ²	11	12	- 1	- 12
Fly ash	36,568	53,273	- 16,705	- 31
Ash and slag	527,203	520,807	+ 6,396	+ 1

1 Calendar year

2 Previous year's figure adjusted

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

Tonnes	2020 ¹	2019 ¹	+/- change	% change
NO _x	2,924	3,135	- 211	- 7
SO ₂	885	1,048	- 163	- 16
Dust	18	38	- 20	- 53
Fly ash ²	90,470	135,991	- 45,521	- 33
Ash and slag	529,882	524,313	+ 5,569	+ 1

1 Calendar year

2 Previous year's figure adjusted

Further environmental protection aspects form part of the environmental management systems at our companies, which are responsible for these on a decentralised basis.

System Transformation

MVV TOPIC SUPPLY RELIABILITY

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

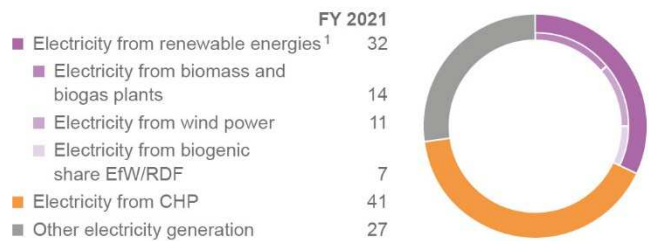
To shape the energy system transformation along social, ecological and economic lines, we are working to an increasing extent with renewable and to a decreasing extent with conventional energies and relying here on a variety of energy sources and technologies. Doubling our proprietary electricity generation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

MVV's proprietary electricity generation

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

ELECTRICITY GENERATION

Shares (%)



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

This development was due on the one hand to the fact that the energy from waste plants in Mannheim and Leuna produced lower volumes of electricity in order to increase their renewable heat volumes. On the other hand, as wind volumes fell short of the previous year's figure our wind turbines generated less electricity, and that despite the addition of new capacities to our wind power portfolio. The increase in electricity generation volumes from combined heat and power generation (CHP) was driven above all by the launch of operations at our gas-fired CHP plant in Kiel in November 2019. This new plant generates electricity and heat using combined heat and power generation and made its first full-year contribution to our electricity generation in the 2021 year under report.

Electricity generation volumes Fully consolidated companies				
kWh million	FY 2021	FY 2020	+/- change	% change
Biomass and biogas plants ¹	485	478	+ 7	+ 1
Biogenic share of EfW/RDF	268	314	- 46	- 15
Wind power	386	422	- 36	- 9
Hydroelectricity	3	5	- 2	- 40
Photovoltaics	3	4	- 1	- 25
	1,145	1,223	- 78	- 6
Electricity from CHP	1,232	1,036	+ 196	+ 19
Other electricity generation ¹	242	359	- 117	- 33
Total	2,619	2,618	+ 1	+ 0

¹ Previous year's figure adjusted

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

¹ Previous year's figure adjusted

MVV's proprietary heat generation

At the end of the 2021 financial year, green heat generation accounted for a 36 % share of our total heat generation volumes (previous year: 31 %). The increase in our green heat generation volumes was largely driven by our energy from waste plants in Mannheim and Leuna, which we connected to their regional district heating grids in February and December 2020 respectively.

Heat generation volumes Fully consolidated companies				
kWh million	FY 2021	FY 2020	+/- change	% change
Biomass and biogas plants ¹	77	83	- 6	- 7
EfW/RDF	2,464	1,906	+ 558	+ 29
Green heat generation	2,541	1,989	+ 552	+ 28
Other heat generation	2,376	2,328	+ 48	+ 2
Total	4,917	4,317	+ 600	+ 14

¹ Previous year's figure adjusted

Heat generation volumes Fully consolidated companies and companies recognised at equity				
kWh million	FY 2021	FY 2020	+/- change	% change
Biomass and biogas plants ¹	77	84	- 7	- 8
EfW/RDF	2,464	1,906	+ 558	+ 29
Green heat generation	2,541	1,990	+ 551	+ 28
Other heat generation	4,466	4,517	- 51	- 1
Total	7,007	6,507	+ 500	+ 8

¹ Previous year's figure adjusted

MVV's proprietary biomethane generation

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

Biomethane generation volumes Fully consolidated companies

kWh million	FY 2021	FY 2020	+/- change	% change
Biomethane generation	258	212	+ 46	+ 22

Biomethane generation volumes Fully consolidated companies and companies recognised at equity

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

Safeguarding grid stability despite growing loads

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

One key non-financial performance indicator which shows the security of the energy supply is the system average interruption duration index (SAIDI), which presents the average interruption to the supply in minutes per year and customer. The SAIDI figure only accounts for unplanned downtimes lasting longer than three minutes and not due to force majeure. We aim to minimise any interruption-induced failure in the supply. The management teams at our grid companies are kept regularly informed about interruptions and also discuss this information with the Executive Board. Any countermeasures thereby required are factored into our investment and maintenance projects.

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

Electricity supply interruptions (SAIDI)

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

¹ Calendar year

² Source: Federal Network Agency (BNetzA)

We perform risk assessments of potential supply interruptions on a quarterly basis. We analyse these from various perspectives, such as by reference to the cause. Particularly worth mentioning in this respect are: plant downtime, especially at our large power plants, downtime at transformer stations and grid downtime due to cyber risks. The maintenance expenses incurred to maintain the grids are also factored into our risk assessment.

All of MVV's grids are approved. When extending our grids, we clarify whether we are obliged to perform an environmental impact assessment in order to minimise the environmental impact of our distribution grids.

MVV TOPIC SECTOR COUPLING

Smartly combining electricity, heat 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 heat 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, electrode boilers and generating green hydrogen in electrolyzers. E-mobility is another core component of the energy system transformation and of a resource-efficient lifestyle. www.mvv.de/energy

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 heat 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.

Heat storage capacity		
Cubic meters	FY 2021	FY 2020
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. One example: Since spring 2021 our customers in the Rhine-Neckar metropolitan region have been able to obtain integrated heat/PV/storage solutions with integrated energy management from us.

Expanding e-mobility

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

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 heat and of electricity. On the one hand, we expect demand for heat 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 heat. At the same time, the energy mix used for heat 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. 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. Moreover, demand for electricity will increase in the overall economy in line with the growth in domestic hydrogen generation and e-mobility.

Alongside the increased provision of renewable energies, three factors that are particularly gaining in significance are the enhanced flexibility, decentralisation 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 and development projects in our 2021 Annual Report [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR_2021), **Page 25 to 27**.

We are preparing our supply grids for changes in energy demand in the electricity and heat 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 published the energy framework study for Mannheim compiled by the Wuppertal Institute on behalf of MVV and in which the City of Mannheim was 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 – Ways To Climate Neutrality” analyses decarbonisation options for all major sectors in Mannheim, including transport and industry.

The results show that by the mid-2030s the CO₂ emissions generated within Mannheim’s boundaries could 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 the national level, the change in drive systems succeeds in the transport sector and the unavoidable emissions from waste incineration are captured (BECCUS). Even if these emissions are not captured, it will be possible to achieve a reduction of 92 %. A further component involves decommissioning the individual blocks at the GKM plant. As a result, the share of Mannheim’s CO₂ emissions that is 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 can safeguard the heat supply. In the field of decentralised heat, decarbonisation can be implemented with heat pumps, solar thermal energy and micro-CHP solutions.

The study also reveals the potential for generating electricity from renewable energies within Mannheim’s boundaries. In total, almost 1 terawatt 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. www.mvv.de/energy-framework-study

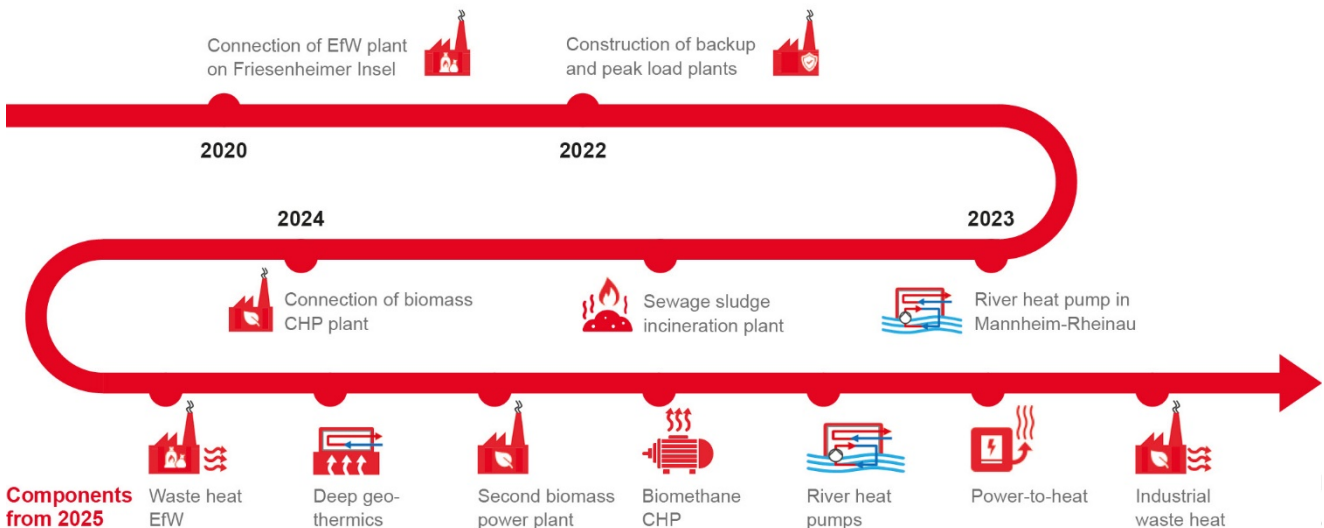
MVV is one of Germany’s largest district heating suppliers

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 heat. We aim to decarbonise the heat supply for which we are responsible – not least given 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 heat turnaround can be realised in three areas: energy efficiency, low-CO₂ heat grids and renewable energies close to the respective properties. The task for us will be to make our district heating supply, which is already operated using highly efficient CHP, climate neutral at as early a date as possible.

We have expanded green heat in Mannheim and the region, for example, by connecting our energy from waste plant on Friesenheimer Insel to our existing district heating grid. This is based on the conviction that, since a central heat 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. GKM AG is building a first river heat pump in Mannheim-Rheinau on our behalf. With a heat generation capacity of 20 MW_t, this will draw on the environmental heat in the Rhine from 2023 onwards.

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.

ROADMAP FOR GREEN HEAT GENERATION AT MANNHEIM LOCATION



MVV TOPIC CHANGED INFRA-STRUCTURES 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.

To promote the process of development towards smart cities, we are consistently working to advance our concepts. One example: In the 2021 financial year we founded “sMArt City Mannheim GmbH”, a joint venture with the City of Mannheim that is intended to promote decarbonisation and digitalisation in the municipal sector. One focus is to convert all of the electricity generated for properties owned by the city to renewable energies, and here especially photovoltaics, by 2027. The term “smart city” refers to a holistic, cross-sector development concept which, by using digital and interlinked applications, aims to improve the quality of life for the local population and increase resource efficiency. A smart mobility system should make it possible to combine different modes of transport effectively, for example, and thus reduce the environmental impact, time spent in queues and the hunt for parking spaces.

Smart 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 Lo-RaWAN wireless technology.

MVV TOPIC INNOVATION

Our innovation department plays a key role in ensuring that we offer smart energy products and innovative solutions that meet the needs of our customers. In this department, innovation managers work on research and development projects in which employees from our operating business fields also participate. Furthermore, our sales units are also involved in forward-looking projects.

Alongside technical and product-based innovations, an ever more important role is also being played by process innovations, which are being driven not least by increasing automation and advances in digitalisation. These enable us to enhance the efficiency of our business operations. Not only that, they also lead to improvements in energy and material efficiency. One example: We deploy approaches such as predictive maintenance based on artificial intelligence and big data. This way, we can optimise maintenance cycles at our power plants or wind turbines and minimise downtimes.

The ideas and proposals of our employees are an important source of momentum for continuous improvements. Our ideas management function also holds topic-specific campaigns; in the year under report, the topics addressed were climate neutrality and decarbonisation. Moreover, we draw on “Take-Off”, our internal innovation process, to develop new products and business models.

Our external innovation process enables us to establish a transfer of expertise between MVV and young companies, to absorb innovative impulses and to anchor these at our company. To this end, we are currently conducting a pilot project with our subsidiary Beegy in which we began by identifying three specific requirements in processes or products that are to be shared with start-ups that are willing to cooperate. Furthermore, in cooperation with an external service provider, we regularly look for start-ups that are positively influencing the energy turnaround and thus offer added value for MVV. We report in detail on technology and innovation in our 2021 Annual Report

 [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR_2021), Page 25 onwards.

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, means that electricity consumers will defer their energy requirements to times with lower costs in line with electricity price movements, and thus changes in the supply of and demand for electricity. This 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 CO₂ 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. As a provider of energy-related services, we have a key role to play: We are drawing on digitalisation to further develop our end-to-end business process logic on a permanent and efficient basis and to provide our customers with bespoke and attractive services, such as those for monitoring, controlling and optimising customer plants. Qivalo and Econ, the two metering specialists within MVV's service provider portfolio, pool their strengths and facilitate 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 attractive for companies who, alongside customary billing requirements, also have an increased need for analytic options.

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 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.

We are closely monitoring developments relating to digitalisation and continually assessing the market with regard to commercially available applications for our portfolio. Thanks to digitalisation, our business models are evolving continuously, as is our cooperation within the company and with external partners. In the 2021 financial year, we drew on all aspects of digitalisation to advance topics across all business fields and departments. Artificial intelligence is playing an increasing prominent role in this respect. We report on technology and innovation in our 2021 Annual Report [www.mvv.de/en/AR 2021](https://www.mvv.de/en/AR_2021), Page 25 onwards.

In the year under report, we once again met the requirements of data protection law, and in particular those of the European General Data Protection Regulation (GDPR) and of internal data protection requirements covering all areas of the company and all business processes. The points of contact we have established to deal with all internal and external enquiries and issues relating to data protection and information security also assessed, checked and processed the enquiries received once again in the year under report. We regularly train our employees, inform them about the steadily rising standards applicable to information security and data protection and work to raise their awareness of existing risks and threats.

Employees and Society

We employed a groupwide total of 6,470 individuals as of 30 September 2021. The increase compared with the previous year was due above all to higher numbers of employees in our growth fields and to the full consolidation of one company.

GRI 403 OCCUPATIONAL HEALTH AND SAFETY

GRI 403-1 Occupational health and safety management system

We accord the utmost priority to protecting the health and safety of our employees and of those employees who work on our behalf. The following points form the core of our “Lived Safety” project:

- 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.

In our activities, we take due account of all legal requirements, such as the German Industrial Safety Act (ArbSchG) with its related ordinances and the German Occupational Safety Act (ASiG), as well as of the occupational health and safety regulations of the respective trade associations (BGV).

In the context of TSM certifications, our grid companies are regularly inspected on a cross-utility basis in accordance with the requirements of the DVGW, AGFW and VDN specialist associations. Furthermore, individual subsidiaries and company departments have systems and certificates in accordance with national and international norms and standards, such as ISO 45001, ISO 9001, the AMS System of the trade associations (BG), the BG seal of quality and

specialist disposal operation. Implementation of these norms and standards at the company primarily relates to our own employees. In individual cases, compliance with specific regulations is also required from the employees of third-party companies and other service providers.

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

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

Our accident statistics and the prevention measures taken, also in connection with the implementation of management systems, are evaluated on Executive Board and group level on a quarterly basis. If necessary, further measures are discussed and planned.

We aim to boost the health of our employees with a prevention-based approach and therefore support them with a variety of company health management measures, which are organised on a decentralised basis. The principal legal requirements for mandatory occupational health support in Germany are set out in the German Occupational Safety Act (ASiG) and the accident prevention regulation of the German Social Accident Insurance (DGUV). Alongside the extensive range of services available at our occupational health service, we also provide employees at our major locations with further health promotion options that go well beyond legal requirements.

To promote the topics of occupational health and safety, we have founded new central departments for both aspects.

GRI 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 if we are not able to eliminate the hazards. Together with the work safety specialists, managers compile the risk assessments and, where necessary, consult the company doctor and the Works Council. This cooperation enables us to ensure that we account for all relevant requirements and information.

In around 80 % of our company departments, these risk assessments are performed and documented with a software tool. Here, we analyse the workplaces used, the activities performed, the work equipment used and any hazardous materials deployed. Where necessary, account is also taken of groups of person 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.

GRI 403-3 Occupational health services

At our major locations, we have our own occupational health services that advise employees in accordance with the German Occupational Safety Act (ASiG), offer work-related health examinations and preventative healthcare measures. At our Mannheim location alone, these services support more than 1,700 employees. We safeguard the quality of the services offered by requiring company doctor qualifications and further training. We use the intranet to inform our employees about the scope of services on offer.

Our employees in Germany are all subject to Regulation No. 2 of the German Social Accident Insurance (DGUV) of the Energy, Textile, Electrical and Media Products Trade Association (BGETEM). Due to confidentiality requirements, the occupational health services at the company do not share any data.

GRI 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, are always 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.

GRI 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 an electronic instruction system. This is based on the results of the risk assessments and is tailored to individual workplaces. This way, our employees can flexibly and individually address a variety of basic topics relating to work safety. This also applies in some cases when we commission third-party firms to work at the company.

GRI 403-6 Promotion of worker health

We offer an extensive range of company health management services in cooperation with external service providers, including a range of regular healthcare courses, training on health-related matters, sports cooperations and prevention-based health campaigns to promote employees' health. 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 at several locations. We also have cooperations with fitness centres and offer nutritional advice. Our range of services includes extensive prevention measures, such as flu vaccinations, skin cancer screening and laboratory diagnostics services for the early detection of 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.

In the year under report, the company doctors at our major locations offered coronavirus vaccinations to our employees to help accelerate the pace of vaccination. At the Mannheim location, for example, a daily total of up to 60 employees, relatives, and employees of third-party companies working on our behalf voluntarily received their vaccination. Overall, more than 2,000 doses (first and second vaccinations) were injected within two months.

GRI 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships

We safeguard our employees' health and safety with company-internal regulations and processes applicable at individual locations in order to ensure safety when working together. This way, we prevent or mitigate any material negative occupational health and safety impacts that, via our business relationships, are directly linked with the locations, products or services of our organisation.

We base the coordination required when cooperating with third-party companies on the German Industrial Safety Act (ArbSchG), Regulation 1 of the German Social Accident Insurance (DGUV) and the German Building Site Ordinance (BaustellV). The requirements, which are determined on a decentralised basis in order to account for local specifics, are nevertheless largely comparable. Third-party company employees may only work at the technical facilities run by MVV Umwelt, for example, once they have received general instructions for the location as a whole and the place of their specific deployment. These include general safety-related information, information about how to behave in the event of an emergency and the relevant contact partners. The third-party companies are also required to provide instructions to their employees themselves and must present the risk assessments for their activities to us. We assess the effectiveness of these measures at individual locations by requiring companies to report to the procurement department that the work commissioned has been safely performed. In the event of accidents, we may also perform joint accident analyses depending on the severity of the respective accident.

With regard to the safe handling of our products, our websites provide publicly accessible safety recommendations to our customers which inform them, for example, how to behave if they smell gas in their homes. The telephone numbers of our emergency hotlines, which are available free of charge and around the clock, are also published on there.

GRI 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 perform a statistical evaluation of accidents with particularly severe injuries and of accident types on an incident-related basis. The assessment and evaluation are performed on a gender-neutral basis and in line with the requirements of data protection. We also assess which further preventative measures might be expedient.

Accident statistics

	FY 2021	FY 2020	+/- change	% change
Lost time injury frequency rate (LTIF) ^{1, 2, 3}	4.1	6.7	- 2.6	- 39
Fatal accidents	0	0	0	0

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

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

3 Basis for centrally recorded FTE figures:

FTE figures at reporting date on 30 September

Basis for non-centrally recorded FTE figures:

FTE figures received directly from companies at reporting date on 30 September

Working hours = number of FTEs (full-time equivalents) at reporting date on 30 September multiplied by 1,700 hours (± 1 FTE)

With an LTIF of 4.1, we were able to reduce the frequency of accidents by nearly 40 % compared with the previous year. This convinces us that we are on the right course. There were no accidents with severe consequences (non-recuperation after 6 months) or fatal consequences in the year under report.

GRI 404 TRAINING AND EDUCATION

GRI 404-2 Programmes for upgrading employee skills and transition assistance programmes

Training and development

Training with promising prospects for the future

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

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

Further training concept implemented

In the 2021 financial year, we held a large number of virtual seminars on a variety of topics for a diverse range of target groups.

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

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

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

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

GRI 405 DIVERSITY AND EQUAL OPPORTUNITY

GRI 405-1 Diversity of governance bodies and employees

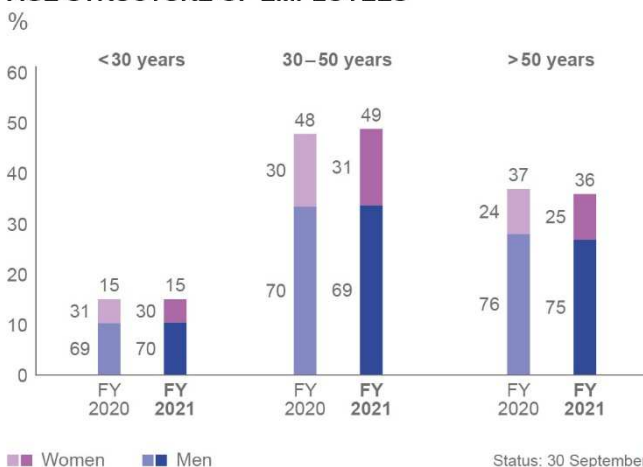
Equality of opportunity on all levels

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 deliberately offer closer support to women. We are convinced that different skills and management styles impact positively on our business performance. We therefore see raising the share of women in our Group’s workforce on a long-term basis as one key to MVV’s successful further development. We are addressing the low share of women in management positions typical to our industry with targeted promotional measures.

Gender distribution		
%	FY 2021	FY 2020
Share of women	28	28
Share of men	72	72
Share of women managers	14	15

1 Includes all levels to group and team leader

AGE STRUCTURE OF EMPLOYEES



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

For MVV Energie AG, we report on the share of women in the first and second management tiers below the Executive Board. In August 2017, the Executive Board set targets for the share of women at 25 % for the first and 30 % for the second management tiers, with both targets to be reached by 30 September 2021. The share of women in the first management tier amounted to 14 % at 30 September 2021 and was thus ahead of the previous year (30 September 2020: 10 %). In the second management tier, the share of women amounted to 31 % (30 September 2020: 27 %) and thus exceeded the target level set. We see this as providing a stable basis and as offering an opportunity to fill positions becoming vacant in the next higher management tier with internal candidates in future.

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

Information about the diversity concepts for the Executive and Supervisory Boards can be found in the Corporate Governance Declaration in the 2021 Annual Report [www.mvv.de/en/AR 2021](http://www.mvv.de/en/AR_2021), **Page 82 onwards**. In the Directors & Officers chapter in that report, **Page 186 onwards**, we also present the composition of the Executive and Supervisory Boards.

Targeted promotion of women

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

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

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. Over their working lives, our employees pass through many different stages of their private lives. We aim to support them in mastering the daily requirements of their work and private lives. To this end, we offer a variety of worktime models with flexible working hours. Digitalisation and the use of modern communications appliances also facilitate mobile work in line with specific needs.

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

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

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

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

Actively tackling demographic management

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

GRI 405-2 Ratio of basic salary and remuneration of women to men

We firmly believe that the company can generate sustainable business success only when responsibility is assigned to women and men on a basis of equality. After all, a variety of management styles has a positive impact on the company’s performance. Furthermore, it makes sense for both social and economic reasons to promote all talents regardless of their gender. This way, we can also actively counter the shortage of specialists and management staff.

We attach great importance to treating MVV’s employees fairly and equally. We therefore ensure gender-neutral remuneration. At MVV Energie AG, for example, remuneration is based on the respective position and remuneration group. Our other locations also ensure gender-neutral remuneration based on the employees’ roles, the qualifications required for such and their experience. Employee representatives are integrated into the staff hiring process. Across Germany, 71 % of our employees work for companies that apply collective pay agreements which we have agreed with our tariff and company partners.

The German Transparency in Wage Structures Act (EntgTranspG) has been in effect in Germany since 2017. We consistently apply these requirements and respond to all requests for information submitted by our employees.

GRI 413 LOCAL COMMUNITIES

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

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. 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 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 to ensure the necessary 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.

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 invest, award contracts to local or regional businesses where possible, secure jobs, offer high-quality training and pay taxes and duties. It goes without saying that we do not use any questionable measures to avoid taxes or move profits across borders.

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

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

Further Information

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GRI content index

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GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	62	
GRI 403-9	Work-related injuries	62	We currently do not collect data on documentable work-related injuries on a centralised basis; we therefore do not report any disclosures on these.
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GRI 405-2	Ratio of basic salary and remuneration of women to men	66	
GRI 413 Local Communities 2016			
GRI 413-1	Operations with local community engagement, impact assessments and development programmes	66	We do not collect any data on measures conducted on a decentralised and project-related basis, as this information is not relevant to managing the company and the collection of such data would not provide us with any benefits.
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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

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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 2021 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 eight SDGs:

Sustainable Development Goals – MVV's contribution			
SDG		Chapter/content	Page
	End poverty in all its forms everywhere.	Topic-specific disclosures: Supply Chain Value Added	12 36
	Ensure access to affordable, reliable, sustainable and modern energy for all.	General disclosures: Organisational profile; 102-9 Supply Chain Topic-specific disclosures: Energy and Environment; MVV topic Renewable Energies Human rights:  www.mvv.de/en/responsibility	12 45
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	Topic-specific disclosures: Employees and Society	60
	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.	Topic-specific disclosures: System Transformation	52
	Make cities and human settlements inclusive, safe, resilient and sustainable.	Topic-specific disclosures: System Transformation; Changed Infrastructures and Smart Cities	58
	Ensure sustainable consumption and production patterns	Topic-specific disclosures: Energy and Environment; Materials	38
	Take urgent action to combat climate change and its impacts.	Topic-specific disclosures: Energy and Environment; Energy, Renewable Energies, Emissions	38 45 47
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	Topic-specific disclosures: Human Rights Compliance Stakeholder Engagement	13 16 18

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