



**We inspire
with energy.**

Sustainability Report 2023



**Our future:
#climatepositive**



MVV in Figures

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

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

² Excluding non-operating measurement items for financial derivatives

³ Excluding collateral deposited for counterparty default risk (margins)

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



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

1 Fully consolidated and at-equity companies

2 Previous year's figure adjusted

3 Including electricity generation capacity from wind turbines for repowering at 30 September 2023 (28 MW)/30 September 2022 (30 MW)

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

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

6 Figures for 2022 and 2021 calendar years



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MVV at a Glance

Adjusted sales (Euro billion)	7.5
Adjusted EBIT (Euro million)	880
Adjusted EBIT excluding disposal gains (Euro million)	747
Investments (Euro million)	344
Direct CO ₂ emissions (Scope 1) (tonnes 000s)	2,684
Indirect CO ₂ emissions (Scopes 2 and 3) (tonnes 000s)	6,111
Renewable electricity generation capacity (MW _e)	633
Renewable electricity generation volumes (kWh million)	1,398
Green heat generation capacity (MW _e)	812
Green heat generation volumes (kWh million)	2,465
Completed development of renewable energies plants (MW _e)	1,436
Operations management for renewable energies plants (MW _e)	3,708
Employees	6,390

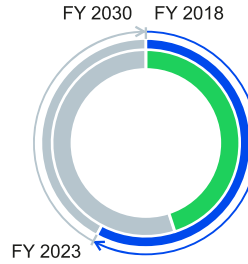
Target achievement for our sustainability and decarbonisation targets FY 2023

Reduction in energy industry CO₂ (Scope 1)

Shares (%)

- Time passed
- Target share reached

FY 2023	
Time passed	58
Target share reached	45

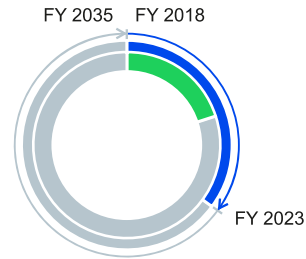


#climatepositive by 2035 (Scope 1, 2 and 3 = zero)

Shares (%)

- Time passed
- Target share reached

FY 2023	
Time passed	35
Target share reached	20

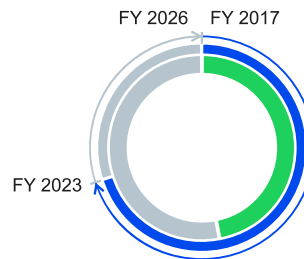


Completed development of new renewable energies plants

Shares (%)

- Time passed
- Target share reached

FY 2023	
Time passed	70
Target share reached	47



Foreword

Dr. Georg Müller

CEO of
MVV Energie AG



Dear Ladies and Gentlemen,

At the end of 2023, the world waited to find out the results of the discussions held at the World Climate Conference in Dubai (COP28). For the first time, all participating countries were able to agree on moving away from fossil-based energy generation in the long term. Furthermore, the volume of renewable energies is to be tripled by 2030, while CO₂ emissions are set to reach net zero by 2050. These and other resolutions mean that the global community is headed more clearly than before towards climate neutrality; the resolutions nevertheless still do not go far enough to limit global warming to 1.5 or 2 degrees. The challenge of acting more swiftly to underpin our targets with measures also applies to the energy transition in Germany. In terms of energy policy, 2023 was a year in which targeted decisions for the future were taken on all levels. These are reflected particularly clearly in the measures to accelerate the expansion in wind and solar power, which significantly raised the numbers of approvals granted and renewable energies plants built. Net totals of 14.1 gigawatts of photovoltaics and 2.9 gigawatts of onshore wind power were newly connected to the grid in 2023. With its revision to the German Building Energy Act (GEG), initially a subject of great political contention, and the German Heat Planning Act (WPG), the Federal Government has created a legal framework enabling local authorities and energy suppliers to jointly shape the heat transition. Alongside these milestones, which are to be welcomed, numerous important aspects of the underlying framework still have to be amended or newly adopted. There is a lack of clarity, for example, concerning the future of gas grids, the financing of modern power plants with controllable capacities, and further measures to accelerate approval processes for wind power or CO₂ emission capturing. The financing of the energy transition as a whole also requires a new and consistent legal framework to provide security. After that, it is the responsibility of the energy industry, all companies involved in the energy supply and potential financing partners as well to make bold and dynamic use of this framework.

You will be aware that MVV has long been advancing on this course. We introduced our first CO₂ reduction programme in the 1990s already. By focusing consistently on the energy transition and the Mannheim Model, we are making our contribution to a sustainable energy system. We are unerringly continuing on this course: In the year under report, we pressed ahead and made notable progress with all three components of our Mannheim Model – heat transition, electricity transition and customer solutions – while further significantly raising our climate protection goals. We launched operations with what is the largest river heat pump integrated into a district heat system in Germany. We thus reached the second expansion stage for the heat transition in Mannheim, having already connected our energy from waste plant in 2020. We will complete this second stage in 2024 by linking up our phosphorous recycling plant and our biomass power plant to the central district heating grid. This way, we can already cover up to 60 percent of household and commercial heating requirements in Mannheim with climate-friendly heat. After that, we will tackle the third stage needed to reach 100 percent green heat. For those customers who will not be able to draw on our district heat, we are offering high-performance decentralised heat solutions. In terms of the electricity transition, we have expanded our own renewable energies generation by taking over several photovoltaics into our portfolio and made preparations to take over further windfarms. Here too, we will step up our pace in future: By 2030, we will more than triple our proprietary electricity generation from renewable energies from 633 megawatts currently to 2,000 megawatts. In addition, we have become a full-service provider for customer solutions enabling our customers to implement their own individual energy transitions whether at home or in their companies. All our products and services are governed by our new target: 100 percent green by 2035!

As you can see, we are further extending our pioneering role in shaping the energy future. We will become #climatepositive by 2035, five years earlier than originally envisaged. Above all, that will be made possible by BECCUS (Bioenergy Carbon Capture Usage and Storage). We will actively withdraw CO₂ from the atmosphere and permanently bind, use or store it. Our bio-waste anaerobic digestion plant in Dresden became MVV's first #climatepositive plant in 2023 already and we are currently performing in-depth trials to capture, liquefy and load CO₂ at a pilot plant in Mannheim. We will equip our other bio-waste anaerobic digestion and biomethane plants with CO₂ sinks before the end of this decade. Our biomass and energy from waste plants are set to follow in the coming decade. This way, we will offset our own unavoidable residual emissions. Not only that: Thanks to the volumes additionally withdrawn, we will become #climatepositive. We report on our Mannheim Model under [Material Topic Energy and Environment](#) in this report and in the Corporate Strategy chapter in our 2023 Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 26**.

To implement the energy transition at MVV at an even faster pace while upholding supply reliability, by 2033 we will expend around Euro 7 billion on our groupwide green growth. The investments of Euro 344 million made in the 2023 financial year mark the highest volume of investment in the past eight years. We are making vigorous progress and reaching our targets: We owe this to the efforts made by our total of around 6,400 employees. They are advancing decarbonisation with enormous dedication and great enthusiasm. On behalf of the entire Executive Board, I would like to thank them very warmly for this!

We would also like to thank you, our readers, for your interest in our Sustainability Report. This report also includes information based on the TCFD transparency recommendations, our contribution to the Sustainable Development Goals and our progress report to the UN Global Compact. You can find our reporting on the EU Taxonomy in the Combined Non-Financial Declaration in our Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 93**.

Yours faithfully,



Dr. Georg Müller
CEO

About This Report

In this Sustainability Report, we document information about sustainability at MVV in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI). The [GRI Content Index](#) provides an overview of the material topics for our Group, the related GRI topic standards and the disclosures on topics of importance to MVV. We identified these topics by means of a materiality analysis that we describe under [GRI 3-1](#). With the publication of this Sustainability Report, we have met the transparency requirements of our stakeholders in customary form and exceeded our statutory reporting obligations. We present all data for the Group, i.e. for all fully consolidated companies and companies recognised at equity. We additionally state part of the data without including companies recognised at equity. Any data that we exclusively collect and publish on a calendar-year basis is correspondingly indicated. Individual items of data to which we refer for comparative purposes and which are based on external sources are not collected each year. This report presents significant sections of our [Progress Report for the UN Global Compact](#), shows how we are contributing to the [UN Sustainable Development Goals](#) and includes an overview for the transparency recommendations made by the [Task Force on Climate-related Financial Disclosures \(TCFD\)](#).

The Sustainability Report has been published in German and in English. It is published in electronic form on our website at [mvv.de/en](#). Furthermore, all of MVV's financial reports can be downloaded from our website. We meet the obligation imposed on us by the German Commercial Code (HGB) to publish a Combined Non-Financial Declaration (NFD) in our Annual Report [mvv.de/AR2023](#), from **Page 58**.

Editorial notes

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

 Reference to other information on the internet

[Reference to other information in this report](#)

The page references in the tables in the [GRI Content Index](#) also refer to this Sustainability Report.

All references to people 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.

GRI 2: General Disclosures

1. Organisation and Reporting Practices

GRI 2-1 Organisational details

MVV Energie AG, Mannheim, Germany, is a publicly listed stock corporation and the parent company of the MVV Group. The City of Mannheim directly and indirectly holds 50.1 % of the shares in the company, while a fund managed by First Sentier Investors owns a 45.1 % stake. The other shares, corresponding to 4.8 %, are in free float.

Our group of companies has its largest locations in Mannheim, Kiel, Offenbach and Wörrstadt in Germany and in Plymouth and Dundee in the United Kingdom. An overview of all shareholdings, and thus of all countries in which we are present, can be found in the MVV's Shareholdings chapter in the Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), from Page 227. In the year under report, we sold the MVV Energie CZ Group and our shares in Stadtwerke Ingolstadt.

GRI 2-2 Entities included in the organisation's sustainability reporting

As the publicly listed parent company of the MVV Group, MVV Energie AG directly or indirectly owns shares in the companies which form part of the Group and also has its own operations. An overview of all companies in which we held shareholdings as of the balance sheet date can be found in the MVV's Shareholdings chapter in our Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), from Page 227. We outline our approach to consolidation in the notes to the consolidated financial statements [mvv.de/AR2023](https://www.mvv.de/AR2023), from Page 146.

Our reporting basically refers to MVV and to all subsidiaries consolidated either in full or at equity in the consolidated financial statements. In addition, in this Sustainability Report we also publish data on specific topics from the perspective of "fully consolidated companies".

GRI 2-3 Reporting period, frequency and contact point

Unless otherwise indicated, the information we provide in this Sustainability Report refers to our most recently concluded financial year (1 October to 30 September). The balance sheet date is 30 September of the respective financial year. This reporting period corresponds to that in our Annual Report. In individual cases, we report 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. To date, our Sustainability Report has been published on an annual basis. Due to the preparations for CSRD reporting, rather than publishing a 2024 Sustainability Report we are considering supplementing the 2023 Sustainability Report with an update to the KPI data annex in Excel format for the 2024 financial year.

The contact point for questions regarding the report is:

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

GRI 2-4 Restatements of information

We have adjusted previous year's figures to account, for example, for changes in specialist allocations; we denote such adjustments by adding footnotes to the relevant tables.

GRI 2-5 External assurance

This Sustainability Report was not subject to any external assurance in the year under report. The Combined Non-Financial Declaration (NFD) published in our Annual Report was subject to a limited assurance engagement conducted by PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Munich. The information provided in the NFD [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 58**, on sustainability aspects requiring consideration pursuant to the German Commercial Code (HGB) has been included in this Sustainability Report.

2. Activities and Workers

GRI 2-6 Activities, value chain and other business relationships

We cover all key stages of the energy industry value chain and are one of Germany's leading energy companies. We operate in Germany and abroad and provide a detailed explanation of our activities in the **Business Model** chapter of our Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), on **Page 25**. The year under report did not witness any material changes in the organisation, sector, supply chain and relevant business relationships compared with the previous year.

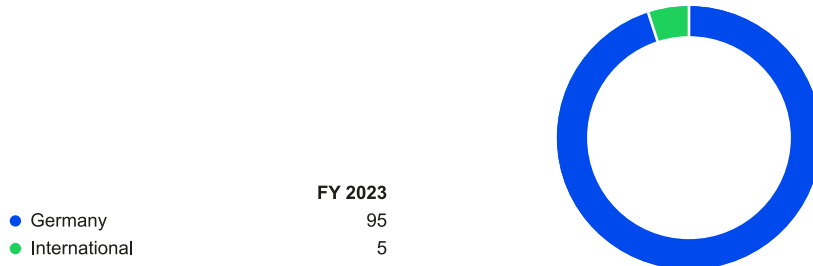
MVV's value creation covers the following main activities, products and services:

- 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 turbines and photovoltaics systems, for proprietary operation and on behalf of third parties
- Operating and maintaining electricity, natural gas, district heat and water grids, as well as energy storage facilities
- Supplying electricity, gas, heat and water to end customers and secondary distributors
- Producing and processing drinking water and supplying it to retail, business and industrial customers, as well as to other municipal water suppliers
- Incinerating and recovering resources from waste, including planning, building, operating and maintaining suitable plants
- Capturing CO₂ emissions, including liquefaction for further transport to subsequent use or permanent storage
- Planning and building IT data centres and providing digital and other services to industrial customers, SMEs and IT companies
- Providing energy-related services for buildings, and for retail, SME and industrial customers.

We did not sell any products or services that are prohibited in the respective markets in the period under report.

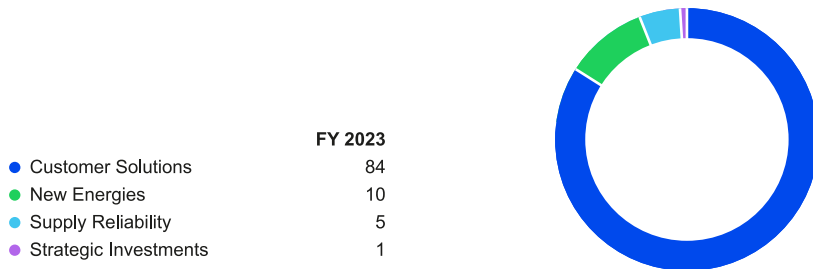
Adjusted sales excluding energy taxes by region

Shares (%)



Adjusted sales excluding energy taxes by reporting segment

Shares (%)



MVV's supply chain

We exercise influence on topics relating to sustainability along our upstream and downstream supply chains. In the upstream supply chain, for example, we can decide who we wish to do business with and which minimum requirements we place in our suppliers. Key factors influencing our supplier selection from a non-financial perspective include the topics of anti-corruption measures, human rights, employee rights, including work safety, and environmental protection. We aim to avoid any situation in which activities along our value chain have or favour any harmful effects in terms of human rights and the environment. In our Annual Report, we describe our procurement and business terms for suppliers in the **Combined Non-Financial Declaration** chapter [mvv.de/AR2023](https://www.mvv.de/AR2023), from Page 89.

Key factor: commodities

Most of our procurement volumes involve energy carriers such as electricity and natural gas. In recent years, there has been increasing public interest in the greenhouse gas emissions resulting from the production and transport of natural gas. This particularly relates to imported liquefied natural gas (LNG). The topic of energy security remained highly important in the year under report. In Germany, the permanent discontinuation of Russian gas supplies has mostly been offset with LNG. Depending on the procurement sources, this may give rise to other ecological issues, ranging from local environmental protection to increased CO₂ emissions in the upstream supply chain, which we analyse very closely. MVV does not procure the natural gas volumes it needs from the respective source countries itself, but rather from importers. We analyse the ecological issues arising along the natural gas value chain, particular with regard to the countries in which it is produced, but cannot influence these directly. Furthermore, 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 our power plants and whether we exert influence on production conditions at the coal mines. The only hard-coal-fired plant we operate ourselves is the CHP plant in Offenbach. For this, we directly procured around 64 thousand tonnes of hard coal

in the year under report. This hard coal mainly comes from Latin and North America. We do not have any direct contractual relationships to mine operators but, given the low volumes involved, procure the fuels via intermediaries. Due to the very low volume of demand, we have hardly any possibility of exerting influence on location. The power plant Grosskraftwerk Mannheim AG (GKM), where we are minority shareholders, also makes use of hard coal. As we ourselves do not operate the plant, we have no direct influence on business activities and fuel procurement. We are nevertheless aware of our responsibility and endeavour to ensure that the coal industry respects human rights and makes a positive contribution to the social and economic livelihoods of workers, producers and communities by discussing sustainability topics closely with GKM and requesting information. GKM AG has been a member of the Better Coal Initiative since March 2021 and is also a member of the Global Compact. We take due account of the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG) [mvv.de/en/LkSG](https://www.mvv.de/en/LkSG).

Lower volume of non-commodities

Apart from energy procurement our other procurement volumes are comparatively low, corresponding to only around one fifth of our commodity procurement. They mostly involve procuring goods, construction services and highly qualified services from contract partners often known to us for many years. Based on separate analysis, we also address the major potential risks further upstream in our supply chain. Here, we also perform a detailed analysis of the CO₂ footprint of the products and solutions we procure and account for these in our climate balance sheet. The cross-location team of experts we have established for this purpose acts early to assess legal requirements, discusses these and the latest developments in central procurement and implements measures to shape further developments. This team of experts includes procurement staff, lawyers, our Human Rights Officer and our sustainability management. In a process managed by this expert team, our suppliers are subject to an automated risk review which compiles individual profiles of human rights and environmental-related risks.

In the year under report, we joined the sector dialogue of the German energy industry concerning respect for human rights along global supply and value chains. Supported by the Federal Government, this forum for sharing information enables industry representatives and members of society to investigate relevant potential violations of human rights along global supply chains and to analyse how the human rights-related situation could be improved. One topic that was again relevant in the year under report involved potential human rights violations in the production of photovoltaics modules in China. This risk is not specific to MVV's photovoltaics supply chains but rather constitutes a cross-industry risk involved in trading with China. We have longstanding supply relationships with module manufacturers, particularly via our Juwi subsidiary. We are in close contact with our suppliers with regard to these topics, although we have yet to gain awareness of any specific violations within our direct supply chains. We have nevertheless also contractually agreed more far-reaching precautions with the suppliers. Irrespective of this, we are closely looking into which alternative procurement options may be available for photovoltaics modules in the medium term.

In terms of our downstream supply chain, our products and services enable our customers to analyse and reduce their energy consumption. We are investing in climate-neutral decentralised energy solutions and drawing on a variety of measures to save energy at our own business locations as well.

GRI 2-7 Employees

As of the balance sheet date, we had a groupwide total of 6,390 employees, of which 557 abroad. Of the employees abroad, 349 worked at Juwi's shareholdings, 162 at the UK subsidiaries of MVV Umwelt and 46 at Avantag Energy in Luxembourg. The reduction in the number of employees compared with the previous year (6,556) is due above all to the sale of the MVV Energie CZ Group. The data we provide on our employees refers to the balance sheet date. The respective headcounts are recorded and processed on a decentralised basis. We then centrally aggregate and evaluate the data. Where possible and depending on the tasks involved, we offer a variety of working hours models to our employees. These include part-time employment, flexible working hours and job sharing, thus enabling employees to combine their working life with their personal needs. At just under 17 %, the share of part-time employees rose by around 1 % compared with the previous year. At MVV, trainees and interns, for example, also count as temporary employees. Apart from these, the number of temporary employees is negligible. The same applies to the number of employees without a fixed number of hours. We report extensively on the concerns of our employees in the [Employees and Society](#) chapter.

Employee key figures

	Women	Men	Diverse ¹	FY 2023	FY 2022
Number of employees	1,880	4,509		6,390	6,556
Germany	1,744	4,089		5,833	5,552
AMERICAS region	6	40		46	42
APAC region	33	67		100	108
EMEA region	97	313		410	854
			1	1	–
of which part-time employees	739	315		1,054	1,027
Germany	732	308		1,040	992
AMERICAS region	–	–		–	–
APAC region	1	–		1	2
EMEA region	7	6		13	33
of which permanent employees	1,655	4,055		5,711	5,896
Germany	1,527	3,651		5,178	4,933
AMERICAS region	6	40		46	42
APAC region	28	63		91	105
EMEA region	94	301		395	816
			1	1	–
of which trainees²	80	251		335	335
Average age (years)	42.2	43.1		42.9	43.8
Average length of service (years)	11.8	12.0		11.9	12.6
Number of employees on parental leave³	90	112		202	206
Staff turnover rate³ (%)				11.4	11.5
Share of employees with severe disabilities³ (%)				4.2	4.3

¹ To avoid conclusions being drawn about specific persons, individuals have not been allocated to the "Diverse" gender category.

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

³ In Germany

GRI 2-8 Workers who are not employees

We only draw on temporary employees to a minor extent. This is the case, for example, when temporary support is required because of employees being absent due to parental leave or illness.

3. Governance

GRI 2-9 Governance structure and composition

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

Annual General Meeting

The Annual General Meeting is where shareholders in MVV Energie AG exercise their voting and control rights. Each shareholder is entitled to participate in the Annual General Meeting if he or she registers within the relevant deadline and meets the requirements governing participation in the meeting and the exercising of voting rights. Shareholders may make statements on all agenda items at the meeting and submit relevant questions and motions. For voting purposes, each share entitles its holder to one vote and voting is possible before or during the Annual General Meeting. Here, shareholders can cast their vote in a variety of ways: in person or via a proxy of their choice, by being represented by a voting proxy appointed by MVV Energie AG to act in line with their instructions, or by a bank or shareholders' association. Moreover, shareholders can submit their votes electronically in advance of the Annual General Meeting provided that they register within the relevant deadlines. Alternatively, they can communicate all declarations electronically using our password-protected shareholder portal that can be accessed via our website

[mvv.de/en/investors](https://www.mvv.de/en/investors).

We held the 2023 Annual General Meeting as an in-person event and plan to do the same for 2024. We publish all relevant documents for our Annual General Meeting pursuant to the requirements of stock corporation law on our website at [mvv.de/en/investors](https://www.mvv.de/en/investors). In particular, these include the invitation to the Annual General Meeting and all reports and information required for the adoption of resolutions.

We describe the dual management system required by law and the composition and mode of operation of the Executive Board in our Corporate Governance Statement (CGS)

[mvv.de/CGS2023](https://www.mvv.de/CGS2023), on **Page 5**. As sustainability is a key focus of our strategy, the Executive Board continually addresses decision-making processes relating to and monitoring the impacts of the organisation on the economy, environment and people.

The composition and mode of operation of the Supervisory Board, the diversity concepts for the Executive and Supervisory Boards, the work performed by Supervisory Board committees and information about the independence and competencies of our Supervisory Board members are also described in detail in the CGS [mvv.de/CGS2023](https://www.mvv.de/CGS2023), from **Page 5**. The Supervisory Board Report in our Annual Report provides information about the work performed by the Supervisory Board [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 12**. At its meetings, the Supervisory Board is involved in issues and decisions relating to sustainability. In the Directors and Officers chapter in our Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 238**, we have listed the additional positions held by the members of our Executive and Supervisory Boards. On our homepage, we provide information about the professional careers of the members of our Executive Board [mvv.de/executive-board](https://www.mvv.de/executive-board) and our Supervisory Board [mvv.de/supervisory-board](https://www.mvv.de/supervisory-board).

GRI 2-10 Nomination and selection of the highest governance body

We outline the procedure governing the appointment or nomination and election of our Executive and Supervisory Board members, as well as the underlying diversity concepts, in our CGS mvv.de/CGS2023, from Page 5. The processes we use ensure that the views of all members of our Supervisory Board are accounted for in a selection process. We comment on the independence of Supervisory Board members in our CGS mvv.de/CGS2023, from Page 9.

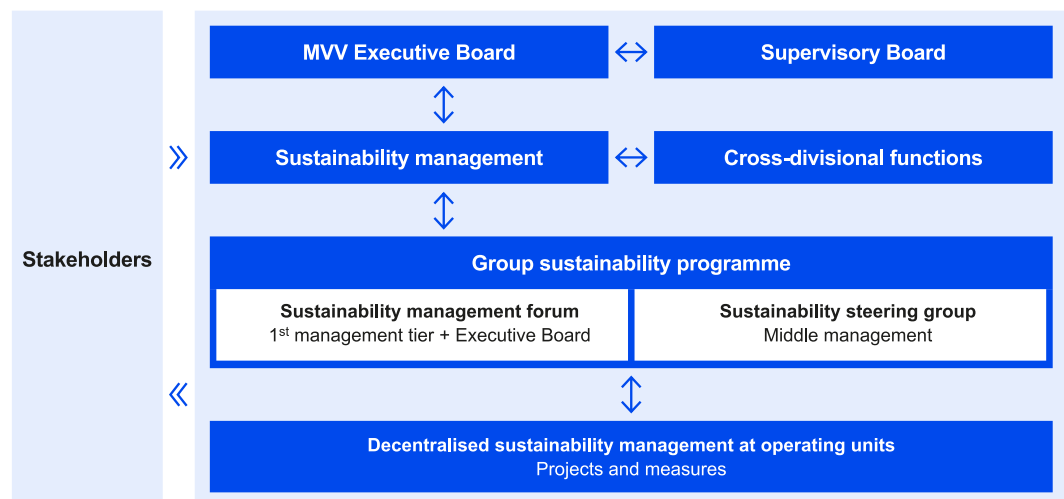
GRI 2-11 Chair of the highest governance body

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

GRI 2-12 Role of the highest governance body in overseeing the management of impacts

The Executive and Supervisory Boards actively address the impacts of MVV's business activities and its sustainability management. The key focus of our sustainability management is on topics, processes and measures that we view as forming part of our core business. This is presented in our Annual Report in the **Business Model** chapter mvv.de/AR2023, from Page 25. It is in turn based on our corporate strategy, which is also explained there mvv.de/AR2023, from Page 26. Our [Climate Protection Strategy and Strategic Decarbonisation and Sustainability Targets](#) were adopted by the Executive Board and discussed by the Supervisory Board. They form a fixed component of our corporate strategy and of the strategies compiled on this basis for individual business fields. Furthermore, the Executive Board bears overall responsibility for managing significant climate and sustainability risks. Since 1 January 2023, MVV has been subject to the scope of application of the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG). We report on this under [GRI 2-23](#) and [GRI 2-24](#).

Sustainability organisational structure



GRI 2-13 Delegation of responsibility for managing impacts

Our sustainability management is anchored on various levels of the Group. The Executive Board bears overall strategic responsibility. The sustainability department, which is located in organisational terms in our group strategy and energy industry department, coordinates the sustainability strategy, reports to the Executive Board and relevant internal management and sustainability bodies on a regular basis and whenever required by specific developments and manages the groupwide sustainability programme. As well as sharing information across business fields, this department also plans and implements projects and measures, such as those relating to the EU Taxonomy and the Corporate Sustainability Reporting Directive. Moreover, sustainability management is also responsible for major aspects of MVV's stakeholder management. The specialist departments continually review, evaluate and manage MVV's performance based on sustainability indicators and medium-term targets. For many years already, we have evaluated investment projects by reference to sustainability criteria and in terms of the contribution they make to our decarbonisation and sustainability targets. To promote sustainable investments even more effectively, in the year under report we included a sustainability-related component in the economic viability requirements for investments. The business fields act under their own responsibility to implement the measures and management systems on an operative level.

GRI 2-14 Role of the highest governance body in sustainability reporting

The Executive Board bears overall strategic responsibility. It reviews the results of the materiality process each year. In the year under report, it approved these both in terms of their relevance and of their prioritisation. The Executive Board also issues its approval for the Sustainability Report.

GRI 2-15 Conflicts of interest

All members of our Executive and Supervisory Boards are obliged to disclose any conflicts of interest to the Supervisory Board immediately. In its report to the Annual General Meeting, the Supervisory Board also provides information as to whether any such conflicts arose and, if so, how these were addressed. No conflicts of interest arose in the year under report. Furthermore, we have performed a review and ascertained that all members of our Supervisory Board are independent pursuant to the definition provided in the German Corporate Governance Code (DCGK). Further information about the independence of the Supervisory Board members can be found in the disclosures provided on [GRI 2-10](#).

In our Annual Report, we disclose the positions held by members of our Executive and Supervisory Boards on other statutory supervisory boards of German companies and their memberships of comparable German and foreign company supervisory boards in the Directors and Officers chapter [mvv.de/AR2023](#), from Page 238.

We provide information about our shareholder structure on our website [mvv.de/shareholder-structure](#). Our majority shareholder, with a direct and indirect shareholding totalling 50.1 %, is the City of Mannheim.

We also publish related party disclosures in our Annual Report [mvv.de/AR2023](#), from Page 224, Note 44.

GRI 2-16 Communication of critical concerns

In our Annual Report, we provide extensive information on the respect for human rights aspect, on measures to combat corruption and bribery and on our compliance management system (CMS) in the **Combined Non-Financial Declaration** chapter [mvv.de/AR2023](https://www.mvv.de/AR2023), from Page 58. We also report on our compliance and our risk management system in our **Corporate Governance Statement** [mvv.de/CGS2023](https://www.mvv.de/CGS2023), from Page 3.

We have structured our CMS in such a way that any breaches are avoided on a preventative basis, particularly by implementing preventative measures in the respective business processes (systemic compliance). Stakeholders can report any potential misconduct or infringements of laws either directly to our Compliance Officer or anonymously to an external confidence lawyer via our “whistle-blower hotline” [GRI 2-25](#).

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

Our reporting on the EU Taxonomy in our Annual Report includes information about minimum safeguards pursuant to Article 18 of the EU Taxonomy. This covers the topics of human rights (including worker and consumer rights), corruption and bribery, taxation and fair competition. [mvv.de/AR2023](https://www.mvv.de/AR2023), on Page 93.

GRI 2-17 Collective knowledge of the highest governance body

Sustainability is at the core of MVV’s corporate strategy. We will become #climatepositive by 2035. For our Executive Board, the topic of sustainability is therefore a regular component of its day-to-day business and a key factor in our Group’s strategic planning. For our Supervisory Board, the #climatepositive topic forms part of numerous agenda items, particularly at its strategy and planning meeting. A further training session on sustainability was held in the context of Supervisory Board meetings in the year under report. We disclose the extent to which the competency requirements for the Supervisory Board are met in a qualification matrix in our **Corporate Governance Statement** [mvv.de/CGS2023](https://www.mvv.de/CGS2023), on Page 8.

GRI 2-18 Evaluation of the performance of the highest governance body

Our Supervisory Board generally performs the self-assessment recommended by the German Corporate Governance Code every two years. This self-assessment was most recently conducted with the assistance of an external consultant in the 2022 financial year. The relevant information was collected by way of an extensive questionnaire, as well as by holding interviews with several select Supervisory Board members. The findings of the evaluation were presented to and discussed in the full Supervisory Board. Overall, members assessed the work performed by the full Supervisory Board and its committees as highly efficient. The feedback received concerning measures to optimise the onboarding process for new Supervisory Board members has been acted on and implemented.

GRI 2-19 Remuneration policies

We describe MVV's remuneration policy in our **Remuneration Report** [mvv.de/RR2023](https://www.mvv.de/RR2023), from **Page 2** and the process used to nominate and select the highest governance body in our **Corporate Governance Statement** [mvv.de/CGS2023](https://www.mvv.de/CGS2023), from **Page 6**.

GRI 2-20 Process to determine remuneration

We describe the process used to determine remuneration in our **Remuneration Report** [mvv.de/RR2023](https://www.mvv.de/RR2023), from **Page 2**.

GRI 2-21 Annual total compensation ratio

We provide a comparative presentation of the remuneration paid to the Executive Board, Supervisory Board and employees at MVV Energie AG in our **Remuneration Report** [mvv.de/RR2023](https://www.mvv.de/RR2023), from **Page 10**. Deviating from the GRI requirement, we base this comparison on a five-year period and, for this presentation, select the remuneration components of employees in such a way that they correspond with total Executive Board remuneration. These components comprise monthly remuneration pursuant to the relevant tables, fixed allowances, one-off payments, variable remuneration and any benefits in kind arising from the use of company cars.

4. Strategy, Policies and Practices

GRI 2-22 Statement on sustainable development strategy

With regard to our statement on our sustainable development strategy, we refer to the comments made by our Chief Executive Officer in the [Foreword](#). We are working consistently to minimise potential negative impacts of our business activities and to make a measurable contribution to transforming the energy supply and to climate and environmental protection. In our Annual Report, we provide an overview of these activities in the **Business Model** and **Corporate Strategy** chapters [mvv.de/AR2023](#), from **Page 25**. For many years now, we have provided information in our Annual Report and on our website about the challenges we face and the progress we have made as a company focused on sustainability [mvv.de/en/about-us/sustainability](#).

We report on developments in energy policy and in our market and competitive climate in the Annual Report in the **Business Framework** chapter [mvv.de/AR2023](#), from **Page 39**. We comment on current developments during the reporting period under [Material Topics](#). We also present an overview of the [Target Achievement for Our Sustainability and Decarbonisation Targets](#).

GRI 2-23 Policy commitments

As part of society and given our corporate social responsibility, it is self-evident to us that we should comply with all state requirements and laws applicable to MVV and report transparently on the management and supervision of our company. We meet our responsibility to the general public by ensuring high-quality compliance and corporate governance. We have published our Declaration of Compliance with the German Corporate Governance Code pursuant to § 161 of the German Stock Corporation Act (AktG) in our **Corporate Governance Statement** [mvv.de/CGS2023](#), from **Page 2**.

Respect for human rights is a fixed component of our compliance management system (CMS) and of the risk analyses we perform each year and whenever specific developments require. We report in greater detail on this under [GRI 2-24](#).

In our Policy Statement on Respect for the Environment and Human Rights and our Human Rights Policy, we underline our commitment to internationally recognised standards, conventions, principles and guidelines on human rights. Among others, these include the International Bill of Human Rights of the United Nations (UN), the OECD Guidelines for Multinational Enterprises, the Ten Principles of the UN Global Compact, the Guiding Principles on Business and Human Rights of the United Nations and the Core Labour Standards of the International Labour Organization (ILO). These also form constituent components of our MVV Business Code of Conduct for our suppliers and business partners. These documents can be downloaded from the download section of our website at [mvv.de/zentraleinkauf](#).

The Policy Statement was adopted by our Executive Board. The managers of our companies and at our locations are responsible for compliance with these requirements. This way, we also take due account of the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG). In our analysis of human rights-related and environment-related risks, we also account for the interests of our employees and those stakeholders whose protected legal positions may be indirectly or also directly affected by our business activities. One vulnerable group we see relates in particular to workers in individual Chinese provinces or production sites who are exposed to human rights abuses in connection with the silicon mining performed there for uses including photovoltaic module production.

MVV Energie AG has high standards when it comes to producing, treating and distributing water. The targets and management approach for the supply of drinking water are laid down in a Water Policy which we are currently developing further [mvv.de/wasser-policy](https://www.mvv.de/wasser-policy).

We updated our Group Environmental Policy in the year under report [mvv.de/ecological-footprint](https://www.mvv.de/ecological-footprint). In the 2024 financial year, we will extend this policy and specify its requirements in greater detail, particularly with regard to the aspects of water, circular economy and biodiversity. We provide our employees with additional guidance in further internal policies, such as those addressing the legal requirements of the German Lobby Register Act or donations and sponsoring.

GRI 2-24 Embedding policy commitments

Our compliance management system (CMS) supports us in safeguarding compliance with applicable laws, as well as with internal company policies and the ethical standards to which we are committed. The Compliance Officer reports to the Executive Board regularly and whenever otherwise required by specific developments, as well as to an Audit Committee meeting in connection with the annual financial statements. The Compliance Officer is also responsible for ensuring that the requirements of the German Act on Corporate Due Diligence Obligations in the Supply Chain (LkSG) are met and reports on this directly to the Executive Board.

We report on our CMS in detail in our Corporate Governance Statement (CGS) [mvv.de/CGS2023](https://www.mvv.de/CGS2023), from Page 3, and in the **Combined Non-Financial Declaration** chapter of our Annual Report [mvv.de/AR2023.pdf](https://www.mvv.de/AR2023.pdf), on Page 90. We also report on our approach of recording potential negative impacts in our risk management system at an early stage, thus meeting our obligation to take suitable precautions, in the **Opportunity and Risk Report** chapter [mvv.de/AR2023.pdf](https://www.mvv.de/AR2023.pdf), from Page 117.

GRI 2-25 Processes to remediate negative impacts

One important component of our CMS is the whistle-blower hotline. With this, we have a long-established early warning system facilitating the early detection of any risks to people, the environment and our company. Via this hotline, our employees, third parties and suppliers can contact either our Compliance Officer directly or an external confidence lawyer anonymously, if preferred, and report potential misconduct or breaches of the law. The utmost priority is accorded to protecting the whistle-blower. We are committed to protecting whistle-blowers from any disadvantages or disciplinary measures due to any such notification. We also do not tolerate and consistently follow up any retaliatory measures or reprisals resulting from such reports or tip-offs. We also provide information about our whistle-blower hotline in German and English at our website [mvv.de/en/whistleblower-hotline](https://www.mvv.de/en/whistleblower-hotline). Here, anyone wishing to submit a notification will also find further information in the relevant procedural guidelines.

Our customers can contact us directly by telephone using various service and emergency hotlines, via online forms, by e-mail, by post or on location in our customer service centres. We also publish our contact details on our homepage. We answer customer enquiries about data protection and process the rights provided by data protection law to the individual concerned without delay. Whenever a breach of data protection law is suspected, the relevant data protection officer is immediately informed. This way, we can ensure that the breach is promptly and carefully evaluated and reviewed and implement any remedial measures required.

By integrating the internal complaints office pursuant to § 13 of the German General Equal Treatment Act (AGG) in organisational terms into our Diversity and Prevention Department, we have created a central point of contact in Mannheim. The complaints office advises and supports employees who feel that they have been disadvantaged due to their ethnic background, gender, religion or worldview, disability, age or sexual identity.

GRI 2-26 Mechanisms for seeking advice and raising concerns

We describe the processes used to accept and process concerns, suggestions and complaints received from our stakeholders under [GRI 2-16](#) and [GRI 2-25](#). These channels are also available to individual persons.

GRI 2-27 Compliance with laws and regulations

We attach great value to working together with all our stakeholders on a basis of transparency, trust, fairness and integrity. We report in detail on our compliance management system in the CGS [mvv.de/CGS2023](#), from **Page 3**. We promote employee awareness of the importance of compliance with all applicable competition laws and regulations. Neither the company nor its senior management have been finally convicted either of violating tax or competition law or of corruption.

GRI 2-28 Membership of associations

We play an active role in bodies, associations and networks, participate in research projects and take part in the public debate. We focus here on the energy system transformation.

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

5. Stakeholder Engagement

GRI 2-29 Approach to stakeholder engagement

We operate at a variety of locations and in diverse business fields and therefore touch upon the interests of numerous, often heterogeneous groups of stakeholders. These include our customers, employees, shareholders, government and political representatives, as well as non-government organisations (NGOs), the media, analysts, local residents at our locations, associations and suppliers. Further stakeholders are cooperation partners, business partners and research institutes. This makes it possible to assess a variety of perspectives and concerns more closely and to factor these into our company's activities. We review the relevance of the respective concerns in the materiality analysis.

MVV's stakeholder management is coordinated by the Sustainability department. We take our discussions and interview with stakeholders as an opportunity to subject the materiality of our topics to a regular review. In this, we also actively contact the various groups of stakeholders listed above. We also draw on AI-based approaches in this connection. Together with MVV's specialist departments and companies, we assess how far and in which ways we can account for specific concerns. The findings are then discussed and implemented by our experts in the sustainability programme.

Stakeholder engagement



We attach great value to maintaining an open and transparent dialogue with our stakeholder groups, and that both in our one-to-one contacts and via our websites, in press releases, on social networks and in specialist formats, such as analysts' or press conferences. We take part in public discussions and other events, such as specialist energy industry conferences and public information events. We play an active role in the relevant bodies, associations and networks, participate in research projects and take part in the public debate. We focus here on the energy system transformation. Via our membership in industry associations, we participate in energy policy and energy industry discussion. We report on this under [GRI 2-28](#).

We involve stakeholder groups in our materiality analysis on a targeted basis. We note their feedback, particularly on our Sustainability Report, in order to factor this into the subsequent report. We hold a sustainability information day for our internal stakeholders once a year and enter into close dialogue with them concerning current sustainability topics. Moreover, we are maintaining our internal programme of action to inspire our employees to work towards even greater sustainability.

We continually endeavour to raise customer satisfaction in order to retain existing customers in the long term. We also aim to attract new customers. It is therefore important for us to be familiar with our customers' expectations and requirements and to react at an early stage to any changes in these. To this end, at our Mannheim location we deploy a measurement system to determine the satisfaction of retail, commercial and business customers on an ongoing basis. Among other figures, we also calculate the net promoter score. This way, we monitor the quality of our products and services.

Our focus has been and will remain on ensuring that our customer service channels are easily accessible and offer a high degree of solutions-driven competence. In the year under report, we therefore implemented a call-back system at the Mannheim location. This provides our retail and commercial customers with an easy and convenient channel to have their concerns addressed more flexibly. It also enables us to handle peak call periods. Furthermore, we draw on additional market and customer research to gain a more in-depth understanding of customer requirements and expectations. Based on the findings, we introduce targeted measures to optimise processes and systems. As in previous years, in the year under report we performed a market research study to investigate retail customer perceptions of MVV at its Mannheim location. Notwithstanding the challenges posed by energy policy, we were able to slightly improve our position in the competitive benchmark. We conclude from this that retail customer perceptions of MVV are based on a longer-term process and that we are viewed as a reliable and trustworthy partner. We benefit here from the fact that, in turbulent times on the energy markets, we provide our customers with individual advice and potential solutions if they encounter difficulty paying their bills. In cases of dire need, we also provide financial assistance via our Emergency Fund in cooperation with the charitable organisations Diakonie and Caritas. In the 2024 financial year, we will further expand the holistic advice we provide on innovative energy solutions in the interests of our customers and, to this end, will increase the range of one-to-one advice offered at our customer service centres on location. We exchange expert opinions with the City of Mannheim for specific projects and accompany the city as a reliable partner in its climate protection action plan. We offer solutions to local industry enabling it to map its own course to climate neutrality. We provide information about this in the **Corporate Strategy** chapter of our Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), on **Page 29**.

The most important concerns raised by our stakeholder groups in the year under report included topics relating to the development in energy prices, supply reliability, the decentralised heat transition, the expansion in green district heat, climate protection, possibilities for carbon capture and the long-term role of natural gas. We analysed and accounted for the concerns of our stakeholders when performing our materiality analysis. We report on this under [GRI 3-1](#).

We have been entered in the Transparency Register of the European Commission since 2020. We organised our entry in the lobby register for the representation of interests to the German Federal Parliament and the German Federal Government within the relevant deadline in the 2023 financial year. We are also entered, on a voluntary basis, in the Transparency Register of the Baden-Württemberg State Parliament. By representing its interests to political participants, MVV pursues the objective of remaining permanently in dialogue with politicians and the administration. This makes us part of the democratic process. To ensure that decisions taken in a parliamentary democracy are based on the best interests of society, lawmakers are required to consider the implications of their decisions in advance, to account for as many perspectives as possible and to be aware of as many arguments as possible. To reach the best decisions, lawmakers therefore also need to consider the perspective of companies. In representing its interests, MVV meets the highest transparency standards and complies with strict codes of conduct. As well as making the statutory public disclosures, we also participate in voluntary initiatives.

Furthermore, MVV publishes position papers and agenda-setting studies and also participates in consultation processes and public hearings on a transparent basis for our stakeholders and for society as a whole. One aspect of our internal compliance regulations is that donations and payments to political parties and connected organisations are strictly prohibited.

GRI 2-30 Collective bargaining agreements

A 69 % share of our employees in Germany work at companies that have concluded collective pay agreements. In Germany, the principle of employee codetermination is legally enshrined both in the German Codetermination Act (MitbestG) and in the German Works Constitution Act (BetrVG). As a member of the UN Global Compact, we also believe we are obliged to uphold the freedom of association and effective recognition of the right to collective bargaining. Contracts for employees in Germany who are not covered by a collective pay agreement are based neither on the collective agreements in place at MVV nor on those at other companies. We currently do not yet report any data on the numbers of our employees abroad who are bound by collective agreements. These are employed at small units and the regulations vary between individual locations.

GRI 3: Disclosures and Guidance on Material Topics

GRI 3-1 Process to determine material topics

The contents of this Sustainability Report are determined on the basis of our materiality analysis. To this end, we continually monitor public discussions and the positions of our stakeholders to identify actual and potential negative and positive impacts that MVV may have on the economy, environment and people. We regularly assess whether and how the relevance of our material topics has changed. This multistage process includes:

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

Our materiality analysis comprises three content-related perspectives, namely stakeholder relevance, business relevance and the impact of our business activities. Analysing these dimensions enables us to meet the various requirements placed in the materiality analysis by different reporting standards. In the year under report, we performed a materiality analysis in accordance with GRI Standards. We prioritise the impacts in terms of their significance by evaluating and weighting the respective impact on the aforementioned dimensions and comparing this with the stakeholder perspective. The methods we apply for this purpose include assessing the severity of negative impacts based on their probabilities of occurrence. We present the results of our analysis under [GRI 3-2](#).

We review all aspects of the materiality process every three to four years and did so most recently in the 2021 financial year. Moreover, we also update the main characteristics and prioritisations on an annual basis. In terms of its contents, the materiality analysis also accounts for global challenges and megatrends, the [Sustainable Development Goals](#), industry and technology-related trends and the expectations of our internal and external stakeholders.

Climate protection is a topic that is of very great relevance to MVV not only in the context of sustainability, but also on a strategic level. When it comes to the topic of climate risks, regulatory risks are particularly significant for us, as the decarbonisation of the energy industry is being shaped by the political framework. By comparison, other types of risk, such as physical, legal or reputational risks, are only of subordinate significance. We present changes in climate and energy policy by working with long-term scenarios that provide a binding foundation for quantifying our strategy on a long-term basis or for growth investments. These also include different developments in CO₂ or commodity prices. The scenarios enable us to portray the robustness and climate resilience of current and future business models at MVV in quantitative terms.

Our risk management continually records and assesses financial and non-financial risks. We report on this in our Annual Report in the **Opportunity and Risk Report** chapter [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 117**. The results of this process were discussed on Executive Board level and confirmed in terms both of their relevance and of their prioritisation.

Under GRI – in which materiality is evaluated in respect of relevance to stakeholders and impacts of our business activities – more topics are reported as material than are relevant for our Combined Non-Financial Declaration. When assessing materiality for the Combined Non-Financial Declaration in our Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 58**, we have also included an evaluation of the business relevance perspective in our analysis.

Furthermore, we draw on an AI-based application to validate our materiality analysis and to identify future topics at an early stage and discuss these with our internal experts, external experts and stakeholders. The materiality analysis performed in the year under report largely confirmed the topics reported on in previous years and thus also our course towards climate neutrality. The table below contains an overview of the topics, our targets and the milestones we have already reached.

GRI 3-2 List of material topics

List of material topics

Material topic/ topic standard	What we aim to achieve	What we achieved in the 2023 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 549 million to Euro 1,694 million.
GRI 203 Indirect economic impacts 2016	We will invest a further total of Euro 3 billion in the energy transition in the years ahead. (basis: start of 2017 financial year) In the next 10 years, we will invest around Euro 7 billion in the energy transition. (basis: start of 2024 financial year)	In the 2023 financial year, we invested a total of Euro 344 million; since the 2017 financial year, we have invested Euro 2.1 billion.
Energy and Environment		
GRI 301 Materials 2016	We will increase the efficiency of our plants and reduce emissions from our proprietary generation and at our customers. We will reduce our ecological footprint by expanding green heat, scaling back fossil-based generation and this way reduce the use of non-renewable fuels.	At the Mannheim location, warm operations with our phosphorous recycling plant were launched at the beginning of the 2024 financial year. Moreover, planning is underway for further efficiency projects in our energy and recycling park at Friesenheimer Insel in Mannheim. The fuel efficiency rate at our fully consolidated companies amounted to 66 % in the year under report.
GRI 302 Energy 2016	We will triple our electricity generation from renewable energies to around 2,000 megawatts by 2030. (2022 basis: 614 MW) We aim to reduce grid losses in our electricity and heat grids.	Electricity generation capacities from renewable energies and the biogenic share of waste/RDF at our fully consolidated and at-equity companies amounted to 633 MW at the end of the year under report, 19 MW more than a year earlier. Grid losses fell by 9 % for our electricity grids and by 10 % for our heat grids.
MVV topic: Renewable energies	We will connect renewable energies to the grid.	Since the beginning of the 2017 financial year, we have connected renewable energies plants with capacities of 4,665 MW to the grid; in the year under report, we connected capacities of 1,436 MW.

Material topic/ topic standard	What we aim to achieve	What we achieved in the 2023 financial year
GRI 305 Emissions 2016	We will become #climatepositive by 2035. We will reduce our energy industry Scope 1 emissions by more than 80 % by 2030. This corresponds to an emissions level of less than 0.5 million tonnes in 2030 (Scope 1).	At the beginning of the year under report, our climate protection targets were again certified by the SBTi as compatible with the net zero standard. Direct Scope 1 emissions showed a year-on-year reduction of 26 % in the year under report. This reduction is predominantly due to lower generation volumes at our conventional CHP plants and to a lesser extent to the disposal of the MVV CZ Group.
System Transformation		
MVV topic: Changed energy demand	We are preparing 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. We are actively making preparations with regard to extending the district heat supply as a substitute for existing fossil fuels such as natural gas.
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.	We convinced Schwetzingen, Eppelheim, Ketsch, Ofersheim, Plankstadt and the municipality of Rosenberg in the Neckar-Odenwald district with the performance of our Climap service. Drawing on thermal imaging of existing buildings, in the year under report we supported the renovation of real estate in these areas in order to improve energy efficiency.
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. As a competent partner, we offer all our customers – from private households to industrial players – the products and services they need to implement their own energy transitions. We work with an extensive range of technical and organisational security measures to ensure information security and data protection.	In our digitalisation programme, we further automated our internal processes and boosted our digital cooperation. Furthermore, we promoted the digital dialogue with our customers. We supplemented our portfolio of solutions with newly developed services and products relating to the energy transition and climate neutrality. We are continually improving the processes used to protect information and personal data.
Employees and Society		
GRI 403 Occupational health and safety 2018	We support our employees in remaining healthy. We aim to avoid any accidents arising at all in future.	We maintained and extended our range of services for employees, particularly those relating to management and cooperation, as well as those promoting the physical and mental health of employees working from home. The lost time injury frequency (LTIF) rate amounted to 4.3, compared with 3.7 in the previous year. We have taken additional measures to raise awareness of potential accident risks.
GRI 404 Training and education 2016	With our broad range of training programmes, we aim to present to young people the whole variety of career options available at the company. We aim to further develop our employees' potential.	We employed 331 trainees as of 30 September 2023. Our employees took part in a variety of internal and external training and development programmes. We upheld the established digital programmes.
GRI 405 Diversity and equal opportunity 2016	By 30 September 2026, 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 September 2021: 28 % and 14 %)	Women accounted for 29 % of the Group's workforce as of 30 September 2023, while the share of women managers stood at 19 %.
GRI 413 Local communities 2016	We aim to communicate transparently and openly with our stakeholders and are available to speak to all our stakeholders.	We upheld our various reporting and communications formats.

Three MVV topics have been removed from the material topic of System Transformation compared with the previous year, namely sector coupling, supply reliability and innovation. As a topic highly specific to energy companies, the MVV topic of sector coupling includes information which has a large intersection with the material topic of Energy and Environment. We have therefore reallocated the relevant information accordingly. The MVV topic of supply reliability is of great relevance to society as a whole. From a GRI perspective, however, it is no longer to be considered material. Given the systems we maintain and the measures we perform in order to uphold supply reliability, the impact thereby determined falls short of the materiality threshold. We have transferred the disclosures provided on our generation volumes to the [Transformation of the Generation Portfolio](#) section. Furthermore, the MVV topic of innovation has been removed due to the threshold values not being reached in the assessment. Within the material topic of Employees and Society, we no longer report on the MVV topic of society as, here too, the relevant threshold values were not reached.

GRI 3-3 Management of material topics

For all of the material topics outlined below, it is equally applicable that their actual and potential negative and positive impacts on the economy, environment and people are centrally recorded and analysed. In this, the consequences of the respective matters are presented: For potential impacts, information such as the scope of such impacts, the consequences for stakeholders and the environment and the probabilities of occurrence are recorded or estimated. We monitor and regularly review the effectiveness of all measures stated for individual material topics by working with traditional plan-do-check-act management processes. We account for the resultant conclusions of their actual effectiveness when devising follow-up measures.

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 system 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 profitable on a long-term basis.

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 embrace this role. With our [Sustainability Management \(GRI 2-13\)](#), 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.

Impacts, measures and effectiveness

Give the value created on site, MVV has clearly positive impacts on our locations. We make investments, award contracts to local or regional businesses wherever possible, thus securing jobs, offer high-quality training and pay taxes and duties. It goes without saying that we do not use any questionable measures to avoid taxes or move profits across borders. Our business activities could also potentially have negative impacts, for example on local tax revenues, if we were no longer to operate profitably in the long term.

We provide a detailed explanation of our treatment of the material topic of Economic Performance and of the measures we take to manage and control effectiveness in the Group Management Report in our Annual Report. Information about this can be found in, among others, the **Group Structure, Business Model, Corporate Management** and **Value-Based Corporate Management** chapters [mvv.de/AR 2023](https://www.mvv.de/AR2023), from **Page 24**. We also provide extensive information there on our business framework [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 39**. We account for our entrepreneurial responsibility by continually observing, analysing and assessing opportunities and risks and by taking measures to minimise risks. In our Annual Report, we report on this in the **Opportunity and Risk Report** chapter [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 117**.

In our [Input/Output Balance Sheet](#), we present all significant flows of materials, energy, goods and money that are associated with our business activities and report on changes compared with the previous year. We report on the policies applicable at MVV under [GRI 2-23](#).

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

Background

The consequences of the further growth in global resource consumption are apparent in much-discussed issues such as biodiversity, resource scarcity or emissions of pollutants. Climate change offers the most striking example of these effects. Containing human-induced climate change is one of the greatest challenges of our time. In the EU, climate neutrality is to be achieved by 2050 at the latest. In 2021, the German Climate Protection Act (KSG) stipulated that Germany should become climate neutral by 2045 already. This course will also require unavoidable emissions to be offset. It will therefore be necessary to achieve negative emissions from the 2040s at the latest, for example by capturing CO₂.

We are consistently working to minimise any potentially negative implications of our business activities and to make measurable contributions to transforming the energy supply and protecting the climate and environment. The 2023 IPCC Synthesis Report makes clear not only that the use of fossil-based energies will have to be phased out completely worldwide, but that the net balance sheet will have to be negative by the middle of the century. This means that CO₂ will have to be permanently captured by being removed from the atmosphere in order to offset unavoidable emissions, such as those arising from agriculture. We describe the associated developments in energy policy in our Annual Report in the **Business Framework** chapter [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 39**.

The great challenge is still the European goal of becoming climate neutral across all sectors by 2050. As one of the main emitters of CO₂, the energy industry has a key role to play in achieving climate neutrality. It must quickly reduce both its direct and its indirect emissions to zero and do entirely without fossil fuels. This affects not only the core business of energy companies, but also their upstream and downstream value chains and their shareholdings. The great challenges for this decade involve rapidly exiting from coal-based generation and reducing energy consumption in absolute terms. At the same time, it is necessary to build or modernise the infrastructures needed to facilitate a fully climate-neutral energy supply. This involves accelerating the expansion in renewable energies (electricity and heat) and the infrastructures needed to generate, transport and use climate-neutral gases. These are the technical preconditions enabling the use of fossil-based natural gas to be gradually phased out. Liquefied natural gas (LNG) can only provide temporary assistance in this respect. MVV has accorded great importance to climate protection, decarbonisation and renewable energies for many years already.

Our energy generation and our products and services still do not fully conform with these long-term ecological sustainability targets, for example with those set out in the Planetary Boundaries concept. We record our environmental impacts each year in our [Input/Output Balance Sheet](#), report on our [Climate Balance Sheet](#), present an overview of our [Sustainability and Decarbonisation Targets](#) and describe the policies applicable at MVV under [GRI 2-23](#).

Impacts, measures and effectiveness

The impacts of our material topic of Energy and Environment are manifold and mutually conditional. One material positive impact of our business activities is the expansion in renewable energies and the increase in energy efficiency at our company and our customers. Both factors are enabling us to gradually reduce emissions. Moreover, we provide energy at competitive prices, are committed to upholding a high level of supply reliability and use waste to generate energy. In the areas covered by the grid companies MVV Netze and SW Kiel Netze, we supply the local population with drinking water, protect groundwater and implement water conservation measures. One negative impact of our business activities is that we use limited natural resources. Given the high efficiency levels at our plants and the use of waste as a resource, however, this impact is limited in scope. The procurement, transmission, generation and use of energy give rise to emissions. Furthermore, energy transmission may result in grid losses. Moreover, our land use and water consumption have an adverse impact on the environment and people. In individual cases, procurement of the resources and plant components we use may potentially have negative impacts in respect of human rights; we comment on this under [GRI 2-16](#).

Our climate protection strategy

We are pursuing a long-term strategy focused on climate protection. This involves providing our customers with a supply of energy that is generated in ways that are as environmentally friendly as possible and supporting them with innovative solutions enabling them to implement their own energy transformation and achieve climate neutrality. Our climate protection strategy is based on the following key principles:

- It forms an integral component of our corporate strategy and determines the allocation of our investments and service focuses, and thus our further development.
- Together with the associated measures, our sustainability and decarbonisation targets have been certified by the Science Based Target initiative (SBTi).
- We consistently include all sources of greenhouse gas emissions, including those at our at-equity shareholdings, in MVV's climate balance sheet.
- Our CO₂ reduction strategy is intended to reduce Scope 1, 2 and 3 emissions in absolute terms; offsetting and compensation measures do not form part of the strategy.

Our groupwide decarbonisation targets set within the Mannheim Model go substantially further than the decarbonisation trajectory set out in the German Climate Protection Act (KSG). While this legislation provides for a 65 % reduction in CO₂ emissions in the energy industry between 2018 and 2030 and calls for climate neutrality by 2045, the goal we have set ourselves is this: We are reducing our total CO₂ footprint to net zero and will be #climatepositive by 2035. To achieve our target of becoming #climatepositive, we will step up the pace of our activities to make a reality of the heat transition, implement the electricity transition and expand our climate neutrality solutions for customers. Further information about this is provided in the section [Renewable Energies, Energy Transition and Climate Neutrality](#).

The energy system of the future is and will remain our key investment focus. For the period from 2017 to 2026, we had set ourselves the target of investing Euro 3 billion. To achieve our new targets, we have initiated the largest growth programme in our company's history. In the decade to 2033, we will expend around Euro 7 billion on our groupwide green growth.

Effectiveness review

We measure the effectiveness of the measures in our climate protection strategy by reference to the [Target Achievement for our Sustainability and Decarbonisation Targets](#). These targets have already been certified on several occasions since 2021 by the Science Based Target initiative (SBTi). In 2021, MVV was the first German energy company to obtain confirmation that it was pursuing a scientific 1.5-degree trajectory. In autumn 2022, MVV was the first energy company in Germany, and only the third worldwide, to be validated in accordance with the SBTi's new and even stricter standard. This confirmed that, in addition to our medium and long-term sustainability and decarbonisation targets, the associated measures also satisfied the strictest scientific standards. As a result, MVV was recognised as being net-zero compatible.

We compile our greenhouse gas balance sheet in accordance with the Greenhouse Gas Protocol. The overwhelming share of the direct CO₂ emissions which we report comes from plants that are governed by the emission trading system (ETS) and 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.

The Executive Board bears overall responsibility for the climate protection strategy. Our climate protection measures are managed by our sustainability management function. The targets within our Mannheim Model 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 the managers responsible for our business fields, who take due account of local conditions. On group level, we assess the investments made by all business fields in terms of their contribution to #climatepositive.

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 attach great importance to efficiency. We minimise the energy losses arising when the fuels are converted into end energy, such as electricity or heat, and consistently invest both in enhancing the energy efficiency of our generation plants and in expanding green heat in conjunction with highly efficient combined heat and power generation. Wherever technically possible, we are also increasingly relying on recycled products and input materials. One key indicator of very high resource efficiency involves the high fuel efficiency rates resulting from optimised use of the energy contained in fuels; see [GRI 301-1](#).

Local environmental protection is a further fixed component of our management systems. Environmental protection on both national and local levels is closely based on legal requirements. The approvals granted and legal requirements form the basis for our activities, both when we build or modernise plants and in our day-to-day operations. Compliance, particularly with the prescribed threshold values, is monitored by the relevant authorities. Certain aspects of our operations, such as plant-specific emissions at large combustion plants, are subject to reporting requirements. Our subsidiaries and at-equity shareholdings are responsible for the operative management of environmental concerns on a decentralised basis. As they work with different technologies and our stakeholders in the regions have different concerns, these companies set their own relevant focuses within the framework provided by our groupwide guidelines. Given the tense current situation on the energy market and in global supply chains, there is an increasing probability of temporary shortages of specific chemical additives and input materials, such as ammoniac.

This in turn could result either in emission threshold values being temporarily exceeded or in energy generation having to be curtailed. By working with forward-looking procurement, MVV is attempting to mitigate the potential implications of a situation of this kind.

At MVV, the circular economy mainly plays a major role in the environmental energy business field, and here in particular in treating waste at the end of the waste hierarchy. However, in our business customer business field we also make major contributions to saving resources and the circular economy. Our targets and measures for further developing these business fields therefore directly help to promote a sustainable circular economy. We are currently honing our strategy for the circular economy in connection with the future requirements of the CSRD.

Renewable energies, energy transition and climate neutrality

MVV will become #climatepositive by 2035. We will be one of the first energy companies to achieve negative overall emissions, and that without deploying offsetting certificates. We had previously already set ourselves the target of reducing our energy industry Scope 1 emissions by more than 80 % by 2030 compared with 2018. To account for changes in the political and competitive climate, in the year under report we further raised the long-term sustainability and decarbonisation targets we had already set in the 2016 and 2020 financial years:

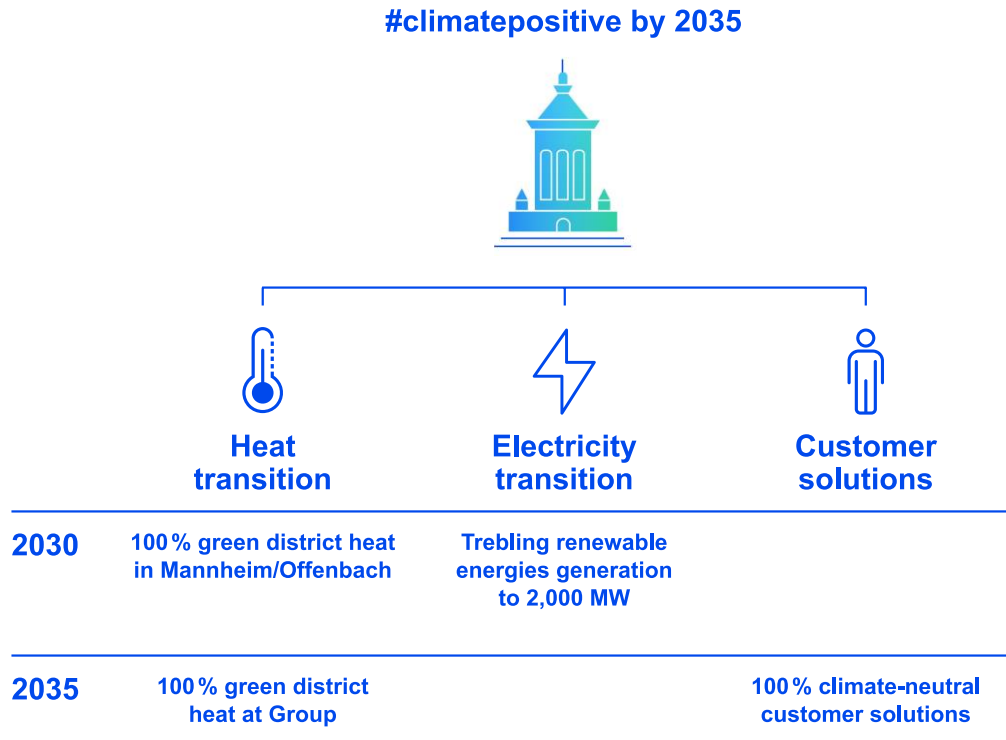
- We are reducing our total CO₂ footprint to net zero and will become #climatepositive by 2035 by upgrading our bio-waste anaerobic digestion, biomethane, biomass and energy from waste plants with suitable technologies.

For MVV, net zero is achieved when we have reduced our absolute direct and indirect emissions on portfolio level by at least 95 % and have offset any residual emissions potentially unavoidable due to technical reasons with our own permanent CO₂ sinks. Unavoidable greenhouse gas emissions arise when no technical alternatives are available for the same application. Today, that is the case for generating energy from waste, for example, or for upstream emissions due to soil movements in agriculture.

Working with BECCUS (Bioenergy Carbon Capture Usage and Storage) will enable us not only to offset our own unavoidable residual emissions but also to become #climatepositive as a company thanks to the additional volumes thereby captured. To this end, by 2035 we will upgrade our bio-waste anaerobic digestion, biomethane, biomass and energy from waste plants with suitable technologies enabling them to permanently remove CO₂ from the atmosphere.

This way, our biomass and energy from waste plants will in the long term become large, industrial-scale CO₂ sinks. That is because around half of the non-recyclable waste incinerated at energy from waste plants comprises biological, i.e. climate-neutral components. The other half involves waste that leads to unavoidable residual emissions. Thanks to BECCUS, the share of biogenic emissions thereby captured is turned into “negative emissions”, while the share of non-biogenic emissions captured becomes CO₂ neutral.

As we head towards becoming #climatepositive by 2035, within our Mannheim Model we will have to reach further targets and milestones that will further promote the energy transition:



In Germany, climate neutrality can only be achieved by way of the **heat transition**, which means fully converting all heat generation from fossil-based to renewable energy sources. We are actively shaping our heat transition:

- We will achieve 100 % green district heat in Mannheim by 2030 by implementing the following measures: launching operations with the first river heat pump at the beginning of the 2024 financial year, extracting district heat from the biomass power plant in the 2024 financial year and integrating further heat generation technologies, such as geothermal energy, biomethane and waste heat.
- We will achieve 100 % green district heat in Offenbach by 2030 by integrating green heat generation technologies, such as waste heat, biomass and large-scale heat pumps.
- We will implement 100 % district heat in Kiel by 2035 by deploying large-scale heat pumps and converting the Küstenkraftwerk power plant to 100 % hydrogen. We are also reviewing the use of geothermal energy.

Renewable energies are set to account for at least 80 % of the electricity generated in Germany by 2030 and then for almost all electricity generation by 2035 at the latest. In view of this, we are also pressing ahead with our own contribution to the **electricity transition**:

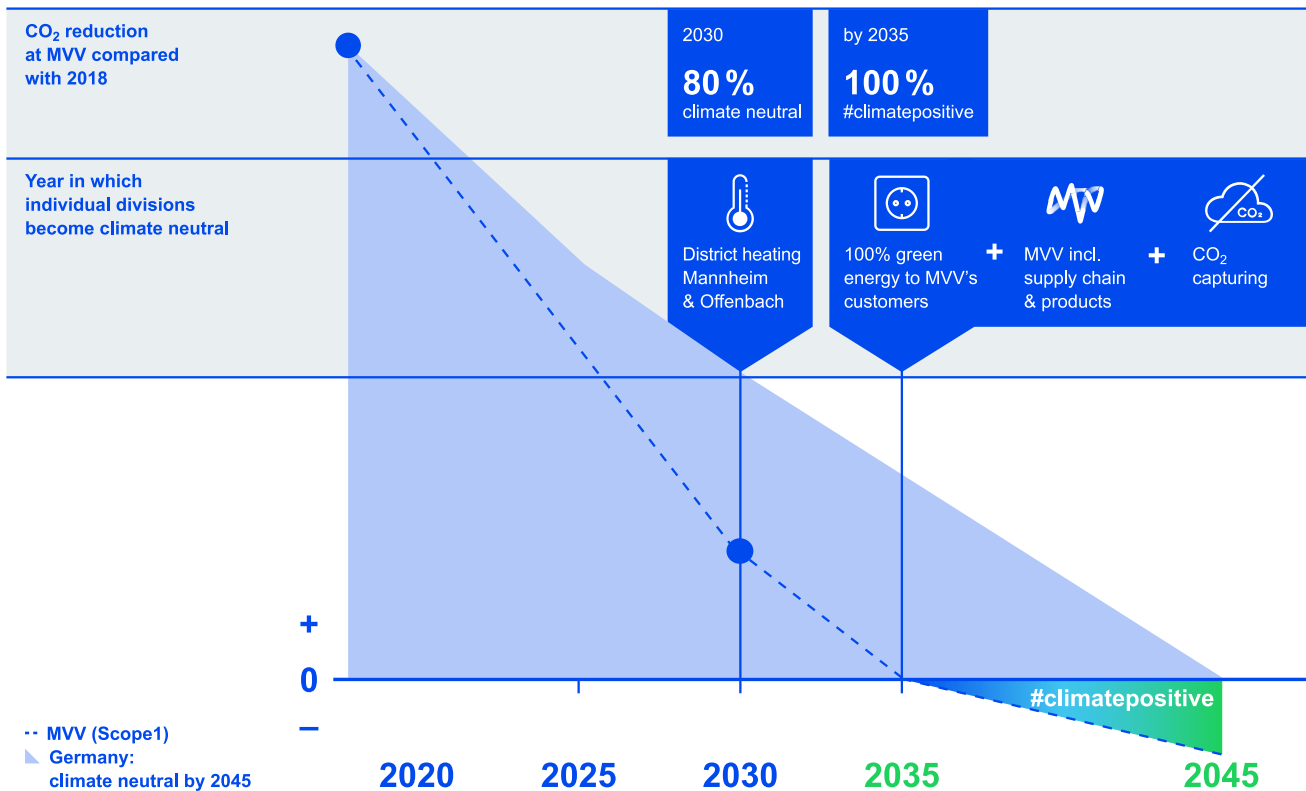
- In the period from 2022 to 2030, we will triple our proprietary generation of electricity from renewable energies from 614 megawatts to around 2,000 megawatts by building or acquiring onshore wind turbines and photovoltaics systems.
- By 2035, we will discontinue our fossil-based energy generation, for example by decommissioning the CHP plant in Offenbach by 2030 and basing 100 % of operations at the Küstenkraftwerk power plant in Kiel on hydrogen by 2035.

Most of our indirect CO₂ emissions result from supplying electricity and natural gas to our customers. We are converting our range of **customer solutions** and discontinuing the sale of fossil-based fuels. This way, we will achieve effective reductions in greenhouse gases.

- By 2035, we will gradually convert our products and services to 100 % climate-neutral solutions and supply our customers exclusively with green energy. We will achieve this by converting electricity supply contracts to 100 % green electricity in the medium term, promoting the procurement and supply of green energy and offering services and solutions for the energy transition and energy efficiency.
- We support our customers by offering a range of climate-neutral heat solutions, for example by continually expanding our district heat grids and by including heat pumps or wood pellets in our portfolio.

Our future: #climatepositive

Interim targets



Material Topic: System Transformation (MVV topics: Changed energy demand, Changed infrastructures and smart cities, 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 transition and make it fit for the future. The advancing energy transition 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. Grid stability is absolutely crucial for the supply of electricity.

For the energy transition to succeed, the transport and heat sectors will also have to use electricity from environmentally-friendly generation or hydrogen generated from green electricity – and these developments will lead to changes in energy demand. The war in Ukraine led to disruptions in European energy markets. The loss of Russian gas deliveries is still to be offset with global LNG supplies. Reducing end demand for energy, and especially for natural gas, is another topic that is increasingly in the foreground. Sharply accelerating the heat transition should on the one hand cut demand for natural gas more quickly while on the other hand mitigating the adverse effects of significantly higher energy prices. Particularly in 2023, there was in-depth discussion of these issues among politicians and in society as a whole in connection with the adoption of the German Building Energy Act (GEG). By accelerating the expansion in wind turbines and photovoltaics systems, the governing coalition aims to bring forward the date of the coal exit to 2030.

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. We report on the policies applicable at MVV under [GRI 2-23](#).

Impacts, measures and effectiveness

The impacts relating to our material topic of System Transformation are also highly diverse and interconnected. One material positive impact of our business activity is the increasingly environmentally friendly energy supply we offer to our customers by pressing ahead with the energy system transformation and expanding our renewable energy supply. We safeguard grid stability on behalf of our customers. We are additionally contributing to the transformation by making electricity generated from renewable energies usable in the heat and transport sectors. We are reducing the environmental burden on cities by developing and implementing innovative concepts for smart cities. Although the renewable share of our energy generation volumes is rising, the emissions resulting from the procurement, transmission, generation and use of energy are still one of the negative impacts of our business activities. We report on these in our [Climate Balance Sheet](#). We also use limited natural resources. The transmission of energy, and here of electricity in particular, gives rise to grid losses. Moreover, our land use and water consumption have an adverse impact on the environment and people. In individual cases, procurement of the resources and plant components we use may potentially have negative impacts in respect of human rights; we comment on this under [GRI 2-16](#). 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 Annual Report [mvv.de/AR2023](https://www.mvv.de/AR2023), from **Page 26**, and monitors the resultant measures and their implementation. With an extensive investment programme that has a long-term focus and is based on our sustainability and decarbonisation targets, we are promoting the energy system transformation, 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. We measure the effectiveness of our measures by reference to the [Target Achievement for Our Sustainability and Decarbonisation Targets](#).

Changed energy demand

The acceleration in the heat transition will produce significant shifts in demand for heat in the coming years already. Renovating buildings to enhance their energy efficiency has the potential to halve demand for heat in the long term. Moreover, the move away from natural gas now initiated will have repercussions in the form of growing electricity demand due to heat pumps, additional demand for district heat in large built-up areas and, in the long term, rising demand for green hydrogen. 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 transitions. Another factor that influences energy demand is the changed energy market situation.

Changed infrastructure and smart cities

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

Digital transformation

Digitalisation is an important component of our corporate strategy. We make targeted use of digitalisation instruments to create modern hybrid ways of working and cooperating and to continually enhance the efficiency and networking of our own business processes. In addition, we 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 opportunities offered by digitalisation, for example to analyse the energy situation on behalf of our customers and structure optimal individual solutions. This way, we also reduce the long-term environmental impact of energy consumption. Smart cities are another field of application emerging for digital products. This means that digital solutions do not just offer economic benefits, they also provide an opportunity to meet ecological and social targets. Viewed as 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.

Working with an information security management system based on the international norm DIN ISO 27001 and a continually optimised data protection management system, the employees we entrust with this task manage, monitor and provide training on the security of business processes in terms of IT and data protection law both centrally and on a decentralised basis. They ensure that both the information and the personal data are protected against unauthorised viewing, loss or manipulation. The measures we have taken to protect ourselves against cyberattacks, increasing numbers of which are challenging IT security at companies, are also to be viewed in this context. All the measures we implement in the field of information security and data protection are intended to detect and manage any potential risks. We aim to maintain and further expand our trust-based relationships with our customers, shareholders, suppliers, service providers and employees. By implementing cross-locational synergy projects, we have strengthened the organisation of our groupwide data protection and structured the overarching cooperation and information flows even more efficiently.

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)

Background

Demographic trends and the associated changes in the employment market, such as the shortage of specialists and growing importance attached to making work and family commitments compatible, are also placing greater demands on corporate personnel policies. Successfully attracting and retaining employees is becoming an ever more important factor.

We are part of society at the locations and in the regions in which we operate. Our goal is to make positive contributions for our employees. Motivated, healthy and well-qualified employees are crucial to MVV's success. We offer attractive and secure jobs to our employees in an environment in which we can jointly make an active contribution to promoting decarbonisation and upholding supply reliability. By offering flexible working hours models, opportunities for further training and attractive benefits, we make efforts to meet the requirements our employees. In this, we maintain a balance between satisfying these needs and the organisational proviso that complexity and costs should be kept within reasonable limits.

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.

We report on the policies applicable at MVV under [GRI 2-23](#).

Impacts, measures and effectiveness

The positive impacts of our business activities in the material topic of Employees and Society include the training positions and further training we offer, the precautionary measures we take to uphold occupational health and safety and our promotion of equal opportunities, particular for women at the company. In our business activities, there is the risk that work-related accidents may occur. We report on this potential negative impact under [GRI 403](#). The overwhelming share of our business activities in the year under report took place in Germany and the UK, i.e. in European countries where respect for human rights is a core aspect of entrepreneurial activity. We have received no indications that any negative impacts arose in respect of human rights in connection with our material topic of Employees and Society. Such impacts may nevertheless potentially arise in the supply chain; we comment on these under [GRI 2-16](#).

Employees

We offer attractive and secure jobs to our employees, who number around 6,400, in an environment in which everyone can make their contribution to promoting decarbonisation and upholding supply reliability. We are aware of the great responsibility we have towards our employees and account for this in our strategic decisions.

Our personnel strategy focuses on the following areas:

- **Leadership:** We are continually and systematically taking measures to improve the quality of management at the company and adapting this in line with changing market and employee requirements.
- **Securing specialist staff:** We aim to remain an attractive employer. That is why we offer performance-based remuneration packages and are committed to helping our employees combine their work and private commitments. In our recruitment, we are focusing on expanding diversity at the company and here in particular on equal opportunities.
- **Work organisation:** We are making continuing efforts to further develop our company and corporate culture and aim to retain and enhance our employees' skills. To this end, we invest in training our workforce and promoting its willingness to embrace change. After all, we need highly trained, flexible and innovative specialists and managers who are keen to make their contribution to the new energy system. We are actively continuing to shape our company. Mobile work, for example, has become a fixed aspect of our work organisation.
- **Talent management:** We deliberately identify, support and cultivate upcoming talent – within the company from among our trainees and new recruits through to employees who have the potential to take on management positions, and externally with great personnel recruitment efforts on the market.
- **Diversity management:** Specialist and talented staff of all genders, age groups, backgrounds and situations should feel that they have found the right job at MVV. With “Energy for Diversity”, our diversity management programme, we are working consistently and with specific measures to create a suitable environment, structures and support services for all our employees [mvv.de/vielfalt](https://www.mvv.de/vielfalt).

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

MVV has a Group Works Council, as well as works council bodies and committees on the relevant levels. The company's management works together with these bodies on a basis of trust, meaning that both the company's concerns and those of its workforce are accounted for in all significant decisions. The Supervisory Board of MVV Energie AG [mvv.de/supervisory-board](https://www.mvv.de/supervisory-board) includes equal numbers of shareholder and employee representatives; half of the Supervisory Board members are elected by the Group's employees. 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 enhance safety at work. These programmes are taken up by the work safety officers on a decentralised basis and then backed up and supplemented with suitable measures. The current status is reported on Group level and discussed by the Executive Board on a quarterly basis. Further details about this management approach can be found in the reporting on [GRI 403](#). Over and above these topics, our corporate culture, with our values of Community, Responsibility, Appreciation and Courage, is a factor of great importance to us [mvv.de/gelebte-energie](https://www.mvv.de/gelebte-energie).

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 make the energy system more sustainable and efficient and, to this end, maintain an open exchange of ideas with our stakeholders. Our dealings with local communities therefore form a further important aspect of our responsibility towards society. For many of the projects involved in expanding renewable energies and the necessary infrastructure, acceptance by people on location is absolutely crucial. We are therefore committed to planning and implementing projects together with local populations and their representatives on location, promoting acceptance for these projects on the basis of dialogue and reaching decisions that also convince third parties. We 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 adopt a project-specific approach which is handled on a decentralised basis by our subsidiaries and shareholdings.

Material Topics: Disclosures Relating to the Topic Standards

Economic Performance

GRI 201 Economic Performance

GRI 201-1 Direct economic value generated and distributed

Creating value

In our [Input/Output Balance Sheet](#), we present all significant flows of materials, energy, goods and money associated with our business activities. Our economic performance is reflected in the adjusted EBIT and ROCE key figures. 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 that are measured 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 therefore 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 that 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 such as those adverse environmental impacts that are not recorded in emissions trading. As a company, we aim to minimise any such impacts of our activities for society, people and the natural world. To bridge the gaps in the associated contents and methodologies, cross-industry approaches have been in development for several years now. One example is the approach developed by the Value Balancing Alliance, which we regularly analyse.

Generation of value added

Euro million	FY 2023	FY 2022	+/- change	% change
Company performance ¹	8,255	4,814	+ 3,441	+ 71
Input costs ²	- 6,354	- 3,458	+ 2,896	+ 84
Depreciation	- 207	- 211	- 4	- 2
Value added	1,694	1,145	+ 549	+ 48

¹ Mainly sales

² Cost of materials/energy and fuel procurement, other expenses, other taxes

Our adjusted sales grew significantly in the 2023 financial year, with this growth being driven above all by the year-on-year increase in electricity and gas wholesale prices. Value added rose year-on-year by Euro 549 million, corresponding to an increase of 48 %. As a share of sales, by contrast, value added decreased to 20.5 % (previous year: 23.8 %), a development due to the significant growth in sales.

Utilisation of value added

Euro million		FY 2023	FY 2022	+/- change	% change
Recipient	Utilisation				
Employees	Wages, salaries and social security payments	541	511	+ 30	+ 6
State authorities	Taxes on income, other taxes, concession duties and levies	459	296	+ 163	+ 55
Shareholders	Dividend	96	69	+ 27	+ 39
Lenders	Interest expenses	51	50	+ 1	+ 2
Other shareholders	Share of group earnings attributable to non-controlling interests	79	72	+ 7	+ 10
MVV	Retention of earnings	468	147	+ 321	>+ 100

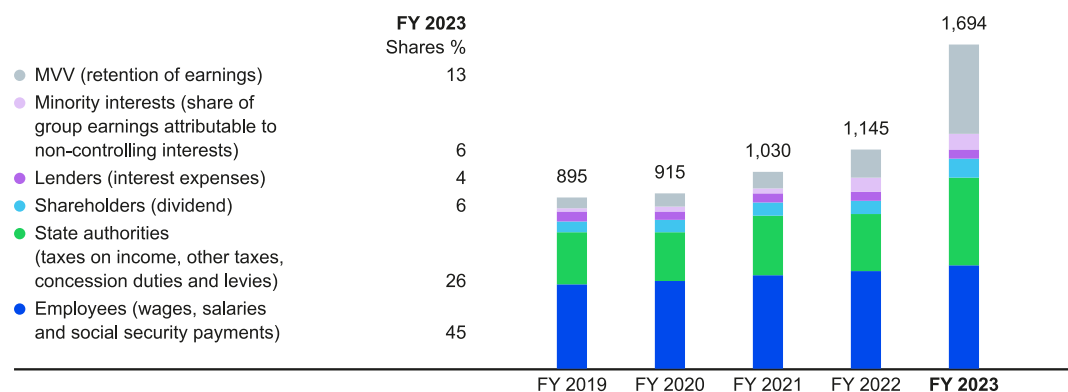
Our shareholders benefit directly from the distribution of the value created by MVV. Our dividend policy is based on continuity and the development in our operating earnings. In the 2023 financial year, our adjusted EBIT grew year-on-year to Euro 880 million (previous year: Euro 353 million), a development principally attributable to disposal gains from the sale of shareholdings and to an exceptional performance with a high volume of additional revenues in our energy trading business. We are therefore proposing to the Annual General Meeting in March 2024 that the regular dividend should be raised by Euro 0.10 per share to Euro 1.15 per share. Moreover, to mark the 150th anniversary of MVV and its predecessor companies and in view of the exceptional earnings performance, we are proposing the distribution of a one-off special dividend of Euro 0.30 per share.

The largest share of our value added is still attributable to our employees, with the year-on-year increase in this share chiefly being attributable to workforce growth at several domestic group companies and to collectively agreed pay rises. The high earnings for the year under report also enable us to retain an above-average volume of funds which we intend to draw on in the years ahead to finance the investments needed for us to reach our target of becoming #climatepositive.

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 not be proportionate to the benefit.

Allocation of value added

Euro million



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 344 million in the year under report.

Energy and Environment

GRI 301 Materials

GRI 301-1 Materials used by weight or volume

Resource efficiency

At our conventional power plants, we generate heat and electricity by using fossil fuels, and here especially natural gas and hard coal, as well as regenerative fuels. These include both solid biomass and so-called refuse-derived fuels which are obtained from waste and have a biogenic share of around a half.

We attach great importance to efficiency. We minimise the energy losses arising when the fuels are converted into end energy. On key indicator of very high resource efficiency is the highest possible fuel efficiency rates. This key figure shows the efficiency of generation by presenting the volume of end energy generated (electricity and heat) as a ratio of the energy input (primary energy). If the fuel efficiency rate increases, the generation portfolio has a higher yield. By 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 66 %. Our energy yield is thus ahead of the German average for generation activities. The Working Group on Energy Balances (AG Energiebilanzen) published an average fuel efficiency rate of 51.9 % for electricity generation at German power plants in 2021.

We operate our major generation plants almost exclusively with highly efficient combined heat and power (CHP) generation. After all, the fuel efficiency rate for CHP is significantly higher than when electricity and heat are generated separately. The year under report witnessed a reduction in the share of electricity generation volumes attributable to combined heat and power generation, a development due on the one hand to a lower volume of electricity generated from our conventional CHP generation and on the other to the disposal of the MVV Energie CZ Group.

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. In the year under report, the geopolitical situation also had a significant influence. By-products, primarily ash and slag, arise in our energy from waste and CHP plants. 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 technically 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-reusable residual volumes have to be disposed of in accordance 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 and waste used at power plants and energy from waste plants
Fully consolidated companies**

	FY 2023	FY 2022	+/- change	% change
Biomass (1,000 tonnes)	501	522	- 21	- 4
Waste/RDF (1,000 tonnes)	2,015	2,018	- 3	-
Sewage sludge (1,000 tonnes)	72	-	-	-
Natural gas (kWh million)	1,982	2,939	- 957	- 33
Hard coal (1,000 tonnes)	76	84	- 8	- 10
Other fossil fuels (kWh million)	57	354	- 297	- 84

**Fuels and waste used at power plants and energy from waste plants
Fully consolidated companies and companies recognised at equity**

	FY 2023	FY 2022	+/- change	% change
Biomass (1,000 tonnes)	539	559	- 20	- 4
Waste/RDF (1,000 tonnes)	2,015	2,018	- 3	-
Sewage sludge (1,000 tonnes)	72	-	-	-
Natural gas (kWh million)	1,982	2,954	- 972	- 33
Hard coal (1,000 tonnes)	568	806	- 238	- 30
Other fossil fuels (kWh million)	58	354	- 296	- 84

**Average fuel efficiency rate
Fully consolidated companies**

%	FY 2023	FY 2022	+/- change	% change
Average fuel efficiency rate	66	68	- 2	- 3

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

%	FY 2023	FY 2022	+/- change	% change
Average fuel efficiency rate ¹	66	65	+ 1	+ 2

¹ Previous year's figure adjusted

Coal use

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

With the revision to the German Federal Climate Protection Act (KSG) that came into effect at the end of August 2021, lawmakers have on federal level 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 dated 24 March 2021). The centrepiece 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. This can only be achieved if coal-based generation is largely discontinued.

In its Coalition Agreement from 2021, the Federal Government 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 heat 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. In this context, the target that 50 % of district heat generation in Germany should be renewable by 2030 already was defined in 2023. 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.

We report on how we are bypassing the interim stage of natural gas-based generation and directly converting our heat generation to green heat sources under [GRI 302-5](#).

Coal-based generation at MVV

MVV intends to fully discontinue coal-based generation by the latest at the end of this decade. With its capacity of 60 MW_e, the power plant in Offenbach is now the only hard-coal-fired power plant in our conventional generation portfolio. We will convert generation in Offenbach to renewable energies by 2030.

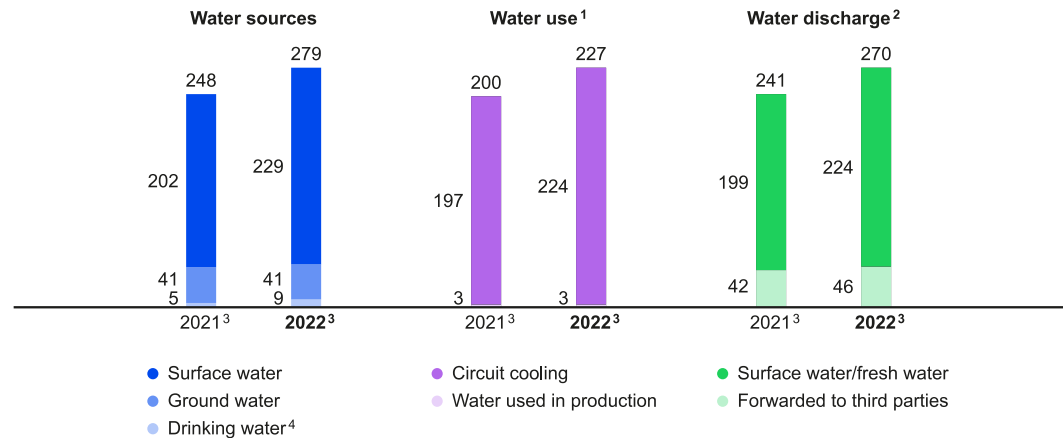
We are a minority shareholder in Grosskraftwerk Mannheim AG (GKM), with a 28 % stake, and do not operate this plant ourselves. GKM currently still operates three hard-coal-fired CHP blocks in the market. Due to supply reliability considerations, market operations were temporarily relaunched at Block 7 at the beginning of 2023. This block has now fully returned to the grid reserve at TransnetBW. Block 8 was registered for decommissioning as of 31 March 2024 and will become part of the grid reserve as of this date. Block 9 at GKM is one of the newest and most efficient hard-coal-fired plants in Germany. As presented above, in its Coalition Agreement signed in 2021 the Federal Government agreed that Germany would “ideally” exit from coal-based energy generation by 2030. In general, we are basing our plans and measures on coal-based electricity generation being discontinued by the end of this decade. The setting of specific decommissioning dates for individual power plant blocks is subject to the proviso of supply reliability, as well as to the legal framework and agreements reached with GKM and its shareholders.

Water use

We report on our water use in the Combined Non-Financial Declaration in our Annual Report, [mvv.de/AR2023](https://www.mvv.de/AR2023), on Page 74.

Water volumes

Fully consolidated companies and companies recognised at equity
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 Includes drinking water produced internally and procured from third parties.

Sustainable circular economy

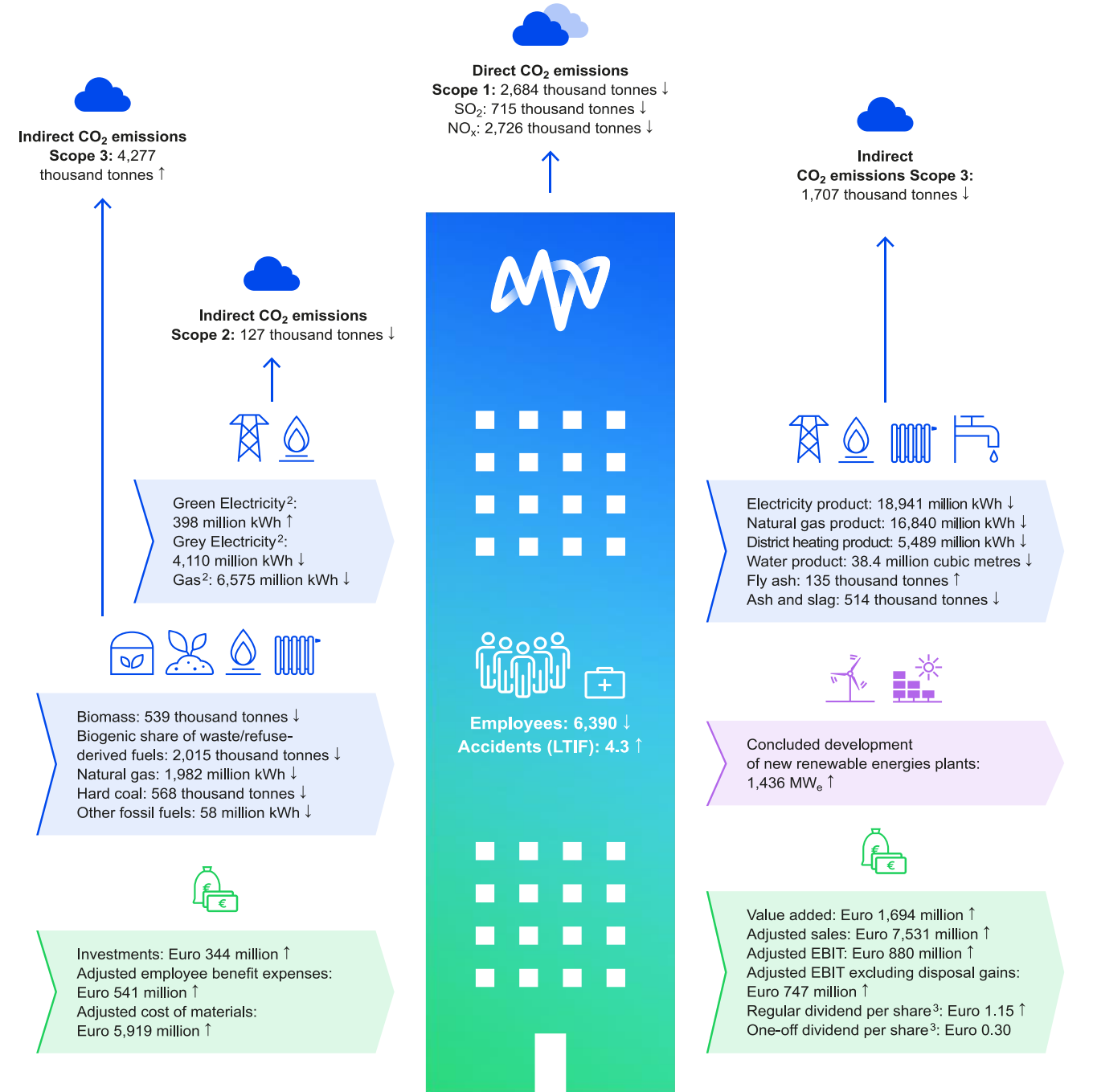
We provide information about the sustainable circular economy in the Combined Non-Financial Declaration in our Annual Report, [mvv.de/AR2023](https://www.mvv.de/AR2023), from Page 78.

Environmental impacts in our input/output balance sheet

We have compiled an [Input/Output Balance Sheet](#) each year for several years now. This visualisation compares our most important environmental impacts with our value added.

MVV's input/output balance sheet¹

Fully consolidated and at-equity companies



1 With change compared to previous year (↓ decrease, ↑ increase)
 2 Excluding sales volumes from trading transactions
 3 Subject to approval by Annual General Meeting on 8 March 2024

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 the energy efficiency at our plants and for 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 heat 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

A major share of our environmental protection activities on local level comprises investments in modernising our plants. These are intended to save resources by achieving greater efficiency. The energy management system (ISO 50001) at MVV Umwelt means that, alongside major programmes such as decarbonising district heat in Mannheim, numerous smaller efficiency measures are planned, audited and implemented on an ongoing basis. The same applies to the management systems (EMAS) in place at other subsidiaries.

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 governing heat insulation and building facility technology. We calculate the PEF for our major district heat supply systems in Mannheim, Offenbach and Kiel. The lower the PEF is, the more environmentally friendly and efficient the fuel use is. In the medium term, however, the PEF will become less meaningful as the share of green heat in the district heat mix rises.

The German Building Energy Act (GEG) was amended in 2023 in order to implement the obligation set out in the Coalition Agreement to use 65 % renewable energies in new heat systems. According to a key issues paper that is available, connection to our district heat systems will be one option for customers to meet this obligation. The PEF for decentralised natural gas or oil-fired heat systems currently stands at 1.1, while timber and geothermal energy have PEFs of 0.2 and 0.0 respectively.

Primary energy factor for district heat grids

	FY 2023	FY 2022
Mannheim district heat supply system	0.40	0.42
Offenbach district heat supply system	0.25	0.25
SWKiel district heat 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 under [GRI 301-1](#).

Energy efficiency projects

District heat from highly efficient combined heat and power generation or from green energy sources represents a key lever for reducing primary energy use, as well as for implementing the heat transition. To decarbonise the district heat supply, we are compiling various concepts which account for all significant forward-looking technologies. At our Mannheim location, we can already generate up to 30 % of annual district heat volumes for Mannheim and the region from green heat sources. In the year under report, we pressed ahead above all with expanding green heat in Mannheim. That is because we have set ourselves the target of converting the district heat supply for Mannheim and the region to 100 % green energy sources by 2030 at the latest. We launched operations with our first river heat pump at the beginning of the current 2023/24 heating period. With a heat generation capacity of 20 MW_t, this draws on environmental heat in the Rhine to supply heat to an arithmetic total of around 3,500 households. In Dresden, we have implemented our first #climatepositive plant. Our bio-waste anaerobic digestion plant there is now permanently removing CO₂ from the atmosphere. We use part of the CO₂ captured during biomethane production for processes within the plant. The excess volume of liquefied CO₂ is permanently stored in demolition concrete. Our next steps include:

- In Mannheim, we are completing construction work on plants to provide backup and peak load cover for our district heat supply. We will be able to deploy these from the 2024 financial year.
- At our location on Friesenheimer Insel, our phosphorous recycling plant, which will enable the phosphorous contained in sewage sludge to be recovered for use in fertiliser production, is in the final stages of construction.
- We are extending our biomass power plant (waste timber) to include a heat extraction facility. With a future heat extraction capacity of 45 MW_t, this CHP plant will make a major contribution to the district heat supply in regular operations from 2024 onwards.
- We are gradually tapping the potential for industrial waste heat at the plants in our energy and recycling park.
- We will access regional potential for deep geothermal energy. With GeoHardt, a joint venture with EnBW, we are investigating up to three preferred areas for geothermal energy plants to the south of Mannheim. The relevant findings and, if applicable, investment decisions are expected by 2025. Moreover, we have signed a cooperation agreement with Vulcan Energy for the medium-term supply of geothermal heat.

We are currently investigating further options in detail. Examples include solutions such as further river heat pumps, biomethane CHP plants and the use of further industrial waste heat potential. We are also working on green heat concepts at MVV's other locations with heat activities.

At our Offenbach location, we already use a plant at which we incinerate 80,000 tonnes of sewage sludge a year. As the sewage sludge is almost exclusively of biogenic origin, the waste heat gained from incineration can be used to displace fossil-based generation at the CHP plant in Offenbach and thus reduce primary energy use.

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, 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. This way, 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. We thus provide our customers with comprehensive solutions and services for all aspects of energy efficiency. We perform all of the above economic activities in alignment with the EU Taxonomy Regulation, as a result of which our customers can state the associated investments (CapEx) and operating expenses (OpEx) in their reporting and, where applicable, benefit from more favourable borrowing conditions.

Together with our customer Olam Food Ingredients (ofi), we took a major step towards greater sustainability in the year under report by launching operations with a unique boiler system on its behalf. With this new steam generation plant, ofi has almost fully converted the supply of process steam at its Mannheim location from gas to the biomass incurred from processing cocoa. The resultant husks are thus used directly on location to generate steam. At the same time, this new and more efficient plant reduces CO₂ emissions by 8,000 tonnes a year. As well as planning and implementing the plant, we are also taking over the financing and operations management for the plant over a 16-year period.

Our Data Center Group subsidiary has built a new green data centre for a customer in Heidelberg. This combines the use of sustainable electricity, innovative cooling energy generation and heat recovery and is thus helping to make digitalisation more climate friendly. The data centre has an IT load of 1,150 kW and a connected load of around 2 MW. In terms of the effectiveness of its energy consumption, the plant has a PUE value of 1.25. This key figure states the total energy consumed by a data centre as a proportion of the energy input for the computing infrastructure. From 2026, newly built data centres may only have a maximum PUE of 1.3. We have already surpassed this requirement.

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

Grid losses

Grid losses occur 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 heat energy grids are due to technical factors and mainly relate to the transport route between the source of the heat 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 temperatures and weather conditions.

Grid losses at MVV

kWh million	2022 ¹	2021 ¹	+/- change	% change
Electricity	126	138	- 12	- 9
Heat	435	486	- 51	- 10

¹ Calendar year

Grid losses can be reduced with long-term infrastructure measures, such as improved pipe insulation, temperature reduction and other technical methods. Due to technical reasons, however, grid losses are unfortunately unavoidable. Our grid losses in both our electricity and our heat activities decreased compared with the previous year.

MVV Topic Renewable Energies

Renewable energies

Active contribution to meeting climate protection targets

At least 80 % of electricity generation in Germany should be based on renewable energies by 2030. It should be based almost entirely on renewable energies by 2035 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.

To implement the electricity transition, we have been expanding our proprietary renewables-based generation capacities for many years now. Our focus is on onshore wind power and photovoltaics. In this area, we set a sustainability target in 2016 already that is to be reached by the end of the 2026 financial year: We aim to double our proprietary electricity generation from renewable energies from more than 400 MW to more than 800 MW. Despite the retirements from our portfolio in connection with disposals of shareholdings, we made further progress towards reaching this target in the year under report. Including the shareholdings we recognise at equity, our electricity generation capacity from renewable energies amounted to 633 MW at the end of the 2023 financial year, 19 MW higher than in the previous year. We will further accelerate our existing pace of adding new capacities and increase our installed renewable energies generation capacities to 2,000 MW by 2030.

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

We connected renewable energies plants with capacities of 1,436 MW to the grid in the 2023 financial year. Between the 2017 financial year and the end of the year under report, we have therefore added new capacities totalling 4,665 MW. We expect to see increasingly dynamic developments in terms of the installation of renewable energies in the years ahead.

We are actively promoting climate-friendly hydrogen technologies

In July 2023, the Federal Government updated its National Hydrogen Strategy. In the coming years, our focus will be on building expertise by implementing pilot projects. We will secure the hydrogen-readiness of our grids, i.e. their suitability for future use with hydrogen, in the early 2030s and subsequently safeguard our generation and backup facilities for district heat, particularly in Kiel.

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

International growth in project development business

With our Juwi subsidiary, we offer end-to-end project development and services both in Germany and abroad for planning, building and managing operations at onshore wind turbines and ground-mounted photovoltaics plants, as well as for hybrid projects, i.e. systems combined with battery storage facilities. In future, we will increasingly retain the wind and photovoltaics projects developed by Juwi within the Group and thus expand our own generation portfolio. Our Avantag subsidiary supplements our project development business with rooftop photovoltaics in the B2B business, while our Beegy subsidiary offers decentralised renewable energies solutions in the retail and commercial customer business.

Completed development of new renewable energies plants

MW _e	FY 2023	FY 2022	+/- change	% change
Wind power	218	58	+ 160	>+ 100
Photovoltaics	1,218	418	+ 800	>+ 100
Total	1,436	476	+ 960	>+ 100

The project development business is inherently volatile, both in Germany and in our international markets. The volume of new renewable energies plants at which operations are launched each year depends, among other factors, on social and political acceptance, the length of approval processes, regulations governing subsidies for renewable energies and specific implementation dates for individual projects. Volumes may therefore vary widely from year to year. Moreover, changes in underlying conditions, such as in national subsidy mechanisms for renewable energies, may have a notable impact on the implementation of projects.

Operations management for renewable energies plants

MW _e	FY 2023	FY 2022	+/- change	% change
Wind power	1,159	1,261	- 102	- 8
Photovoltaics	2,549	2,518	+ 31	+ 1
Total	3,708	3,779	- 71	- 2

Transformation in the generation portfolio

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

Supply reliability, always a core topic, has become a key focus of attention again due to the effects of current geopolitical tensions and the war underway in Ukraine since 2022. Irrespective of these developments, we have always been aware of the importance of this aspect in our area of responsibility.

The reliability, smartness and performance capacity of our grids also have a key role to play in this respect. That is why we are continually investing in digitalising, maintaining, expanding and optimising our grids and plants, increasingly also against the backdrop of an acceleration in the electricity and heat transitions.

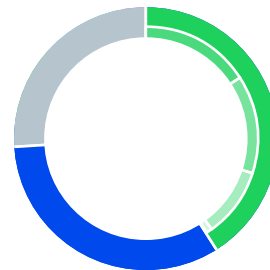
MVV's proprietary electricity generation

At the end of the 2023 financial year, the electricity generated at renewable energies plants (including biomass/biogas and the biogenic share of waste/refuse-derived fuels) accounted for 41 % of our total electricity generation (previous year: 32 %).

Electricity generation

Shares (%)

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



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

2 Including RDF plants

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

**Electricity generation volumes
Fully consolidated companies**

kWh million	FY 2023	FY 2022	+/- change	% change
Biomass and biogas plants	447	456	- 9	- 2
Biogenic share of EfW ¹	322	306	+ 16	+ 5
Wind power	519	447	+ 72	+ 16
Hydroelectricity	3	5	- 2	- 40
Photovoltaics	42	11	+ 31	>+ 100
	1,333	1,225	+ 108	+ 9
Electricity from CHP	853	1,059	- 206	- 19
Other electricity generation	210	277	- 67	- 24
Total	2,396	2,561	- 165	- 6

¹ Including RDF plants and sewage sludge treatment

² Previous year's figure adjusted

**Electricity generation volumes
Fully consolidated companies and companies recognised at equity**

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

¹ Including RDF plants and sewage sludge treatment

**Electricity generation capacity
Fully consolidated companies**

MW _e	FY 2023	FY 2022	+/- change	% change
Biomass and biogas plants ¹	108	109	- 1	- 1
EfW ²	172	176	- 4	- 2
Wind power	271	275	- 4	- 1
Photovoltaics	59	24	+ 35	>+ 100
Hydroelectricity	2	2	0	0
Renewables and EfW	612	586	+ 26	+ 4
Conventional CHP and other activities	282	330	- 48	- 15
Total	894	916	- 22	- 2

1 Including biomethane plants

2 Including RDF plants and sewage sludge treatment

**Electricity generation capacity
Fully consolidated companies and companies recognised at equity**

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

1 Including biomethane plants

2 Including RDF plants and sewage sludge treatment

MVV's proprietary heat generation

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

Heat generation volumes Fully consolidated companies

kWh million	FY 2023	FY 2022	+/- change	% change
Biomass and biogas plants	107	146	- 39	- 27
EfW ¹	2,358	2,515	- 157	- 6
Green heat generation	2,465	2,661	- 196	- 7
Other heat generation ²	1,381	2,214	- 833	- 38
Total	3,846	4,875	- 1,029	- 21

1 Including RDF plants

2 Previous year's figure adjusted

Heat generation volumes Fully consolidated companies and companies recognised at equity

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

1 Including RDF plants

2 Previous year's figure adjusted

Heat generation capacity Fully consolidated companies

MW _t	FY 2023	FY 2022	+/- change	% change
Biomass and biogas plants	88	99	- 11	- 11
EfW ¹	724	762	- 38	- 5
Green heat capacity	812	861	- 49	- 6
Conventional CHP and other activities	1,075	1,596	- 521	- 33
Total	1,887	2,457	- 570	- 23

1 Including RDF plants and sewage sludge treatment

Heat generation capacity

Fully consolidated companies and companies recognised at equity

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

¹ Including RDF plants and sewage sludge treatment

MVV's proprietary biomethane generation

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

Biomethane generation volumes

Fully consolidated companies

kWh million	FY 2023	FY 2022	+/- change	% change
Biomethane generation	246	273	- 27	- 10

Biomethane generation volumes

Fully consolidated companies and companies recognised at equity

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

The generation capacity at our biomethane plants did not change compared with the previous year and stood at 41 MW at the end of the 2023 financial year. Biomethane can be used both to generate electricity and heat and as a fuel for vehicles. In the medium term, we plan to further expand our biomethane generation capacities from waste digestion.

GRI 305 Emissions

GRI 305-1 Direct (Scope 1) GHG emissions, and
 GRI 305-2 Energy indirect (Scope 2) GHG emissions, and

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

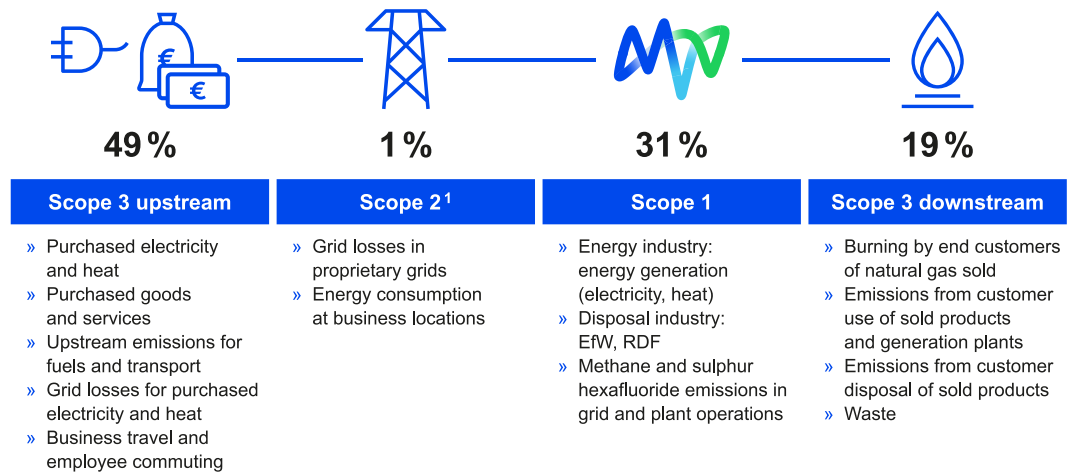
Our climate balance sheet for the year under report

MVV's climate balance sheet

We consistently include all sources of greenhouse gases in our climate balance sheet, i.e. including emissions in the upstream and downstream supply chains and at the companies we recognise at equity. We distinguish between direct and indirect CO₂ emissions. The generation of energy at our own 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, our Scope 1 emissions are influenced by weather-based demand for heat and by developments in wholesale electricity prices. These factors cannot be influenced by MVV but are reflected in capacity utilisation rates at our generation plants. On the other hand, the medium to long-term development in our direct emissions largely depends on the dates when our existing plants using fossil-based fuels are decommissioned and on new plants needed to secure the supply.

Structural composition of our climate balance sheet



¹ Location-based

Our Scope 1 emissions fell year-on-year by 26 % in the 2023 financial year. This reduction was predominantly due to lower generation volumes at our conventional CHP plants. Furthermore, this development also reflects the disposal of the MVV Energie CZ Group and the increasing volume of green heat and electricity generation. In this respect, Scope 1 CO₂ emissions fell more sharply in the year under report than would have been expected without the one-off effects. Regardless of this, we are aware that the emissions incurred have reduced the remaining budget required to comply with a 1.5-degree trajectory and have introduced operative and strategic measures to ensure budget compliance. Examples of these include accelerating the expansion of renewable energies in our own portfolio. In addition, the situation on the German gas and electricity markets may currently still be tense, but once this has eased we will align our conventional generation portfolio even more closely to avoiding CO₂ emissions and gradually decommission our remaining fossil-based generation.

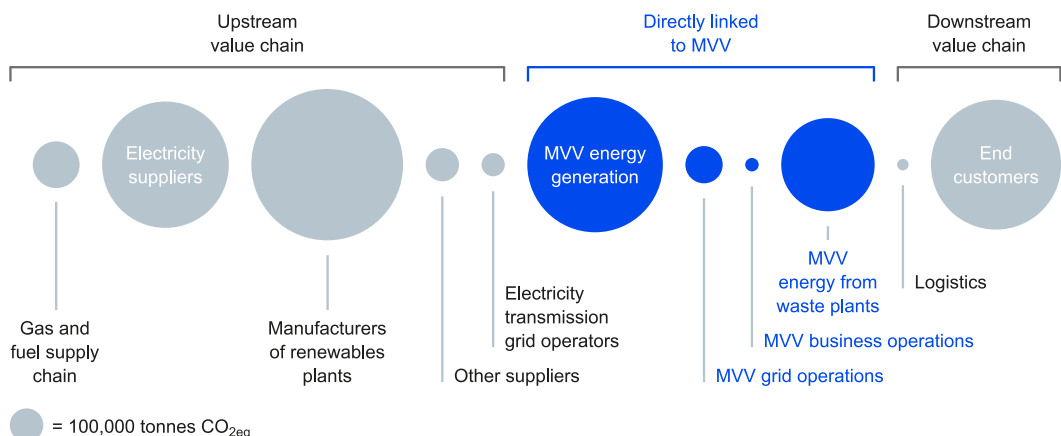
Indirect CO₂ emissions, Scope 2, mainly result from the energy we use for our business operations outside energy generation. These emissions are only of subordinate significance at MVV and were 12 % lower in the year under report than in the previous year.

Indirect 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 the procurement of electricity not generated by MVV. Emission activities in downstream stages of the value chain chiefly involve the use of natural gas supplied by MVV to its customers. The annual development in Scope 3 emissions is chiefly determined by sales volumes for electricity, gas and heat, as well as by volumes in the renewable energies project development business. This key figure also includes emissions from non-commodities procurement activities.

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

Direct and indirect CO₂ sources at MVV

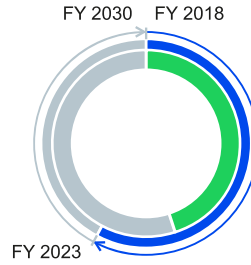
Fully consolidated companies and companies recognised at equity



Reduction in energy industry CO₂ (Scope 1)

Shares (%)

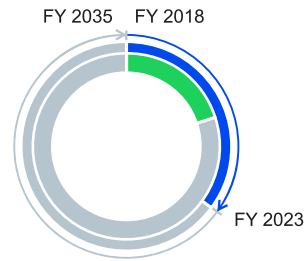
	FY 2023
● Time passed	58
● Target share reached	45



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

Shares (%)

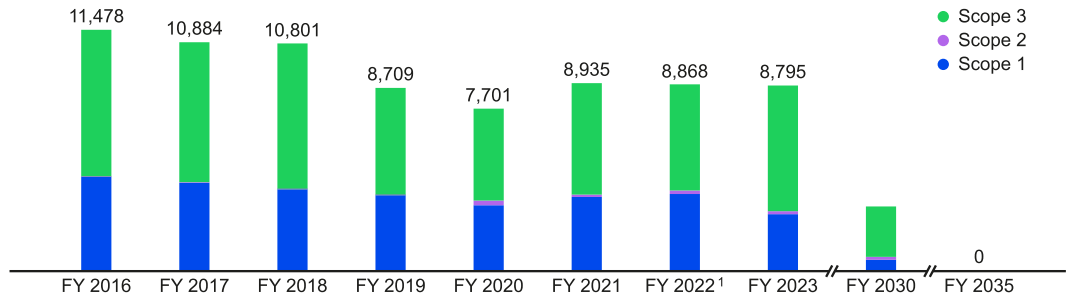
	FY 2023
● Time passed	35
● Target share reached	20



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

Development in total emissions

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



¹ Previous year's figure adjusted

We include CO₂, CH₄, N₂O, FKW, PFKW, SF₆, and NF₃ in the calculation of CO₂ emissions (CO₂ equivalents).

Climate balance sheet
Fully consolidated companies

1,000 tonnes CO _{2eq}	FY 2023	FY 2022	+/- change	% change
Direct CO ₂ emissions (Scope 1) ^{1,2}	1,538	1,943	- 405	- 21
Energy industry activities ²	706	997	- 291	- 29
of which CH ₄ emissions ³	39	58	- 19	- 33
of which SF ₆ emissions ⁴	2	1	+ 1	+ 100
Disposal activities (EfW) ⁵	832	946	- 114	- 12
Indirect CO ₂ emissions (Scope 2) ⁶	127	144	- 17	- 12
of which energy procured for proprietary plants	6	7	- 1	- 14
of which energy used for grid operations	121	137	- 16	- 12
Indirect CO ₂ emissions (Scope 3)	6,366	5,578	+ 788	+ 14
of which purchased goods and services (GHG Category 1) ⁷	2,429	872	+ 1,557	>+ 100
of which fuel and energy-related activities (GHG Category 3)	2,215	2,868	- 653	- 23
of which waste generated in operations (GHG Category 5)	2	1	+ 1	+ 100
of which business travel (GHG Category 6)	-	1	- 1	- 100
of which employee commuting (GHG Category 7)	6	6	0	0
of which use of sold products (GHG Category 11)	1,709	1,827	- 118	- 6
of which end-of-life treatment of sold products (GHG Category 12)	3	1	+ 2	>+ 100
of which downstream leased assets (GHG Category 13)	2	2	0	0
For information: indirect emissions from gas grid use by third-party sales operations ⁸	545	620	- 75	- 12
For information: climate-neutral biogenic emissions	1,593	1,647	- 54	- 3
For information: biogenic emissions captured at MVV plants (BECCUS)	< 1	0	+< 1	+ 100

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

2 Previous year's figure adjusted

3 Emissions from gas motor combustion

4 Inspection work performed on an older plant enabled leakages to be remedied, significantly reducing SF₆ emissions.

5 Including RDF plants

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

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

8 Due to the SBTi certification, MVV is required to publish regular reports. This involves natural gas volumes channelled by other energy companies through our gas grids.

Climate balance sheet

Fully consolidated companies and companies recognised at equity

1,000 tonnes CO _{2eq}	FY 2023	FY 2022	+/- change	% change
Direct CO ₂ emissions (Scope 1) ^{1,2}	2,684	3,649	- 965	- 26
Energy industry activities ²	1,852	2,703	- 851	- 31
of which CH ₄ emissions ^{2,3}	42	58	- 16	- 28
of which SF ₆ emissions ⁴	2	1	+ 1	+ 100
Disposal activities (EfW) ⁵	832	946	- 114	- 12
Indirect CO ₂ emissions (Scope 2) ⁶	127	147	- 20	- 14
of which energy procured for proprietary plants	6	7	- 1	- 14
of which energy used for grid operations	121	140	- 19	- 14
Indirect CO ₂ emissions (Scope 3)	5,984	5,072	+ 912	+ 18
of which purchased goods and services (GHG Category 1) ⁷	2,429	872	+ 1,557	>+ 100
of which fuel and energy-related activities (GHG Category 3)	1,839	2,302	- 463	- 20
of which waste generated in operations (GHG Category 5)	3	1	+ 2	>+ 100
of which business travel (GHG Category 6)	0	1	- 1	- 100
of which employee commuting (GHG Category 7)	6	6	0	0
of which use of sold products (GHG Category 11)	1,702	1,887	- 185	- 10
of which end-of-life treatment of sold products (GHG Category 12)	3	1	+ 2	>+ 100
of which downstream leased assets (GHG Category 13)	2	2	0	0
For information: indirect emissions from gas grid use by third-party sales operations ⁸	545	620	- 75	- 12
For information: climate-neutral biogenic emissions	1,653	1,706	- 53	- 3
For information: biogenic emissions captured at MVV plants (BECCUS)	< 1	0	+< 1	+ 100

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

2 Previous year's figure adjusted

3 Emissions from gas motor combustion

4 Inspection work performed on an older plant enabled leakages to be remedied, significantly reducing SF₆ emissions.

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

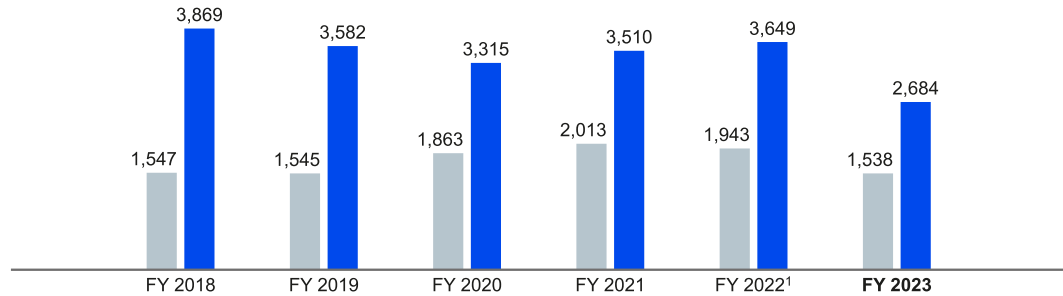
7 GHG Protocol methodology used: spend-based and average data method

8 Due to the SBTi certification, MVV is required to publish regular reports. This involves natural gas volumes channelled by other energy companies through our gas grids.

With regard to our climate balance sheet for the 2024 financial year, since the conclusion of the year under report we have enhanced the underlying methodologies and will factor these improvements into the tables and charts in our future reporting. On the one hand, we will calculate our indirect emissions (Scope 3) in greater detail and subdivide our electricity turnover into green and grey electricity. This will slightly reduce the emissions reported in GHG Category 3. On the other hand, in recording our indirect emissions (Scope 3) for the year under report we also for the first time collected information about GHG Category 15 (Investments in company shareholdings): These emissions amounted to 108 thousand tonnes of CO₂ in both climate balance sheets.

Direct CO₂ emissions (Scope 1)

1,000 tonnes CO₂eq

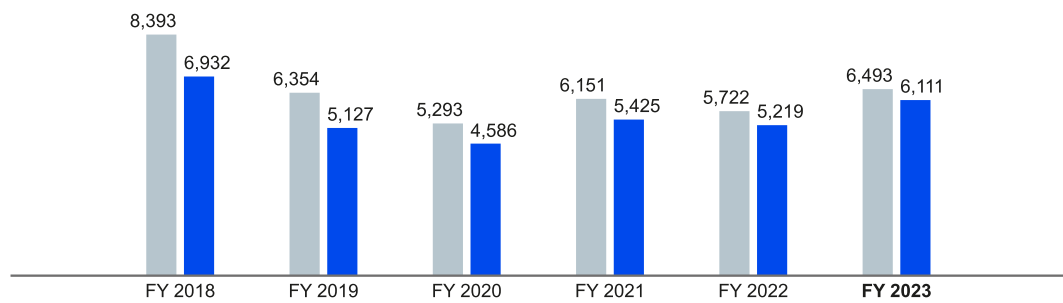


● Fully consolidated companies ● Fully consolidated companies and companies recognised at equity

¹ Previous year's figure adjusted

Indirect CO₂ emissions (Scope 2+3)

1,000 tonnes CO₂eq



● Fully consolidated companies ● Fully consolidated companies and companies recognised at equity

GRI 305-4 GHG emissions intensity

Lower specific CO₂ emissions

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 heat grids.

Specific CO₂ emissions for our generation portfolio decreased compared with the previous year, with this being due to the lower volume of conventional electricity generation.

Specific CO₂ emissions in the groupwide generation portfolio

g CO ₂ /kWh	FY 2023	FY 2022
Electricity generation	365	460
Heat generation	115	122
Energy generation in the generation portfolio	212	249

Climate protection measures

Climate protection – reduction in our emissions

	Main medium-term measures to reduce CO ₂
Direct CO₂ emissions (Scope 1)	
Energy industry	Gradual decommissioning of fossil-based generation plants, reduction in volume of electricity generated using condensation method and expansion in renewable energies
Disposal activities (EfW)	Operation of a pilot carbon capture plant in Mannheim in 2023 and promotion of plans to scale up on an industrial scale
Indirect CO₂ emissions (Scope 2)	
of which energy procured for proprietary plants	Energy efficiency measures in buildings and procurement of green energies for our properties
of which energy used for grid operations	Technical measures to reduce grid losses
Indirect CO₂ emissions (Scope 3)	
of which purchased goods and services (GHG Category 1)	Promote green procurement, improve quality of CO ₂ data from upstream suppliers and develop suppliers in specific areas
of which fuel and energy-related activities (GHG Category 3)	Lower own use of fossil fuels and increased share of green energies procured
of which waste generated in operations (GHG Category 5)	Operative measures in environmental management systems
of which business travel (GHG Category 6)	Increased avoidance of air travel and greater use of rail travel
of which employee commuting (GHG Category 7)	Communications campaign for employees to use "Jobticket" and "Jobrad" (bicycles)
of which use of sold products (GHG Category 11)	Long-term fuel switch from sold natural gas to other fuels (e.g. district heat, hydrogen or heat pumps)
of which end-of-life treatment of sold products (GHG Category 12)	Improve basis of data and in the long term the PCF of upstream products
of which downstream leased assets (GHG Category 13)	No measures currently planned

GRI 305-7 Nitrogen oxides (NO_x), sulphur oxides (SO_x) and other significant air emissions

Local environmental protection and management systems

We operated our plants in accordance with the approvals granted and relevant legal requirements once again in the 2023 financial year. We continually monitored compliance with the relevant threshold values.

Operative environmental protection aspects form part of the environmental and energy management systems at our companies, which are responsible for these on a decentralised basis. Our energy and environmental management systems, such as those based on EMAS or ISO14001, were enhanced and recertified for the relevant companies with energy infrastructure. Where possible, we avoid other harmful environmental effects resulting from the generation and provision of our products and services or reduce these to a minimum. We pay attention, for example, to reducing other air pollutants. We treat the pollutants incurred very carefully. In the interests of a circular economy, unavoidable waste from energy generation and waste incineration, such as ash, metals and slag – so-called by-products – is turned wherever possible into products for other companies. Where this is not possible, the waste is disposed of correctly.

We are making a crucial contribution towards a sustainable circular economy with the ecological disposal of municipal sewage sludge. At our Offenbach location, we have since 2021 used a single-purpose sewage sludge incineration plant with an annual capacity of 80,000 tonnes of sewage sludge. At our Mannheim location, a sewage sludge treatment plant with capacity for up to 180,000 tonnes of sewage sludge a year is currently in the final stage of construction. Here, we will in future recover phosphorous on location from the sewage sludge for use in fertiliser production.

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

Other emissions and by-products Fully consolidated companies

Tonnes	2022 ¹	2021 ¹	+/- change	% change
NO _x	2,088	2,385	- 297	- 12
SO ₂	338	597	- 259	- 43
Dust	17	18	- 1	- 6
Fly ash	37,442	41,104	- 3,662	- 9
Ash and slag	511,757	525,824	- 14,067	- 3

¹ Calendar year

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

Tonnes	2022 ¹	2021 ¹	+/- change	% change
NO _x	2,726	2,970	- 244	- 8
SO ₂	715	971	- 256	- 26
Dust	27	28	- 1	- 4
Fly ash	134,538	94,039	+ 40,499	+ 43
Ash and slag	514,136	528,235	- 14,099	- 3

¹ Calendar year

System Transformation

MVV Topic: Changed Energy Demand

The energy transition requires electricity generated from renewable energies to be made available for the mobility and heat sectors and requires the entire system to be networked. As this process of interconnection advances, demand for energy will change and this will have different impacts in the various sectors. Alongside the provision of higher volumes of renewable energies, other factors that are becoming increasingly important are increased flexibility, decentralisation and energy storage. We systematically account for foreseeable shifts in demand in our strategic investment planning and continually adapt our business in line with actual market developments.

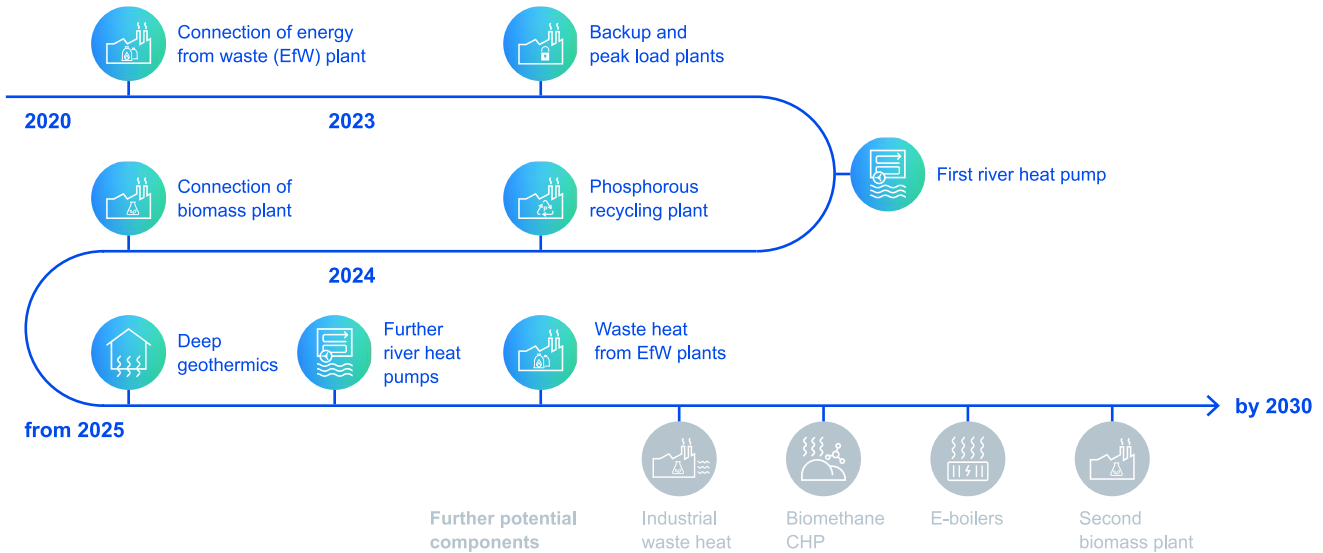
Heat transition

Triggered by the war in Ukraine, the availability of natural gas and its long-term role have moved to the foreground of public and political discourse. Reducing the use of natural gas in the medium term and phasing it out entirely in the longer term will only be possible by accelerating the heat transition, not least as most existing buildings in Germany are still heated using fossil-based natural gas and heating oil. A regulatory and legal framework is now emerging in the political debate surrounding the heat transition. Laws governing both municipal heat plans (German Heat Planning Act (WPG)) and requirements for individual buildings (German Building Energy Act (GEG)) took effect on 1 January 2024. Based on the current status, district heat will be firmed up as a central heat supply option in large built-up areas. This underlines our strategic position in the heat transition. At the same time, the decision largely not to restrict technologies means that our customers can select the heat option at MVV that best meets their needs. Instead of natural gas and heating oil, remaining demand will in future be covered by district heat, geothermal energy, waste heat, biomass, and in particular by heat pumps. This will significantly increase demand for heat-induced electricity.

District heat supply

As well as industrial district steam grids, in Mannheim, Kiel and Offenbach we also operate integrated district heat systems and provide our customers with a supply of environmentally-friendly, centrally generated heat. Moreover, in the year under report we also used several smaller heat, district steam and property-specific grids in Germany and the UK. We aim to further decarbonise the heat supply for which we are responsible, not least given the climate protection targets for the building sector. Our core task is to transform our CHP-operated district heat supply, which is already highly efficient, as rapidly as possible to enable us to provide our customers with a supply of 100 % green energy. At our Mannheim location, we connected the energy from waste plant to our district heat grid in 2020. Since October 2023, our first river heat pump in Mannheim, which has a heat generation capacity of 20 MW_t has been drawing on the environmental heat available in the Rhine on a climate-neutral basis. We are currently extending our biomass power plant at the Mannheim location to include a district heat extraction facility. With a heat extraction capacity of 45 MW_t, this will make an important contribution to the district heat supply starting in 2024. These measures are 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 by implementing numerous decentralised measures on the demand side.

Roadmap for green heat generation at Mannheim location



Heat storage and decentralised energy management

A further focus involves enhancing flexibility by working with heat storage facilities and power-to-heat. One major concept entails 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 heat storage facilities in operation at our major district heat grids. The launch of operations with the river heat pump in October 2023 has increased the flexibilities available. The close proximity of the heat storage facility to the river heat pump has enabled us to react even more effectively to the requirements of the energy market.

Heat storage capacity

Cubic meters	FY 2023	FY 2022
MVV Energie	45,000	45,000
Stadtwerke Kiel	42,000	42,000
Energieversorgung Offenbach	8,000	8,000

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. We have deployed these kinds of technical and business concepts on conversion sites in Mannheim for many years already. We also develop tailored smart city solutions for other local authorities [mvv.de/smart-cities](https://www.mvv.de/smart-cities).

Electricity transition

The processes of shifting the electricity mix towards renewable energies and reducing end energy consumption are backed up with ambitious political targets. Due in particular to the energy price increases seen in recent years, various customers of ours are increasingly interested in covering their electricity needs with their own generation systems. Moreover, due to growing volumes of domestic hydrogen generation, ever greater use of heat pumps and e-mobility, demand for electricity within the overall economy is also increasing.

Hydrogen to store electricity

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

In our Annual Report, we report on hydrogen technologies in the **Technology and Innovation** chapter [mvv.de/AR2023.pdf](https://www.mvv.de/AR2023.pdf), on **Page 31**.

Mobility transition

Making renewables-based electricity suitable for use by the transport sector as well requires smart needs-based charging solutions. In structuring the mobility transition and expanding the range of e-mobility solutions, we are heading in the same direction as the City of Mannheim. Drawing on federal grants from the charging infrastructure subsidy programme, since early summer 2019 we have installed more than 200 charging points for electric vehicles in Mannheim and region. We have upheld this expansion since the expiry of the subsidy programme in 2022 and launched operations with more than 70 new charging points in the year under report. Within the "TENK Network", all our charging points are connected with further charging infrastructure across other towns in the Rhine-Neckar metropolitan region. We will continue to expand our own charging network, even if the challenges arising due to delays in supplies and securing locations have slowed this expansion to date. The target for the 2024 calendar year is to launch operations with the 400th charging point in Mannheim and the Rhine-Neckar metropolitan region. This expansion has two key focuses: On the one hand, by increasing the density of the existing decentralised infrastructure we aim to ensure that the charging infrastructure is within walking distance in all districts of Mannheim. We will be focusing here for the first time on smaller direct current (DC) rapid charging points with charging capacities of up to 50 kW. On the other hand, we are pressing ahead with expanding central MVV e-charging parks with 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. Energieversorgung Offenbach installed and launched operations with 31 further charging points in the year under report, while Stadtwerke Kiel added 34 new charging points.

Grid stability

Secure grid stability even with growing loads

One way to assess the reliability of the energy supply involves measuring the frequency and duration of grid downtime. Our three large grid companies MVV Netze, Energienetze Offenbach and SWKiel Netz have set themselves the goal of avoiding grid downtime and remedying any downtime as quickly as possible. One key task for our grid companies is to work on further developing and operating our grid infrastructure. We are investing large sums in maintaining, modernising and expanding our grids. In the 2023 financial year, these investments totalled Euro 143 million. One key performance indicator which shows the security of the energy supply is the system average interruption duration index (SAIDI), which presents the average interruption to the supply in minutes per year and customer. The SAIDI figure only accounts for unplanned downtimes lasting longer than three minutes and not due to force majeure. 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.

Following a very good value in the previous year (10.3), the cumulative SAIDI figure for our grid regions rose to 11.9 in the 2022 calendar year. Overall, we were able to provide our customers with an electricity supply that was largely free of interruptions and once again ahead of the national average.

Electricity supply interruptions (SAIDI)

Minutes/year	2022 ¹	2021 ¹	+/- change	% change
Electricity at MVV	11,9	10,3	+ 1,6	+ 16
Electricity in Germany ²	12,2	12,7	- 0,5	- 4

1 Calendar year

2 Source: Federal Network Agency (BNetzA)

In Germany, companies which supply energy and water form part of the country's critical infrastructures (KRITIS). It is therefore especially important that sophisticated management structures should be in place to deal with any risks or crisis materialising. We perform the hazard analysis, risk analysis and risk assessment for the electricity infrastructure at MVV Netze GmbH in accordance with the VDE FNN S1001 (11/2012) standard. These risk assessments of potential supply shortfalls, examples of which include grid disruptions due to cable faults, system breakdowns and grid breakdowns resulting from cyber risks, are performed on a quarterly basis. Based on a prioritisation process, we implement the measures thereby required on a targeted basis. We reduce IT risks in the field of critical infrastructures with an extensive range of technical and organisational measures. These are regularly monitored in statutory inspections, as well as in audits that we commission on a voluntary basis.

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.

We are preparing our energy distribution grids for the changes in demand for electricity and heat resulting from the conversion in the energy system or from energy efficiency measures.

MVV Topic Changed Infrastructures and Smart Cities

The growth in populations in large built-up areas, i.e. the trend towards urbanisation, is creating 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 on the further development of our concepts. We are advancing decarbonisation and digitalisation in the municipal sector with sMArt City Mannheim GmbH, a joint venture with the City of Mannheim. One focus is to convert all the electricity generated for properties owned by the city to renewable energies, and here especially photovoltaics, by 2027. To this end, we are also pressing ahead with several ground-mounted PV projects and reached a further milestone with the launch of operations with a photovoltaics system on the roof of the extension to the art gallery Kunsthalle Mannheim. To date, we have implemented 21 projects of the City of Mannheim with a total capacity of almost 1,800 kWp. This results in CO₂ savings of around 950 tonnes a year.

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 and the time spent in queues [mvv.de/smart-cities](https://www.mvv.de/smart-cities).

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 disposal, for example, as well as to public lighting, municipal buildings and optimising traffic flows. The Internet of Things (IoT) enables local authorities to sustainably improve life in built-up areas and to structure processes more efficiently. With our MVV IoT platform, we provide a data platform which accesses various data sources and evaluates the data thereby obtained and processes this in line with requirements. One particular feature of this IoT platform is its comprehensive integration of LoRaWAN wireless technology.

MVV Topic Digital Transformation

For the future energy system, we need a decentralised communications infrastructure that networks generators, marketers and consumers with each other. This gives rise to consistent end-to-end processes. As the industrial transformation already begun – Industry 4.0 – progresses further, all industrial equipment and tools down to end points will in future be connected both to each other and to the internet and thus become the Industrial Internet of Things (IIoT). 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. 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 involves demand side management, with the assistance of which 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.

The digitalisation of the energy system both on end customer level and also for Industry 4.0 on B2B level forms 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 that, alongside customary billing requirements, also have an increased need for analytic options, energy management and CO₂ accounting. We also offer e-mobility handling, including billing. In a cross-location project, we are harmonising key processes in the retail customer business. We are thus safeguarding the productivity of processes, optimising these in shared standard processes and enhancing process quality while simultaneously cutting costs. Soluvia Energy Services participated in the MeKIDI research project (Human-Centred AI-Based Process Digitalisation in the Energy Sector), which was promoted by the Federal Ministry of Labour and Social Affairs (BMAS) and completed at the beginning of the year under report. The project aimed to research the impact of advancing digitalisation, taking robotic process automation (RPA) as an example, in order to replace monotonous activities and reduce error quotas and process costs. One example is the handling of postal returns, i.e. letters which are sent back to MVV because their recipient is not at the address stated. Previously, the correct addresses were researched and the letters manually sent out. Now, it is already possible to process 60 % of postal returns on an automated, AI-assisted basis. This project has shown that automation can improve the quality of work and processes while also creating potential savings.

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 heat 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.

At MVV, the overriding topic of digitalisation is being promoted in all business fields. We coordinate and organise key aspects of this in our overall digitalisation programme. We are closely monitoring developments in this field 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 year under report, we drew on digitalisation to advance topics across all business fields and departments. At MVV Trading, for example, we have established a new unit to implement and operate model-based trading strategies in modern cloud-based system architectures. Adaptable IT and a well-structured approach to data handling form the foundation enabling us to permanently secure a resilient competitive position and to deploy AI in other applications as well. Like many other companies, we too are in the process of moving to the new world of SAP S/4HANA. We are thus streamlining, harmonising and automating our processes. With a joint and harmonised data model, we are laying a foundation to make more intensive use of data and fully exploit the potential offered by AI applications. We report on technology and innovation in our Annual Report

[mvv.de/AR2023.pdf](https://www.mvv.de/AR2023.pdf), from Page 31.

We are committed to ensuring that sensitive information and personal data are protected with an extensive range of technical and organisational measures and generally follow the basic principles of data protection. One guarantee in this respect is the wealth of practical expertise our employees have acquired for this important topic. In particular, this also applies to the protection of the personal data we collect from our customers in connection with our solutions and services or from our employees and suppliers in connection with employment and other contractual relationships and subsequently process in accordance with data protection requirements. In the year under report, we met our target of sustainably protecting information and personal data with numerous effective measures and of further raising awareness for this topic among our employees.

Employees and Society

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 those who work on our behalf. The following points form the core of our “Lived Safety” programme:

- Every accident is one too many. Our goal is therefore clear: no accidents.
- For us, protecting the health and safety of our employees is not just a task, but rather an obligation.
- All employees are important to us and are involved in health and safety decisions.
- All managers and employees know their responsibilities and actively live up to these in the areas which they are able to influence.
- The aim is to continually improve the safety and health protection of all employees based on a prevention-driven approach.

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.

Structured programmes and measures form a key foundation in this respect. Examples here include an electronic instruction system with occupational safety training tailored to the respective workplace, an inspection concept and “Safety Moments”, i.e. regular safety briefings aimed at raising safety awareness and firmly establishing this on all levels.

Our accident statistics and the prevention measures taken are evaluated on Executive Board and group level on a monthly basis, with further measures also being discussed and planned.

We aim to preserve and promote the health of our workforce by offering a range of targeted service and preventative medical care. We also attach great value to raising awareness for our employees' mental and physical wellbeing. With the wide variety of measures offered by our company health management services, the information, events and fitness formats provided online and the extensive offerings available at company medical services at our larger locations, we provide our employees with numerous health promotion options. 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. We report on these under [GRI 403-6](#).

To maintain our focus on the topics of occupational health and safety, we have pooled these in respective central departments.

GRI 403-2 Hazard identification, risk assessment and incident investigation

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

In the great majority our domestic company departments, these risk assessments are performed and documented digitally. Here, we analyse the workplaces used, the activities performed, the work equipment used and any hazardous materials deployed. Where necessary, account is also taken of groups of persons who are at particular risk. Once we have implemented protective measures and conclusively checked their effectiveness, we reassess the remaining residual risk. Furthermore, implementation of various work safety ordinances is also factored into our analyses. We perform a review at last once a year to ascertain whether new findings or new legal or operating requirements mean that we have to amend the risk assessments.

Employees who find themselves in a work situation where there is an acute risk of injury or sickness must stop work and immediately consult their managers. We have laid this down in corresponding operating instructions that we communicate to our employees, for example in training sessions. We systematically investigate any accidents, near-accidents, unsafe conditions and unsafe actions reported and derive measures where necessary. For all incidents, we consider whether we have to make any amendments to our risk assessments. All recorded work-related incidents are investigated by the respective manager with support from the relevant safety expert and, where applicable, from the company doctor, Works Council and safety officers. When investigating the accident, we also review whether the causes have already been accounted for in the hazard assessment and whether the associated risk assessment is appropriate. If necessary, we amend the hazard and risk assessments. Based on the findings of the investigation, the respective managers also lay down measures to enable accidents of the same nature to be avoided.

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) and which offer work-related and other preventative healthcare measures. At our Mannheim location alone, these services support around 2,000 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. For additional seasonal offerings, we also display posters and distribute leaflets.

Our employees in Germany are all subject to Regulation No. 2 of the German Social Accident Insurance (DGUV). Due to confidentiality requirements, the occupational health services at the company do not share any data.

In 2023, we were singled out for the third time already at our Mannheim location for the Corporate Health Award, the most prestigious award for company health management (CHM) in Germany.

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

The work safety committees required by § 11 of the German Occupational Safety Act (ASiG) are formed by the companies on location and comprise both employer and employee representatives. The great importance our company attaches to work safety is also reflected in the fact that this is a fixed agenda item at the meetings of our Supervisory Board. We liaise closely with professional associations and employee representatives and agree our work safety and prevention strategies and measures with them.

We communicate important information about occupational health and safety on a regular basis in the organisational units. Via the intranet, this information is also permanently available to most company departments. We also make the findings of the risk assessments available to staff via a software tool. By attending meetings, participating in inspections and investigations into accidents or submitting proposals via the company suggestion scheme, for example, 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 an electronic instruction system based on the results of the risk assessment. This way, our employees can flexibly and individually address a variety of basic topics relating to work safety. This also applies in some cases when we commission work from other companies.

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. Experienced coaches guide participants in health-related courses. In the year under report, these courses were offered in online format and well received by our employees working from home. We once again offered a range of sports groups at several locations in the year under report. 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 our locations have shown great interest in the services on offer.

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

We safeguard our employees' safety and health when working together with company-internal regulations and processes applicable at individual locations. 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 other 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. Employees of other companies 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 parties. Such 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 performed safely. 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 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 only perform a statistical evaluation of accidents with particularly severe injuries and of accident types on an incident-related basis. The most frequent types of accident include people stumbling, slipping or falling over, as well as handling-related accidents. The assessment and evaluation are performed on a gender-neutral basis and in line with data protection requirements. We also assess the expediency of further preventative measures.

Accident statistics

	FY 2023	FY 2022	+/- change	% change
Lost time injury frequency rate (LTIF) ^{1, 2, 3}	4.3	3.7	+ 0.6	+ 16
Work-related injuries with severe consequences ⁴	2	0	+ 2	>+ 100
Fatal accidents	0	0	0	0

1 Includes all fully consolidated companies in Germany (new fully consolidated companies only included in accident statistics at the earliest in the second financial year after acquisition)

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

3 Basis for FTE figures: FTE figures at reporting date on 30 September

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

4 Non-recuperation after 6 months

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

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

With our broad range of training options – in Mannheim alone, we offer training in 14 different vocations and combined training and study programmes – we provide young people with numerous opportunities to start their career at our company. In Mannheim, Offenbach, Kiel and Gersthofen close to Augsburg, we are among the largest trainers in the respective regions. As of 30 September 2023, a total of 331 women and men were in training at MVV. We regularly receive large numbers of applications for the training positions we offer, enabling us to fill these with suitable young people.

Training concept implemented

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

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

Key focuses of staff development measures at our Mannheim location in the 2023 financial year on the one hand included continuing the General Management series, which is intended to develop our management staff and for which 26 training sessions were held in the year under report. On the other hand, they involve further expanding our IT training for all employees. Here, we added programmes to train employees in preparing and working with data. 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 conducted at intervals of around two years to record the skills and further training needs of our managers and high-potential employees and to plan their next career steps. This involves a graded process including self-assessment, third-party assessment, internal management review conferences and concluding feedback talks between employees and managers. Within a well-established talent management process, we subsequently develop our employees with potential for management positions. More than 40 % of the participants in the 2019 management review now hold management roles or manage major projects. Our talent management activities also extend to specialist and upcoming staff, such as trainees and career starters.

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

GRI 405 Diversity and Equal Opportunity

GRI 405-1 Diversity of governance bodies and employees

Energy for diversity

We promote equal opportunities for women

To date, women have only made up a comparatively low share of the overall workforce at companies operating in the energy sector. We believe that raising the share of women working at our group of companies in the long term is one key to the company's successful further development.

Gender distribution ¹

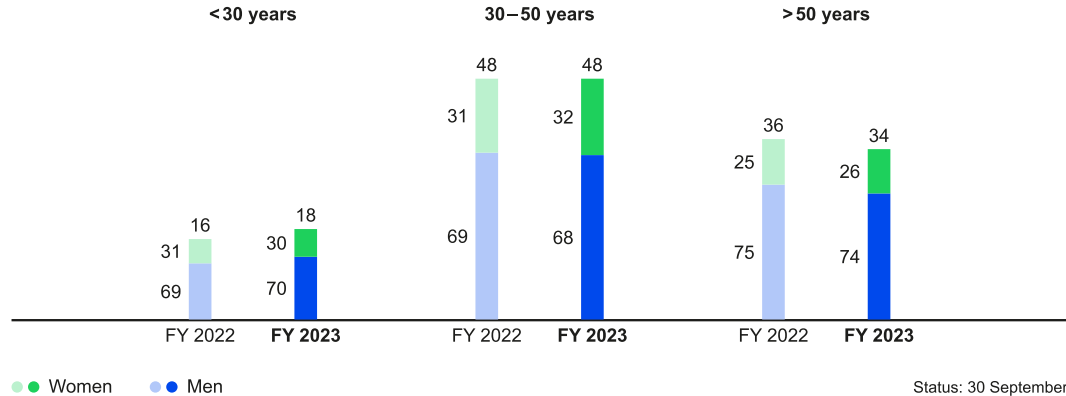
%	FY 2023	FY 2022
Share of women	29	28
Share of men	71	72
Share of women managers ²	19	16

¹ Due to its low percentage, the "diverse" gender category cannot be meaningfully presented.

² Includes all levels to group and team leader

Age structure of employees ¹

%



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

We have set ourselves the target of raising women's share of our Group's workforce to 35 % by 30 September 2026, up from 28 % at 30 September 2021. Women accounted for 29 % of the Group's employees at the end of the 2023 financial year. Among our management staff, we aim to increase the share of women to 25 %. At the balance sheet date on 30 September 2023, this share stood at 19 %. To achieve our targets by 2026, we are consistently implementing and further expanding our promotional measures and programmes. That is particularly true for our targeted personnel development activities for women with the potential to take on management positions.

We are supplementing existing activities to increase the share of women by implementing measures aimed at raising women's visibility at MVV both within and outside the company. One key aspect is the establishment of "wom:energy", our groupwide network of women that holds regular networking meetings and organises its own formats. Moreover, we have also taken measures to increase the number of applications we receive from promising external and internal women candidates.

For MVV Energie AG as well, we have set ourselves targets for the share of women in the first and second management tiers below the Executive Board. In September 2021, the Executive Board set targets for the share of women at 25 % for the first and 30 % for the second management tiers, with both targets to be met by 30 September 2026. In the first management tier, we reached our target prematurely: At 30 September 2023, the share of women in the first management tier amounted to 33 % and was thus already well ahead of the 25 % target. In the second management tier, the share of women stood at 23 % (30 September 2022: 22 %) and was thus slightly higher than in the previous year. We see these increases as confirming the effectiveness of the measures we have drawn on, particularly to further enhance the skills of internal management staff.

In our Corporate Governance Statement, we provide information about the diversity concepts for the Executive and Supervisory Boards [mvv.de/CGS2023.pdf](https://www.mvv.de/CGS2023.pdf), from Page 5. In our Annual Report, we present the composition of the Executive and Supervisory Boards in the **Directors and Officers** chapter [mvv.de/AR2023.pdf](https://www.mvv.de/AR2023.pdf), from Page 238.

We promote diversity

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

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

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

Work and family can be combined at MVV

Our aim is for our employees to be able to successfully combine their family and work commitments on an ongoing basis. Over their working lives, employees, pass through many different stages of life. We aim to support them in mastering the daily requirements of their work and private lives. To this end, we offer a variety of worktime models with flexible working hours; these are explicitly available for our managers as well.

Digitalisation and the use of modern communications appliances also facilitate mobile work in line with specific needs. In the year under report, we performed a mobile work survey of employees at our Mannheim location. The findings have been factored into a new company agreement. Equivalent agreements governing mobile and hybrid work are also in place at our Kiel, Offenbach and Wörrstadt locations. Our part-time management concept is intended to retain high-performing employees at the company through various stages of their lives. This concept is targeted on the

one hand at management staff in specific situations, such as parental or nursing care leave. It therefore makes it easier for them to return to work more quickly. On the other hand, the concept is intended to encourage employees to directly assume part-time management positions.

Since the 2011 financial year, we have offered a family service. Here, we work together with an experienced service provider who can provide advice to any of our employees who wish to discuss work-related, family or financial issues. The advice is of course offered on a strictly confidential basis and is not forwarded to MVV as employer.

Another area in which our employees face growing challenges involves caring for relatives. Here too, we are providing them with support. Employees caring for relatives can be granted leave from work. We also inform our staff about nursing care options by holding information events, providing emergency folders with information about work and care and, as is the case at our subsidiary Energieversorgung Offenbach, by cooperating with a nursing care service.

We are actively tackling demographic management

In our third pillar of “Energy for Diversity”, we are addressing the demographic challenges we face. As well as offering extensive services via our company health management service to help employees preserve their health and further develop their personal skillset, we also draw on a modern knowledge transfer method for employees leaving the company. The expertise they have gained over many years should be retained at the company after their departure. We organise a well-structured and moderated transition and coordinate which knowledge should be transferred, as well as the timeframe and manner in which this should take place. In selected departments in Mannheim, for example, we perform “parallel runs”, in which employees due to retire from the company help to train their new colleagues over an extended period of time.

Furthermore, an interdisciplinary workgroup at the Mannheim location, namely “Work & Age/Age-Appropriate Work” is currently developing additional ideas and specific proposals for measures to consider the whole employee lifecycle. One initial focus is on short-term measures to accompany employees during their final three to five years at the company.

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

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.

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 are helping to convert the energy system and thus to develop a new, more sustainable and more efficient energy supply. Building new generation plants, the required conversion and expansion in the electricity grid and the necessary modernisation of existing plants – all these measures change the local environment and may 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.

Further Information

GRI Content Index

GRI content index

GRI Standard	Designation	Page	Notes
GRI 1: Foundation 2021			
Statement of use			
MVV is reporting in accordance with GRI Standards for the period from 1 October 2022 to 30 September 2023.			
GRI 2: General disclosures 2021			
1. Organisation and reporting practice			
GRI 2-1	Organisational details	11	
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GRI 2-3	Reporting period, frequency and contact point	11	
GRI 2-4	Restatements of information	12	
GRI 2-5	External assurance	12	
2. Activities and workers			
GRI 2-6	Activities, value chain and other business relationships	13	
GRI 2-7	Employees	16	
GRI 2-8	Workers who are not employees	16	We assess the share of temporary employees and third-party employees as immaterial. Specific data would therefore not offer us any benefits. In view of this, we have so far not collected any group-wide data, apart from a survey for the basic assessment of the overall scope.
3. Governance			
GRI 2-9	Governance structure and composition	17	
GRI 2-10	Nomination and selection of the highest governance body	18	
GRI 2-11	Chair of the highest governance body	18	
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	18	
GRI 2-13	Delegation of responsibility for managing impacts	19	
GRI 2-14	Role of the highest governance body in sustainability reporting	19	
GRI 2-15	Conflicts of interest	19	
GRI 2-16	Communication of critical concerns	19	
GRI 2-17	Collective knowledge of the highest governance body	20	
GRI 2-18	Evaluation of the performance of the highest governance body	21	
GRI 2-19	Remuneration policies	21	
GRI 2-20	Process to determine remuneration	21	

GRI Standard	Designation	Page	Notes
GRI 2-21	Annual total compensation ratio	21	
4. Strategy, policies and practices			
GRI 2-22	Statement on sustainable development strategy	22	
GRI 2-23	Policy commitments	22	udhr.pdf (un.org) OECD Guidelines for Multinational Enterprises UN Global Compact Network Germany: United Nations Global Compact ILO Core Labour Standards (ILO Berlin)
GRI 2-24	Embedding policy commitments	23	
GRI 2-25	Processes to remediate negative impacts	23	
GRI 2-26	Mechanisms for seeking advice and raising concerns	24	
GRI 2-27	Compliance with laws and regulations	24	
GRI 2-28	Membership of associations	24	
5. Stakeholder engagement			
GRI 2-29	Approach to stakeholder engagement	25	Lobbyregister.bundestag.de
GRI 2-30	Collective bargaining agreements	27	
GRI 3: Disclosures and guidance on material topics 2021			
GRI 3-1	Process to determine material topics	28	
GRI 3-2	List of material topics	29	
GRI 3-3	Management of material topics	31	
Material topics: Disclosures relating to the topic standards			
Economic Performance			
GRI 201: Economic performance 2016			
GRI 201-1	Direct economic value generated and distributed	43	
GRI 203: Indirect economic impacts 2016			
GRI 203-1	Infrastructure investments and services supported	45	
Energy and Environment			
GRI 301: Materials 2016			
GRI 301-1	Materials used by weight or volume	46	
GRI 302: Energy 2016			
GRI 302-5	Reductions in energy requirements of products and services	51	No complete groupwide data on the energy savings achieved is available to us. That is because customer data on volume factors relating to changes in weather conditions or production volumes is highly confidential. We therefore only provide quantitative disclosures on a project-by-project basis.
MVV topic	Renewable energies	54	
GRI 305: Emissions 2016			
GRI 305-1	Direct (Scope 1) GHG emissions	61	
GRI 305-2	Energy indirect (Scope 2) GHG emissions	61	
GRI 305-3	Other indirect (Scope 3) GHG emissions	61	

GRI Standard	Designation	Page	Notes
GRI 305-4	GHG emissions intensity	67	
GRI 305-7	Nitrogen oxides (NOx), sulphur oxides (SOx) and other significant air emissions	67	
System Transformation			
MVV topic	Changed energy demand	69	
MVV topic	Changed infrastructures and smart cities	73	
MVV topic	Digital transformation	74	
Employees and Society			
GRI 403: Occupational health and safety 2018			The information provided refers to the company's proprietary employees operating in Germany. Due to the decentralised organisational structure, we do not collect this data for our international employees. 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 additional benefits.
GRI 403-1	Occupational health and safety management system	76	
GRI 403-2	Hazard identification, risk assessment and incident investigation	77	
GRI 403-3	Occupational health services	78	
GRI 403-4	Worker participation, consultation and communication on occupational health and safety	78	
GRI 403-5	Worker training on occupational health and safety	78	
GRI 403-6	Promotion of worker health	78	
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	79	
GRI 403-9	Work-related injuries	79	We currently do not collect complete data on documentable work-related injuries on a centralised groupwide basis; we therefore do not report any disclosures on these.
GRI 404: Training and education 2016			
GRI 404-2	Programmes for upgrading employee skills and transition assistance programmes	80	
GRI 405: Diversity and equal opportunity 2016			
GRI 405-1	Diversity of governance bodies and employees	82	We only distinguish by age and gender, as the collection of data on minorities is governed by national legal norms. mvv.de/executive-board mvv.de/supervisory-board
GRI 405-2	Ratio of basic salary and remuneration of women to men	85	
GRI 413: Local communities 2016			
GRI 413-1	Operations with local community engagement, impact assessments and development programmes	85	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 collecting such data would not provide us with any benefits.

Awards and Initiatives

Our commitment to greater sustainability has already been singled out on multiple occasions by various institutions [mvv.de/awards-and-initiatives](https://www.mvv.de/awards-and-initiatives).



MVV was singled out by the renowned international ESG rating agency ISS as one of the world's most sustainable energy companies and awarded the highest rating score in the sector. This involved a detailed assessment of all aspects of the company's sustainability.



In October 2022, we were the first energy company in Germany, and one of the first three worldwide, to receive certification from the Science Based Targets initiative (SBTi) that our targets are net zero compatible.



MVV received the Gold Medal from the sustainability rating agency EcoVadis and is thus among the best 14 % of companies in the energy industry.



In 2023, we were singled out for the third time already at our Mannheim location for the Corporate Health Award, the most prestigious award for Company Health Management (CHM) in Germany.

Progress Report for UN Global Compact

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

Progress report for UN Global Compact

Principle	Topic	Page
Human rights		
1. Businesses should support and respect the protection of internationally proclaimed human rights.	Human rights policy	mvv.de/menschenrechte
2. Businesses should make sure that they are not complicit in human rights abuses.	Compliance	22
Labour		
3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	Employees and Society – Employee representation	40 76
4. Businesses should be committed to the elimination of all forms of forced and compulsory labour.	Value chain	13
5. Businesses should be committed to the effective abolition of child labour.	Value chain	13
6. Businesses should be committed to the elimination of discrimination in respect of employment and occupation.	Compliance Employees and Society	22 82, 85
Environment		
7. Businesses should support a precautionary approach to environmental challenges.	Material Topics	43
8. Businesses should undertake initiatives to promote greater environmental responsibility.	Material Topics	43
9. Businesses should encourage the development and diffusion of environmentally-friendly technologies.	Material Topics	43
Corruption		
10. Businesses should work against corruption in all its forms, including extortion and bribery.	Compliance	22

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 year under report, we again performed a review to identify those SDGs to which we can make a substantial contribution with our business activities:

Sustainable Development Goals – MVV's contribution

SDG		Chapter/content	Page
	End poverty in all its forms everywhere.	General disclosures: 1. Organisation and reporting practices; GRI 2-6 Activities, value chain and other business relationships	13
		Topic-specific disclosures: Economic Performance	43
	Ensure access to affordable, reliable, sustainable and modern energy for all.	General disclosures: 1. Organisation and reporting practices; GRI 2-6 Activities, value chain and other business relationships	13
		Topic-specific disclosures: Energy and Environment; MVV topic renewable energies	54
		Human rights	mvv.de/menschenrechte
	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.	Topic-specific disclosures: Employees and Society	76
	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.	Topic-specific disclosures: System Transformation	69
	Make cities and human settlements inclusive, safe, resilient and sustainable.	Topic-specific disclosures: System Transformation; Changed infrastructures and smart cities	73
	Ensure sustainable consumption and production patterns.	Topic-specific disclosures: Energy and Environment; Materials	46
	Take urgent action to combat climate change and its impacts.	Topic-specific disclosures: Energy and Environment; Energy, Renewable energies, Emissions	46 54 61
	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.	General disclosures: GRI 2-6 Activities, value chain and other business relationships GRI 2-15 Conflicts of interest GRI 2-16 Communication of critical concerns 4. Strategy, policies and practices GRI 2-29 Approach to stakeholder engagement	13 19 20 25

TCFD Transparency Recommendations

The Task Force on Climate-related Financial Disclosure (TCFD) is an initiative founded by the Financial Stability Board (FSB) in December 2015. The FSB is an international body created with the support of G20 member states to contribute to international financial stability. The TCFD is intended to identify the information needed by stakeholder groups such as investors, lenders and insurers to assess the risks and opportunities involved in a company's approach to climate change. In 2017, the TCFD published its eleven recommendations for climate-related financial disclosures in the areas of governance, strategy, risk management and metrics and targets. In the table below, we link the TCFD aspects with our reporting to assist our stakeholders in finding information:

TCFD transparency recommendations – MVV's reporting

TCFD aspect	Recommended TCFD topics	Brief description	Page
Governance	Role of Executive and Supervisory Boards	Within our risk management system, the Executive Board and the Supervisory Board Audit Committee are regularly informed about non-financial risks, including the climate topic. The Executive Board bears overall strategic responsibility for the company's sustainability and climate protection strategy. Responsibility for the operative management of climate protection and climate-related risks is decentralised, but nevertheless coordinated by our groupwide sustainability and risk management.	17, 18
	Management of climate protection and climate-related risks		18 mvv.de/AR2023, from Page 121 mvv.de/AR2023 from Page 59
Strategy	Climate-related risks and opportunities	Our strategy of becoming climate positive by 2035 leads to a rapid reduction in our CO ₂ exposure, minimises potential climate-related risks and helps us to grow by offering green products and services. In our corporate planning, we work with scenarios that portray different regulatory and market developments, for example.	28, 61
	Impact of climate-related risks and opportunities on MVV		69
	Climate-related scenarios		mvv.de/AR2023 from Page 95
Risk management	Identifying climate-related risks at MVV	MVV's risk management system covers all relevant non-financial risks and opportunities, including the climate topic. As part of our risk management, risks are assessed with the probabilities of occurrence, potential level of damages and, if applicable, suitable countermeasures. In analysing physical climate-related risks, we use the approach prescribed by the EU Taxonomy. As an energy company, many of our activities are subject to statutory CO ₂ pricing – the EU ETS and the German Emissions Trading Act (BEHG). Internal price-based and structural management instruments are continually being developed further.	61 mvv.de/AR2023 from Page 95
	Managing climate-related risks at MVV		mvv.de/AR2023 from Page 95
	Integration into risk management at MVV		mvv.de/AR2023 from Page 117
Metrics and targets	Metrics used to assess climate-related opportunities and risks	MVV's climate balance sheet compiled in accordance with the GHG protocol is the point of reference for our ambitious climate protection targets. These were certified by the Science-based Target initiative (SBTi) in 2022 as being compatible with its net zero standard. Extensive quantitative metrics pursuant to the EU Taxonomy provide information about our current capital expenditure, turnover and operating expenditure in climate-friendly technologies and business models.	46f., 54 et seq. mvv.de/AR2023 from Page 93 mvv.de/AR2023 from Page 262
	MVV's climate balance sheet		61
	MVV's climate protection targets		33 et seq.

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

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