Combined Management Report

Group Fundamentals

GROUP STRUCTURE

Company structure and shareholdings

MVV Energie AG, which has its legal domicile in Mannheim, plays a key role as MVV's listed parent company. It directly or indirectly owns shares in the companies which belong to the Group and also has its own operations. Including MVV Energie AG, the MVV Group comprises 165 fully consolidated companies and 36 companies recognised at equity. The largest locations of our group of companies are in Mannheim, Kiel, Offenbach and Wörrstadt. We are also present in more than 20 countries. As well as Germany, these include the United Kingdom and the Czech Republic.

Organisational structure

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

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

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

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

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

We pool our shared service companies and cross-divisional functions in the **Other Activities** reporting segment. The shared service companies perform metering, billing and IT services for MVV. Pooling their services enables us to generate benefits of scale and ensure high process quality

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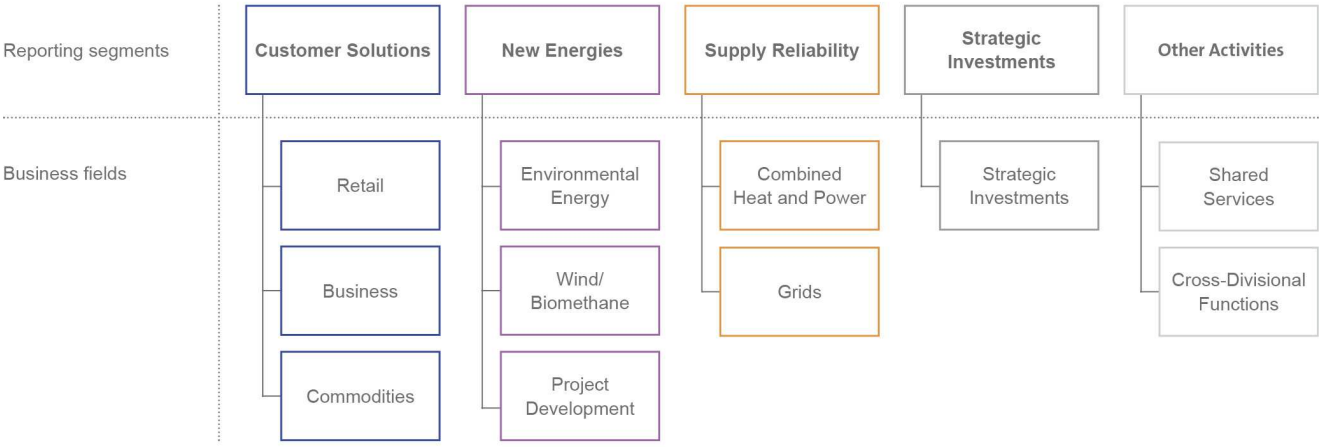
REPORTING SEGMENTS AND BUSINESS FIELDS



BUSINESS MODEL

We are one of Germany's leading energy companies and cover all major stages of the energy industry value chain: from energy generation, energy trading, energy distribution via proprietary distribution grid companies through to sales activities for energy solutions and our environmental energy business. We also produce and distribute water. Renewable energies are a particular focus of our business model. Here, our activities include project development and operations management for windfarms and solar parks, as well as biomass power plants.

Customer Solutions segment

The Customer Solutions reporting segment includes the energy and water retail businesses. As ever larger numbers of customers are opting for environmentally-friendly energy, we provide our private and business customers with a broad range of products and services meeting ecological standards. These range from renewable energies through to environmentally-friendly district heating and also include the portfolio of solutions we offer to private and business customers for self-generated solar power and e-mobility. E-mobility is also an integral component of our activities in Smart Cities, where we act as a system partner to local authorities and offer networked solutions for the towns and cities of the future. Our range of energy-related services for business customers focuses on projects and measures to enhance efficiency and optimise energy use at industrial, commercial, and housing industry clients. The Customer Solutions segment also includes the commodities, service and trading business at MVV Trading, where we pool energy procurement, energy product trading and portfolio management for our group of companies. We also offer these services to third-party customers on the market. Moreover, our trading subsidiary is also responsible for the renewable energies direct marketing business.

New Energies segment

In the New Energies reporting segment, we on the one hand pool our extensive competence in making ecological use of waste and biomass. We draw on this expertise not only at our plants in Mannheim, Offenbach, Leuna, Königs Wusterhausen and Flörsheim-Wicker, but also in the United Kingdom: In Plymouth, we operate a state-of-the-art energy from waste plant with heat extraction. Our biomass power plant with CHP capability at Ridham Dock works exclusively with waste timber and non-recyclable timber from regional sources. In the Scottish city of Dundee, we took over an existing energy from waste plant in the 2018 financial year and are building a new, ultra-modern plant in the direct vicinity. Furthermore, in Germany we also have biogas and biomethane plants. On the other hand, the New Energies segment also contains our proprietary wind turbines and photovoltaics systems, as well as our national and international project development business. In Germany, we focus above all on onshore wind turbines, while solar power is the focal point in the international business. We also provide operations management for windfarms and solar parks.

Supply Reliability segment

The Supply Reliability segment includes our generation portfolio for conventional energies with combined heat and power generation. These include our CHP plant in Offenbach and our shareholdings in such plants in Mannheim and Kiel. To be able to guarantee a reliable supply of energy and water at all times, high-performing grids are crucial. For this reason, this segment also includes the grid businesses at our distribution grid operators in Mannheim, Kiel and Offenbach. We are continually investing in modernising and expanding our grid infrastructure. Overall, we operate electricity, district heating, gas and water grids with a total length of more than 19,000 kilometres at the MVV Group.

CORPORATE STRATEGY

Climate neutrality by 2050 – at the latest

Protecting the climate is an indispensable aspect of our strategic alignment and thus forms part of our responsibility towards society. We are committed to the targets agreed in the Paris Climate Accord: Our aim is to be climate neutral as a company by 2050 at the latest.

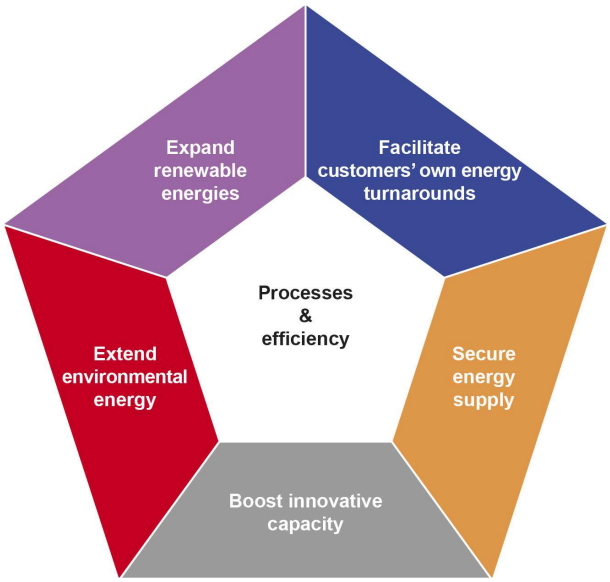
Specifically, this means that we will

- Continue to press consistently ahead with expanding renewable energies
- Reduce the emissions from our conventional generation positions to zero by 2050 at the latest
- Gradually reduce the CO_2 intensity of our heating energy generation
- Promote climate neutrality as achieved at and by our customers by implementing energy efficiency measures, planning and operating renewable energies plants and offering innovative services
- Look into new technologies facilitating the climate-neutral management of unavoidable remaining emissions.

The sustainability targets we already set in 2016 continue to act as major milestones as we head for climate neutrality. By 2026, we will thus be tripling the volume of CO_2 savings we achieve in the energy system to 1 million tonnes a year and doubling the volume of electricity we generate from renewable energies. Over the same period, we will connect 10,000 MW of renewable energies to the grid. Implementing this strategy will substantially reduce the CO_2 intensity of our business activities.

The future has already begun. With us.

The new energy world is currently being shaped by three key developments: Alongside the need for further decarbonisation by expanding renewable energies and the related process of decentralisation, the digitalisation of the energy industry is playing a key role and is promoting a process of technological change that affects all stages of the value chain and makes new solutions possible. With our investments in renewable energies, energy efficiency, supply reliability and developing innovative services and products enabling our customers to participate directly in the energy turnaround, we are actively addressing these trends and seizing them as an opportunity for the further development of our group of companies. In the years ahead, we will be investing a total of Euro 3 billion in the energy system of the future.



In implementing our corporate strategy, we aim to achieve a balanced structure of opportunities and risks and this way generate further value-based growth. This applies equally to the balance between regulated and unregulated business, between business fields and between business in Germany and abroad. When evaluating our investment projects, we therefore focus not only on their economic viability and sustainability, but also on their fitness for the future and their customer focus, as well as on their conformity with our strategic alignment.

Smart energy for everyone

In parallel, we are developing innovative, forward-looking products and services tailored to the specific needs of our business customers in the industrial, retail and housing sectors, as well as for our retail customers, with which we enable them to implement their own energy turnarounds. To this end, we can draw on our proven competencies and decades of experience. Furthermore, we supplement our range of products and services by forging strategic partnerships and acquiring shareholdings intended to assist us and our customers as we head towards climate neutrality.

Our customers benefit from the combination we can offer of energy industry and technical know-how, software intelligence, great experience and expertise. Together with our Econ Solutions subsidiary, for example, we offer one-stop energy monitoring and efficiency solutions for medium-sized industrial companies, large commercial businesses and chain operators. Thanks to our stake in DC-Datacenter-Group, our solutions portfolio also includes energy-efficient and high-availability data centres. For customers in the housing industry, we work with our joint venture Qivalo to offer new, all-round solutions meeting the requirements they have in terms of modern digital metering services.

A further focus involves expanding e-mobility, an area in which we offer charging infrastructure and smart charging management for industrial and business customers, as well as a combined product for our retail customers which comprises a photovoltaics system, a charging station and an electric vehicle. On this basis, we are also extending our activities in the field of smart cities. Acting as a partner to local authorities and innovative municipal utility companies, we are developing and implementing holistic concepts for the cities of the future and decentralised district solutions.

Key focus on renewable energies

When it comes to renewable energies, we cover the entire value chain from project development to building and operating plants through to energy marketing. Our focuses here include onshore wind power, where we aim to further expand our portfolio, and our activities using waste, biomass and biogas. Furthermore, for photovoltaics-based electricity generation we are reviewing the economic potential which this harbours for our group of companies. Overall, the targeted investments we are making in renewable energies mean that our generation portfolio is becoming significantly greener and more broadly diversified. In our project development business, we have different strategic approaches in Germany and abroad. Alongside our wind activities, in our German business we will in future be developing larger numbers of photovoltaics projects once again, while in our international business we will continue to focus with our Juwi subsidiary above all on photovoltaics projects in stable markets.

When it comes to generating energy from waste, waste timber and non-recyclable timber, we are one of the market leaders in Germany and are also generating growth with new projects in the British market. In generating electricity and heating energy from biogas, we have supplemented our existing biomethane cluster in the Magdeburger Börde region by adding a first organic waste fermentation plant in Dresden to our portfolio. A further plant, which will generate environmentally-friendly biogas from around 33,000 tonnes of organic waste from 2021 onwards, is currently in the planning stage in Bernburg (Saxony-Anhalt). A new organic waste fermentation plant in Sinsheim (Rhine-Neckar district) at which we are playing the leading role in its biomethane purification and marketing activities launched operations in September 2019.

Secure energy supply for our customers

Further expanding renewable energies involves challenges given the volatility in the volume of electricity fed into the grid by wind turbines and photovoltaics systems, which is significantly dependent on the time of day and weather conditions. We will provide our customers with a secure and reliable supply of energy at all times. In this respect, the reliability, intelligence and performance capacity of grids play a key role.

One particular focus relates to the future of heating energy. Especially in large built-up areas, the pipeline-based supply of heating energy is and is set to remain an indispensable component of a sustainable, forward-looking heating energy supply. District heating has a future – and that is why we are consistently investing in more renewable generation forms which thus involve lower volumes of CO_2. Our current projects include linking up our waste-fired CHP plant to the district heating grid in Mannheim and the region, as well as the new modular gas-powered CHP plant in Kiel. We are thus continually developing our heating energy vision and concept further with the aim of working towards decarbonisation and the integration of renewable energies into heating energy generation structures. Our concept is therefore based on remaining modern, innovative and secure and, over and above this, making a substantial contribution to achieving the climate neutrality objective.

Further expanding our environmental energy activities

The generation of electricity and heating energy from waste, an activity which is allocated to our environmental energy business field, is a key pillar of a modern, resource-efficient, recycling-based economy. In Germany, we are one of the leading operators of energy from waste and biomass plants. Not only that, we have been active in the United Kingdom for several years now with our waste-fired CHP plant in Plymouth and our biomass plant at Ridham Dock. We took over an energy from waste plant in the Scottish city of Dundee in the 2018 financial year and have operated this since then. We are currently building a highly efficient new heat and power plant in the direct vicinity. This is due to launch operations in 2020. We plan to make further investments in this business field in future as well.

At the same time, we are further developing our Mannheim energy location at Friesenheimer Insel and turning it into a valuable component of the energy turnaround and climate protection for Mannheim and the Rhine-Neckar metropolitan region. On the one hand, we are connecting our CHP plant to the existing district heating grid. In future, we will thus be using the heating energy produced from waste incineration not only for electricity generation and to supply steam to neighbouring industry, but also in our supply of heating energy to the region. By linking up the plant, we are making our environmentally-friendly district heating more renewable and fitter for the future.

We are implementing this forward-looking concept at our other locations as well. From the beginning of 2020, for example, the city of Merseburg will be supplied with heating energy from our energy from waste plant in Leuna. This way, more than half of the city's district heating needs, which were previously covered by fossil fuel sources, will be secured in future with climate-friendly energy.

On the other hand, we are supplementing our CHP plants with innovative technologies. In Mannheim, for example, we will be recycling phosphorous from municipal sewage and simultaneously generating environmentally-friendly energy that will also be channelled into our heating energy grids in the city. We are working on analogous solutions in Offenbach and Leuna as well. This way, we are making use of the opportunities arising due to amendments in statutory sewage treatment requirements. The phosphorous thereby recovered is a valuable raw material in the production of manure and provides the basis for building a sustainable cycle.

We are further developing our innovative capacity

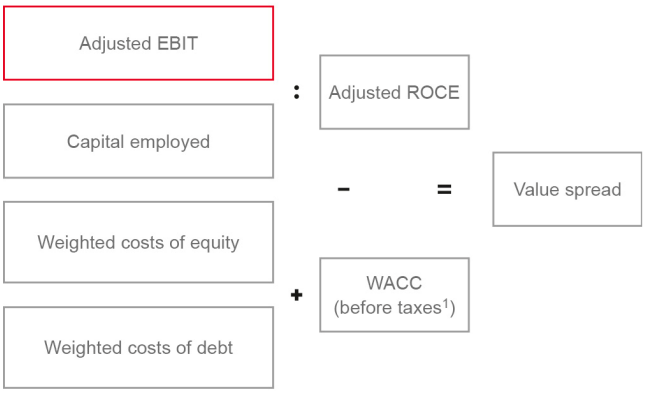
We repeatedly review all of our technologies, procedures and processes in terms of their suitability for future use – and that while operations are "up and running" and taking due account of the economic, ecological and political framework. To safeguard our ability to do this, we are continually developing our corporate culture further, retaining and expanding the competencies of our employees and also drawing on the opportunities offered by digitalisation.

Digitalisation offers two-fold assistance: firstly in further optimising our existing processes and secondly in developing new, innovative and individual business models and forward-looking ways of entering into dialogue with our customers. The digital marketing platform, for example, makes it possible to plan, develop and execute individualised data-assisted sales and marketing campaigns. The possibilities offered by digitalisation help us in our technical and commercial operations, in efficiently structuring the cooperation between departments and business fields and in further optimising processes. Our IT strategy involves making greater use of cloud solutions, thus enabling us to meet the need for flexible and forward-looking software support even more closely.

VALUE-BASED CORPORATE MANAGEMENT

Our value-based corporate management is intended to sustainably increase MVV's value and to offer an attractive dividend to our shareholders. We achieve this by generating a positive value spread, i.e. when the return on average capital employed (adjusted ROCE) is higher than the costs of capital (WACC). The most important key figure in this respect is adjusted operating earnings before interest and taxes (adjusted EBIT), which we use to assess the medium and long-term success of our business activities. To calculate this key earnings figure, we eliminate earnings items resulting from the measurement of financial derivatives pursuant to IFRS 9 as of the reporting date, items resulting from the structural adjustment for part-time early retirement and, where applicable, restructuring expenses. We add interest income from finance leases reported below EBIT in the income statement to our adjusted EBIT. This income results from our contracting projects and therefore forms part of our operating business.

CALCULATION OF VALUE SPREAD
(simplified presentation)

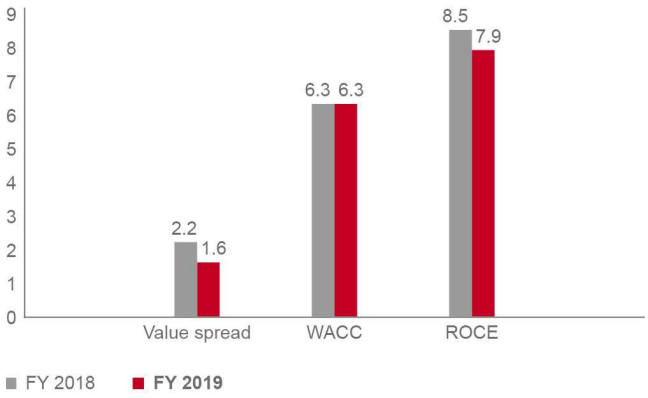


1 WACC before taxes = WACC after taxes/0.7

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

On this basis, we calculated equity costs of 6.5 % (previous year: 6.5 %) after taxes and debt costs of 1.7 % (previous year: 2.0 %) after taxes. The capital structure of MVV's peer group amounts to 55.5 % for equity (previous year: 54.1 %) and to 44.5 % for debt (previous year: 45.9 %). The Group tax rate is 30 % (previous year: 30 %). The WACC after taxes calculated on this basis for the 2019 financial year is unchanged at 4.4 % (previous year: 4.4 %) and 6.3 % before taxes (previous year: 6.3 %).

KEY VALUE MANAGEMENT FIGURES
(%)



The ROCE for the 2019 financial year amounted to 7.9 %, as against 8.5 % in the previous year. The lower ROCE figure was due to the decrease in adjusted EBIT and the higher average volume of capital employed compared with the previous year.

If the WACC before taxes of 6.3 % (previous year: 6.3 %) is subtracted from the ROCE of 7.9 % (previous year: 8.5 %), then it can be seen that the value spread for the year under report amounted to 1.6 % (previous year: 2.2 %).

TECHNOLOGY AND INNOVATION

The energy turnaround in Germany has triggered numerous processes of change within the energy industry. The trend towards decentralising the energy supply is continuing apace – and one consequence of this is the increasingly digital management of the energy supply. Against this backdrop, we are drawing on innovative technology and testing its suitability for future use. Our overriding objective here is to develop products and services that are ready for the market and take greater account of the needs of our customers.

The Customer Experience and Innovation department set up by MVV in 2014 helps us to meet this objective. Here, innovation managers and market researchers work together on research and development projects that are intended to lead to customer-oriented products and services. Not only that, employees from our operating business fields, such as our sales units, are also involved in the projects. As a result, the development expenses for technology and innovation, and particularly for our decentralised energy management activities, are not fully reflected in the research and development expenses reported under IFRS **Notes to Balance Sheet (Note 14), Page 113.**

In the following section, we present some of the projects we pursued in the 2019 financial year.

Decentralised energy management system in FRANKLIN District

C/sells, the energy turnaround project in which nearly 60 participants from industry, the energy sector and science are working together, is developing and demonstrating sample solutions for a digital, secure and environmentally compatible future energy supply. It is part of the nationwide “Smart Energy Showcase – Digital Agenda for the Energy Turnaround” initiative launched by the Federal Ministry for Economic Affairs and Energy (BMWi). Its aim is to develop a new smart grid approach with a cellular structure. The cellular system consists of several small units – so-called cells – which may be properties, districts or towns. Each of these cells attempts to balance its own electricity generation and electricity requirements directly on location. Energy is only exchanged with connected cells when local production is insufficient to cover current demand. This way, each cell assumes responsibility for the equilibrium of the overall energy system.

The FRANKLIN conversion space is one of nine cells participating in C/sells. Here, MVV is simulating and testing the energy system of the future by interconnecting the sectors of electricity, heating energy and mobility. We are putting this into practice by working with an IoT (Internet of Things) platform that enables diverse infrastructure components to be orchestrated within the district. The relevant IT infrastructure has already been designed. The energy system, which is in the planning and execution stage, consists of

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

District residents also play a decisive role by exchanging their electricity, heating energy and water meters, in this case for smart meters and the smart meter gateway needed for secure data transfer. This way, residents on the one hand gain transparency as to their energy consumption. On the other hand, the data acquired helps to provide visibility as to the energy flows in the district, a key prerequisite for optimising the entire district across all sectors. Moreover, as the project progresses various value-added services can be developed using the data and then tested by residents. For example, water pipe leakages and energy guzzlers left on by mistake, such as an oven, can rapidly be discovered. The first smart metering systems were installed for trial purposes in July 2019 and these are set to increase in number over the term of the project.

Innovation processes

Take-Off is an internal innovation process in which our employees contribute their own ideas and, with support from a team, implement these themselves. By adopting this process, MVV is taking a new approach to developing new products, solutions and business models. The process began in 2018 already, with 145 ideas submitted in total. Workshops were then held over several stages, with 16 ideas being further developed by teams taken from across different departments and hierarchical levels. In January 2019, it was decided which projects would be implemented.

One of these is the Climap project, which looks into how building heat losses can be made visible and subsequently remedied. This is currently being developed further within an internal project structure. The MyTalents project, for which an external company was founded, is developing an online platform for private services.

Our Take-Off internal innovation process is supplemented by an external innovation process. In this, we aim to absorb innovative impulses gained via networks and in cooperation with newly founded companies and to anchor these within our own company. Among other activities here, we took part in the past two years in an accelerator programme in Berlin.

E-mobility – MVV and City of Mannheim take energy turnaround to the streets

When it comes to shaping the transport turnaround and expanding the range of e-mobility options, MVV and the City of Mannheim are following a common path. MVV has developed solutions to link the energy system of the future, with its key focus on renewable energies, with sustainable mobility. Among other aspects, we are working to facilitate the coordinated expansion of public charging infrastructure in line with requirements.

Drawing on federal grants from the charging infrastructure subsidy programme, we have installed 25 new charging stations for electric vehicles in Mannheim and the region since early summer 2019. By spring 2020, we will equip 30 further locations with around 100 electric vehicle charging stations. For the third phase of the subsidy programme, which is set to run until the end of 2020, we have applied for 70 further normal and 40 fast charging stations. These will also be installed in Mannheim and the surrounding districts. Thanks to this programme, more than 300 charging stations will then be available in the region in total.

KielFlex – Kiel to be a real-time laboratory for e-mobility

The overall project – “Kiel as a Model City for Installing a Charging Infrastructure in a Flexible Power Grid to Achieve Emissions Reductions in the Transport Sector” (KielFlex) – is intended to reduce transport-related emissions, and here in particular nitrogen oxide. The circumstances surrounding the electrical infrastructure and inner-city traffic are factored into the project, while measures to increase the degree of electrification are also being developed, evaluated and implemented. KielFlex is being promoted by a consortium which includes ABB AG Mannheim, CAU University Kiel, Fraunhofer Institute IFF Magdeburg, Kieler Verkehrsgesellschaft, the state capital of Kiel, Seehafen Kiel, Stadtwerke Kiel AG and SWKiel Netz GmbH.

With KielFlex, Stadtwerke Kiel will be establishing a smart charging infrastructure and control software. It will develop new, flexible tariff models, taking due account of load management, and thus create attractive charging solutions for the housing industry, multistorey car parks and fleet operators. SWKiel Netz will in particular be investigating the market expansion of electric vehicles in the grid region, as well as potential repercussions for the grid, such as local bottlenecks and peak loads. This will give rise to guidelines for basic planning and operations management for medium and low-voltage grids.

Company ideas management

Our ideas management aims to actively involve employees in continuous improvement processes at our company. This way, we support our corporate strategy with topic-specific special campaigns and continually call on the wealth of ideas available among our workforce.

In the 2019 financial year, we completed 485 proposed improvements. The ideas implemented enabled us to save Euro 138 thousand in the first year of implementation. The proposal winning the top award dealt with tamper-proof key rings used in customer key management, which produced savings of Euro 34 thousand. Overall, we distributed prizes of Euro 37 thousand to our employees. The multiyear benefit (over 4 years) currently amounts to Euro 313 thousand.

Group Business Performance

» Adjusted sales and adjusted EBIT consistent with our expectations
» Investments in sustainable growth

MAJOR DEVELOPMENTS AND EXECUTIVE BOARD SUMMARY

Investments in the future

We have been drawing on the opportunities presented by the conversion in the energy system for years already. By making targeted investments, we are creating a basis for MVV to generate sustainable profitable growth. In the 2019 financial year, three major investments were at the forefront of our activities.

In Kiel, we completed our new gas-powered CHP plant as the successor solution to the joint power plant (Gemeinschaftskraftwerk Kiel – GKK). This will secure the supply of district heating to the city and is expected to take up commercial operations at the end of 2019. With a volume of Euro 290 million, it represents the largest investment we have made in recent years.

In Dundee in Scotland, we are currently building what will be one of the most up-to-date energy from waste plants in Europe. The new plant is scheduled to launch operations in 2020 and will generate heating energy and electricity from a total of 110,000 tonnes of waste a year. This way, we are also helping to ensure the clean, efficient and sustainable treatment of non-recyclable waste in the region. Overall, we are investing around Euro 135 million in Dundee.

At our Mannheim location, we are linking up our CHP plant to the existing district heating grid, involving an investment of around Euro 100 million. From the 2019/2020 heating period, this will enable us to use the heating energy from waste incineration not only to generate electricity and supply steam to neighbouring industry, but also for the district heating supply in the region. Moreover, we will extend the plant to include a sewage incineration facility that will enable the phosphorous contained in the sewage to be recovered. This way, the location will become an even more important component of the energy turnaround and of a recycling-based economy for the City of Mannheim and the Rhine-Neckar metropolitan region.

In addition to these three major projects, we also initiated a large number of further projects in the 2019 financial year. October 2018, for example, witnessed the ground-breaking ceremony in Leuna for our joint project with Stadtwerke Merseburg, which operates a district heating grid of more than 40 kilometres in length. From the beginning of 2020, the city of Merseburg will be supplied with heating energy from our energy from waste plant in Leuna. This will cover more than half of the city's annual district heating needs.

We invested a total of Euro 310 million in the 2019 financial year. Thanks to our strong financing structure and solid adjusted equity ratio of 34.5 %, we will be able to uphold this pace of investment in future as well.

Project development business gains momentum

One key vehicle of our activities to expand renewable energies is our project development business. In the 2019 financial year, we connected renewable energies plants with capacities of 460 MW to the grid in Germany and our international markets. Our Juwi and Windwärts subsidiaries are currently building two windfarms with a total capacity of around 24 MW. Upon their completion in the 2020 financial year, we will be taking these into our own generation portfolio. We have also been awarded the tenders for numerous new projects, especially in our photovoltaics business. In Colorado, for example, Juwi will be installing a 123 MW photovoltaics plant, our largest project to date in the US. In Greece, Juwi is building the largest solar park in South-Eastern Europe.

MVV Smart Cities

At conversion sites in the City of Mannheim, we are already realising the energy system of the future, implementing networked mobility solutions and developing smart districts and commercial and industrial estates. Since the 2019 financial year, we have contributed this expertise to our new activities in the field of smart cities. Acting as a system partner to local authorities, we offer networked solutions for the towns and cities of the future. Here, we build on grids and networks already available on location and draw on new IT technologies such as cloud and edge computing to extend them into the “Internet of Things”. This way, we enable residents to make their living space more efficient and sustainable and thus improve their quality of life.

Consistent pursuit of efficiency measures

Sustainable efforts to boost competitiveness are a crucial factor in MVV’s successful further development. In the 2017 financial year, for example, we already launched a project to compile a forward-looking concept for jointly offering shared services at MVV, Stadtwerke Kiel and Energie-versorgung Offenbach. In the year under report, we merged the shared service companies for metering, billing and customer services at a subsidiary. By founding Soluvia Energy Services, we will be able to focus even more closely on changes in the industry and the dynamic market climate.

Adjusted sales and adjusted EBIT slightly lower than in previous year

In the 2019 financial year, we generated adjusted sales of Euro 3.7 billion, as against Euro 3.9 billion in the previous year. The reduction in sales is on the one hand a reflection of lower electricity trading volumes. On the other hand, since the beginning of the 2019 financial year one effect of the newly introduced IFRS 15 involves netting renewable energies compensation items between sales and cost of materials. This does not have any impact on earnings but has, as expected, resulted in lower sales. The performance in earnings compared with the previous year is due on the one hand to non-recurring one-off items in the previous year. On the other hand, earnings for the year under report were adversely affected by follow-up costs for the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK). Due above all to a damaged turbine at Ridham Dock, plant availability in our environmental energy business fell short of the previous year. Thanks in particular to the positive development in electricity and biomass prices and the higher at-equity result, we were able to compensate for these negative factors. Earnings in our project development business also performed better than in the previous year, a development driven above all by a stronger performance in the international business. Overall, our adjusted EBIT of Euro 225 million fell only slightly short of the previous year’s figure (Euro 228 million).

Earnings before taxes (adjusted EBT) fell year-on-year by Euro 11 million to Euro 168 million. This reduction was not reflected in adjusted annual net income after minority interests which, due to lower adjusted taxes on income, rose by Euro 4 million to Euro 98 million. Adjusted earnings per share came to Euro 1.49, as against Euro 1.43 in the previous year.

Executive Board summary of business performance and economic position

Given challenging conditions in the energy industry and in terms of energy policy, we can look back on a good year. We initiated, pressed further ahead with or successfully completed various projects and thus set MVV on course for sustainable profitable growth.

We met our targets for adjusted EBIT and adjusted sales: At Euro 225 million, adjusted EBIT fell 1 % short of the previous year’s figure, while sales decreased by 6 %. We had forecast slight reductions in both key figures.

We are convinced that MVV has the right strategic position to use the energy system transformation as an opportunity and be able to generate further long-term growth – even if, as expected, this is not directly reflected in our operating earnings for the 2019 financial year. After all, one aspect of the new climate in which we operate is that our earnings performance has become more volatile overall.

Comparison of expected and actual business performance and outlook for 2020 financial year

	Forecast FY 2019	Results FY 2019	Outlook FY 2020
Adjusted sales	Forecast adjusted after end of 1st half of 2019: slight reduction on previous year's figure (Euro 3.9 billion)	Sales of Euro 3.7 billion	Slight increase on previous year
Adjusted EBIT	Forecast adjusted after end of 1st half of 2019: slight reduction on previous year's figure (Euro 228 million)	Adjusted EBIT of Euro 225 million	Slight increase on previous year; depending on weather and wind conditions, electricity and fuel prices, the development in waste and biomass prices, the spreads on conventional generation, the market and competitive climate and the availability of our plants. High volatility in renewable energies project development business
Adjusted equity ratio	Target > 30%	Adjusted equity ratio of 34.5%	Target > 30%
Adjusted ROCE	Slightly below previous year's level (8.5%)	Adjusted ROCE of 7.9%	At around previous year's level
Investments	Significant increase on previous year (Euro 290 million)	Total investments of Euro 310 million	Moderate increase on previous year
Employees	Increase in personnel totals in growth fields; further efficiency measures in existing business	Increase in personnel totals to 6,113 employees at 30 September 2019 (previous year: 5,978)	Increase in personnel totals in growth fields; further efficiency measures in existing business

BUSINESS FRAMEWORK

Energy policy changes

Key energy policy factors

Following the publication in January 2019 of the final report of the Commission on Growth, Structural Change and Employment (KWSB) established by the Federal Government, the "Climate Cabinet" of the Federal Government took up its work in April 2019. This resulted in the Federal Government presenting the initial cornerstones of its 2030 Climate Protection Plan in September 2019. One key aspect is the CO_2 pricing due to take effect in the transport and heating energy sectors from 2021. Revenues from this levy are to be used to benefit people and business with measures such as lowering electricity costs and raising the allowance for long-distance commuters. These are accompanied by numerous sector-specific measures, such as subsidies for district heating grids and expanding e-mobility. Parts of the overall package require approval by the Federal Council and may be further amended there. The underlying framework then agreed will play a significant role in determining the options and scope available to the energy industry, and thus also to MVV, to shape developments in the coming years.

Implementation of coal exit

In its final report, the KWSB sketches out the exit from coal and provides a basic roadmap for further decarbonising the energy industry in Germany.

With the German Structural Reinforcement Act (Strukturstärkungsgesetz) adopted by the Federal Cabinet in August 2019, the Federal Government will be supporting those regions particularly affected by the exit from coal. The next step on the way towards decarbonisation is the hard coal exit legislation, which is still being drafted. The current draft provides for a two-stage process for exiting from coal for electricity generation. The first stage provides for voluntary decommissioning of hard coal power plants. Here, there are plans to introduce a tendering mechanism to determine compensation payments for operators. A regulatory solution is then envisaged for the second stage. The Federal Government has underlined its intention to enact both projects in law before the end of the 2019 calendar year.

Introduction of CO_2 pricing in Germany

One main point in the 2030 Climate Protection Programme presented by the Federal Government is the future pricing of CO_2 emissions in the transport and heating energy sectors. Previously, these were not recorded in the European Emissions Trading System (ETC). District heating from ETS plants is not expected to be affected. CO_2 pricing is initially intended to begin in 2021 at a fixed price of Euro 10 per tonne of CO_2. By 2025, this price would then gradually rise to Euro 35 per tonne of CO_2. From 2026, it is planned to move to a national trading scheme with emission certificates, which would decrease in number from year to year. Prices for 2026 range from Euro 35 to Euro 60 per tonne of CO_2. The decision as to whether upper and lower threshold limits will still be needed for the CO_2 price after 2026 is not due to be taken before 2025.

Energy efficiency in buildings

The German Building Energy Act (GEG) is intended to pool various individual norms and account for new European requirements. The norms thereby consolidated come from the German Building Energy Saving Act (EnEG), the German Ordinance on Energy-Saving Heat Insulation and Energy-Saving Systems Technology in Buildings (EnEV) and the German Renewable Energies Heat Act (EEWärmeG). At the same time, the Coalition Agreement requires the governing parties not to make building energy efficiency requirements any stricter. It therefore remains to be seen whether the GEG legislation can provide any notable momentum for the heating energy turnaround. Since the first draft was issued in November 2018, the Federal Government has repeatedly deferred consideration of the project.

The White Paper issued by the Federal Government for its 2030 Climate Protection Programme envisages introducing tax incentives for energy-efficiency building refurbishments, irrespective of the specific technology used. Existing subsidy programmes are to be merged into a "Federal Support for Efficient Buildings" scheme and allotted additional funds. Alongside direct support for converting from oil heating to efficient heating systems, the individual measures provided for also include boosting energy efficiency measures in urban districts.

EU Clean Energy Package finally adopted

In May 2019, the EU Council of Ministers provided definitive approval for the remaining legislative sections of the Clean Energy Package. This marks the completion of the legislative process for the "Winter Package", which began with publication of the EU Commission's proposal in November 2016. The most important topics involve expanding renewable energies and decentralisation. The timeframe for expanding renewable energies in the EU has been extended, with the renewable share of electricity generation to be achieved by 2030 being raised from 27 % to 32 %. Not only that, the share of heating energy from renewable energies is to be raised by 1.1 % a year; where waste heat is also included, the annual growth rate should amount to 1.3 %. This way, the EU's internal electricity market is being further

prepared for the conversion in the supply system. This will increasingly consist of decentralised prosumers and electricity storage facilities and will be far more flexible.

MVV welcomes these measures to strengthen the EU's internal electricity market and the improved competitive climate within and between member states. The new requirements will align the internal electricity market to the growing share of energy generation provided by renewable energies and thus create a basis for ensuring a reliable and affordable electricity supply in the EU. For MVV, this may result in growth potential relevant to its major reporting segments.

German Consolidated Energy Act in force

The German Consolidated Energy Act (EnSaG) came into force in December 2018. This legislation contains amendments to several acts and ordinances relevant to the energy industry, and in particular to the German Renewable Energies Act (EEG) and the German Combined Heat and Power Generation Act (KWKG). Among other aspects, the EnSaG legislation also provides for special tender rounds to be held for open-space photovoltaics plants and onshore wind turbines in the years from 2019 to 2021, with total capacities of 4 GW to be tendered for each energy form.

MVV welcomes this decision, which will also be of significance for the New Energies reporting segment. After all, special tender rounds represent one way of accelerating the expansion in renewable energies. It is also pleasing to note that the Federal Government's 2030 Climate Protection Programme includes the target of achieving a 65 % share of renewable energies by 2030. Subsidies for combined heat and power generation have been extended by three years until 2025, increasing planning reliability for the construction of new plants and modernisation of existing plants. This extension is nevertheless still subject to state aid approval by the European Commission. The key points of the 2030 climate package also provide for further extension in CHP subsidies through to 2030.

Further legal amendment corrects design faults in EEG tenders

The German Renewable Energies Act (EEG) has been amended to facilitate implementation of the special tenders provided for in the German Consolidated Energy Act (EnSaG). The omnibus legislation introduced to accelerate energy line expansion will ensure that the special onshore wind power tender rounds will also be free of any market distortions resulting from special privileges.

Higher Regional Court in Düsseldorf nullifies decision on productivity factor

In appeal proceedings in July 2019, the Higher Regional Court (OLG) in Düsseldorf nullified the general sector productivity factor (Xgen) of 0.49 % set by the Federal Network Agency (BNetzA) for gas in the third regulatory period. This factor reduces the permissible revenue cap based on assumed progress in enhancing the productivity of grid operations compared with the overall economy. It is significant for the level of grid fees, and thus earnings at grid operators. This effect is countered by inflation, which is expected to remain low for the foreseeable future. The BNetzA is obliged to issue a new decision concerning the factor it has set. The ruling allows appeals to be filed at the Federal Supreme Court. In November 2018, the BNetzA had specified an Xgen of 0.90 % for electricity supply grid operators, with large numbers of grid operators taking legal action against this as well.

Federal Supreme Court upholds rates of equity return set by Federal Network Agency

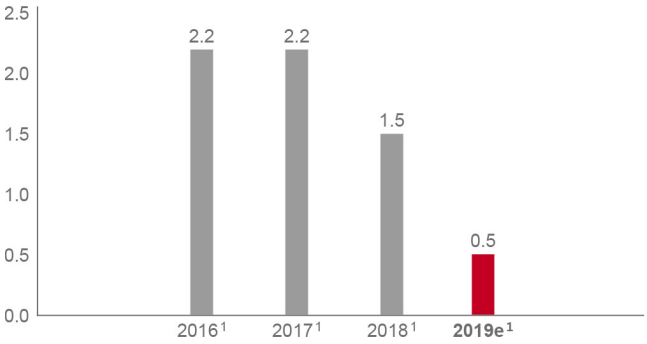
With a decision taken on 9 July 2019, the Federal Supreme Court (BGH) confirmed the reduction by the Federal Network Agency (BNetzA) in the rates of equity return for electricity and gas grids in the third regulatory period and thus overrode the decision to the contrary taken by the Higher Regional Court (OLG) in Düsseldorf on 22 March 2018. This will reduce the level of future grid fees, and thus earnings, in our Supply Reliability reporting segment. Although the BGH has not yet published the reasons for its decision, the industry as a whole will find it difficult to understand the decision, as it fails to take adequate account of the forward-looking expansion in distribution grids. The levels of return set by the BNetzA in 2016 are among the lowest in Europe, and that even though Germany has some of the greatest grid expansion needs of any EU member state. To master the tasks needed to integrate renewable energies, considerable sums will still have to be invested in energy grids. At the same time, new energy policy targets, such as sector coupling, e-mobility and digitalisation, also have to be accounted for. In many cases, these require grids as points of connection both between consumers and producers and between various forms of energy. The lower rates of return will make it more difficult to mobilise the necessary capital.

Market climate and competition

German economy with lower growth

In their autumn survey, experts at Germany's leading economic research institutes forecast GDP growth of 0.5 % for the 2019 calendar year. This represents a slowdown in the pace of growth compared with the previous year. Global trade conflicts and the prospect of Brexit are continuing to hold back the German economy.

GDP GROWTH IN GERMANY
(%)



1 Calendar year

Source: Forecast in autumn survey of leading German economic research institutes (September 2019)

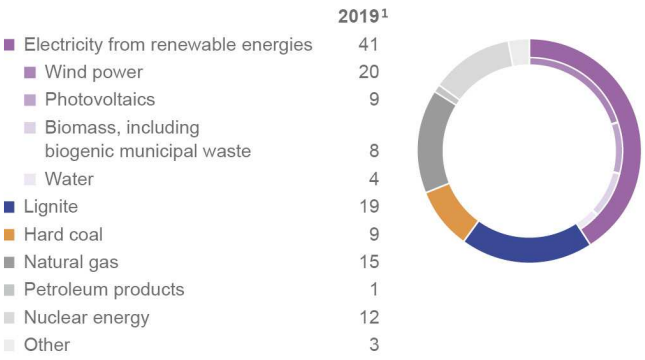
Reduction in electricity generation in Germany

In October 2019, the Association of the German Energy and Water Industries (BDEW) published its estimates of gross electricity generation in Germany. A total of 447.8 billion kWh of electricity was generated in the first nine months of 2019, around 5 % less than in the previous year's period (472.9 billion kWh).

Renewables share of German electricity generation rises to 41 %

According to BDEW estimates, the share of gross electricity generation in Germany accounted for by renewable energies totalled 41 % in the first nine months of the 2019 calendar year, up from 35 % in the previous year's period. This growth was particularly due to onshore wind turbines, which raised their electricity generation volumes by 17 %. Generation volumes at offshore wind turbines rose by 31 %. Electricity generation volumes at photovoltaics systems grew year-on-year by 3 %. Biomass and biogenic municipal waste were used to generate 1 % less electricity than one year earlier. In total, around 183 billion kWh of electricity was generated from renewable energies.

GROSS ELECTRICITY GENERATION IN GERMANY
Shares (%)



1 January to September 2019

Slowdown in wind power expansion

In January 2019, the German Wind Energy Association (BWE) published its "Wind Energy Fact Sheet Germany" for the 2018 calendar year. Overall, 3,371 MW of wind power capacity, of which 2,402 MW onshore, was newly installed in Germany. Total installed wind power capacities therefore amounted to 59,313 MW, around 6 % higher than the previous year's figure.

Gross onshore wind power capacity totalling 287 MW was added in Germany in the 1st half of the 2019 calendar year. This represents the lowest figure since the introduction of the German Renewable Energies Act (EEG) in 2000. The slowdown in the addition of new capacities, a trend already apparent in the previous year following record figures in 2014 to 2017, has thus continued. Compared with the first six months of the 2018 calendar year, the volume of wind power capacity newly added fell by 82 %.

Positive market expectations underpin our strategic alignment

Making a long-term success of the energy turnaround is not just about converting the electricity sector to renewables; all sectors have to decarbonise. The key building block here is to interlink energy flows across these sectors and connect them to the energy industry (sector coupling). The Federal Government underlines this objective in the 2030 Climate Protection Programme intended to implement its 2050 Climate Protection Plan. Using green electricity across all sectors will help to force out fossil fuels. The direct use of renewable energies is set to rise significantly, especially in the heating energy and transport sectors. In transport, the transition from combustion engines to e-mobility will be promoted. By 2030, between 7 and 10 million electric vehicles should be registered in Germany, with 1 million charging stations installed by then. Together with decarbonised heating energy grids, sector coupling powered by electricity from renewable energies should enable people to live and work in buildings on a climate-friendly basis.

The “Heat Transition 2030” study published by the Agora Energiewende think tank is based on the assumption that the building heating energy turnaround will be driven by three key factors: energy efficiency, low-CO_2 heating grids and nearby renewable energies. The study sketches out the scale of contribution required from each factor, particularly if the country is to achieve its ambitious climate protection targets for 2050. It concludes that significantly expanding conurbation heating energy grids has a key role to play in facilitating the energy turnaround in the building heating energy sector. The expansion potential for (district) heating grids from around 10 % to around 23 % of end energy needs by 2050 appears capable of significant improvement.

The quality of life in cities can be noticeably enhanced by making extensive use of digital solutions. “Smart” cities cut daily commuting times, lower rates of criminality and reduce waste volumes, while also improving air quality. Those are the findings of “Smart Cities: Digital solutions for a more liveable future”, a study issued by the McKinsey Global Institute (MGI). In their study “The German Smart City Market 2017–2022: Facts and Figures”, the eco Association of the Internet Industry and Arthur D. Little predict that the smart city market will be one of the fastest-growing sectors, both in Germany and around the world, in the years ahead. Revenues in this sector in Germany are forecast to double from around Euro 20.4 billion in 2017 to approximately Euro 43.8 billion in 2020.

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

Disparate developments in wholesale prices for fuels and electricity in period under report

Wholesale prices for fuels and electricity moved in different directions during our year under report.

Listed prices for Brent crude oil for supply in the following month (front month) ranged from US$ 49.95 to US$ 86.70 per barrel in the 2019 financial year. At US$ 65.72, the average barrel price in the year under report was US$ 4.21 down on the previous year’s figure of US$ 69.93. The very strong supply situation led prices on the oil market to fall sharply at the beginning of the period under report. Having peaked above US$ 86 per barrel in early October, the market fell to its annual low of less than US$ 50 at the end of December 2018. A moderate stabilisation in prices led to highs of more than US$ 75 per barrel in the 1st and 2nd quarters of the 2019 calendar year. In the further course of the year, however, this recovery proved to be temporary. From the summer onwards, concerns about the robustness of the global economy led to more marked sell-offs. By bottoming out at US$ 56, the price per barrel nevertheless avoided new annual lows. Within this weaker market climate, the attack on Saudi-Arabian oil production in mid-September 2019 led to the sharpest rise in the oil price in a single day in nearly 15 years. Sales at US$ 72 per barrel nevertheless proved unsustainable over time. The rapid re-availability of the facility and global de-escalation efforts significantly eased the situation.

Average natural gas price listings for the front-year product in the NetConnect Germany (NCG) market region came to Euro 20.53/MWh in the year under report, Euro 1.11/MWh higher than in the previous year. Overall, front-year prices showed only weak trends in the period under report. The peak in prices at Euro 26.50/MWh at the beginning of October 2018 was not confirmed in the 1st quarter of the 2019 calendar year, with downward pressure coming from mild temperatures and the weak development in oil prices. This weak trend continued in the following quarters. Well-filled gas storage facilities following the mild 1st quarter and very good overall availability of LNG and pipeline gas led prices to their annual low of Euro 17.10/MWh at the beginning of September 2019.

Coal prices maintained their downward trend in the 2019 financial year. Compared with the previous year, front-year prices per metric tonne for hard coal in the ARA region (Amsterdam, Rotterdam, Antwerp) fell by US$ 8.58 to an average of US$ 75.66. Key drivers of this development were the fall in prices in the oil market, mild temperatures in the 1st quarter of the 2019 calendar year and weaker demand in Asia, and that while stocks remained high. Having peaked at US$ 95.50 at the beginning of October 2018, the price fell to US$ 62 in mid-June 2019, with this weak trend being exacerbated by macroeconomic concerns in the summer months in particular. The temporary highs in prices in mid-September, which were triggered by a lack of clarity as to the availability of a nuclear plant in France, did not continue as the month progressed.

In the year under report, prices for base load electricity for supply in the following year rose by Euro 9.20/MWh to an average of Euro 48.75/MWh. The annual high was recorded at Euro 54.20/MWh in mid-October 2018. Prices fell significantly as the year progressed and reached their annual low at Euro 44.50/MWh. Unlike the oil and gas markets, however, electricity did not follow a downward trend in the period under report, but rather moved sideward within a broad range throughout the 2019 financial year. Key drivers were developments in prices on the emissions and coal markets, mild weather conditions in the 1st quarter of the 2019 calendar year and the macroeconomic situation in Germany. Concerns that individual French nuclear power plants might be unavailable proved unsubstantiated. The peak prices previously attained were therefore not upheld in the further course of the year.

Emission right prices per tonne of CO_2 for supply in the following year averaged Euro 23.89 in the 2019 financial year, Euro 11.04 higher than the equivalent figure for the previous year. In November 2017, the EU Commission, European Council and the EU Parliament had reached agreement on the post-2020 reform of emissions trading. This lent positive momentum to the market and drove prices upwards in the period under report. Having dipped to a temporary low at Euro 15.45 at the beginning of November 2018, prices rose significantly in the further course of the year, reaching their annual high at Euro 29.84 in mid-July 2019. More recently, prices lost ground due to weaker coal prices in response to economic concerns and the political uncertainty surrounding Brexit, and reached a temporary low of Euro 25 at the beginning of September 2019. Despite recent sell-offs, however, the upward trend in the emissions market remains intact.

Having begun the year at Euro –1.30/MWh, the clean dark spread (CDS), i.e. the margin from generating electricity from hard coal, showed slightly positive developments in the 1st quarter of the year under report. Lower temperatures in the period from October to December 2018 led spreads to average at around Euro 0.30/MWh. In the months from January to March 2019, the spread showed slightly negative developments once again, reaching an average level of Euro – 0.30/MWh. Lower prices in the coal market, simultaneously accompanied by robust electricity prices, led the CDS to recover in the following six months. In the period from April to September 2019, it traded at an average of Euro 0.90/MWh.

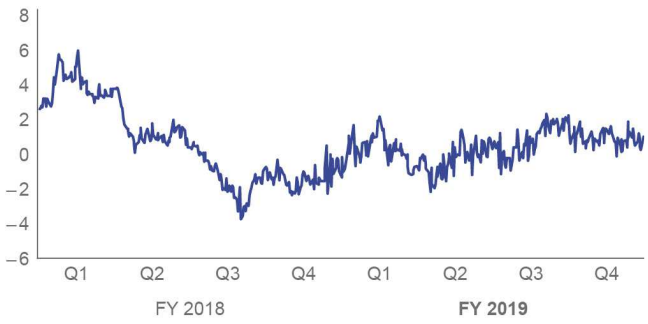
DEVELOPMENT IN WHOLESALE MARKET PRICES FOR ELECTRICITY, GAS AND CO_2 RIGHTS

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

DEVELOPMENT IN WHOLESALE PRICES FOR OIL AND COAL

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

DEVELOPMENT IN CLEAN DARK SPREAD FOR 2020



- Clean dark spread 2020 (Euro/MWh)

MVV's market position

- 69 % of all the electricity we generated in Germany in the 2019 financial year was based on renewable energies. For Germany as a whole, renewable energies accounted for 41 % of gross electricity generation in the first nine months of the 2019 calendar year.
- Together with our Juwi and Windwärts subsidiaries, we are one of Germany's leading renewable energies project developers.
- Directly marketing electricity from renewable energies in the market premium model also forms part of our portfolio. We had renewable energies plants with total capacities of around 4,000 MW under contract in Germany at the end of the year under report. This makes us one of the country's largest direct marketers.
- We are also one of the German market leaders when it comes to generating energy from biomass. In the 2019 financial year, we operated 19 biomass and biogas plants in Germany. These plants generated a total of 293 million kWh of electricity and 162 million kWh of heating energy. Moreover, we generated 233 million kWh of biomethane at four biomethane plants.
- Our grid companies in Germany have district heating grids with a total length of 1,159 kilometres. In the year under report, we generated district heating turnover of 5.9 billion kWh in Germany, which make us the country's second-largest district heating provider.
- We are one of Germany's top three operators of energy from waste and biomass plants. Our German locations accepted a total of 1.7 million tonnes of waste and refuse-derived fuels for incineration in the 2019 financial year.
- In the Czech heating energy market, our subsidiary MVV Energie CZ a.s. operates at 15 locations, making us one of the market leaders.

Impact of weather conditions

Temperatures around previous year's level

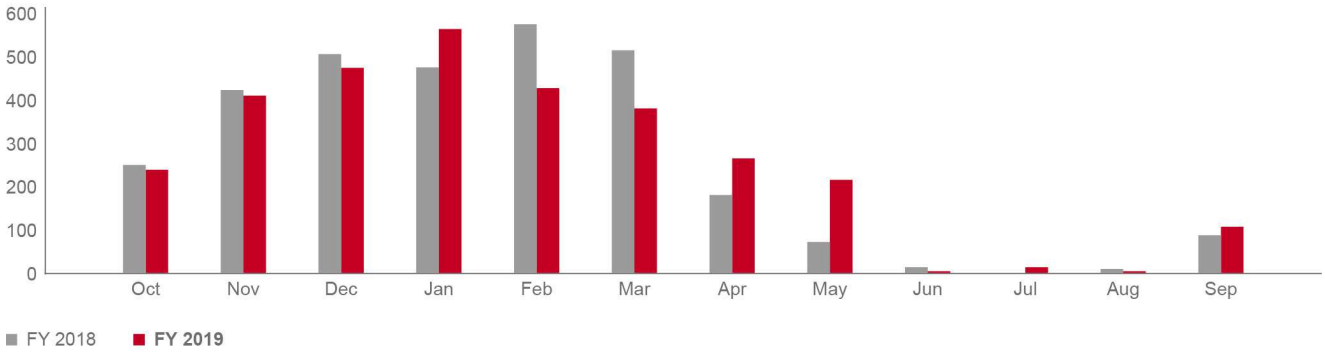
Lower outdoor temperatures lead to higher heating energy requirements at our customers. That is also reflected in higher degree day figures, which we refer to as an indicator of temperature-based heating energy use. In the 1st half of our 2019 financial year, degree day figures were still lower than in the previous year due to the unusually mild weather conditions at the time. Lower temperatures in the 2nd half of the year, especially in April and May, then led degree day figures for the period under report as a whole to exceed the previous year's comparatively low level by 1 %.

Lower wind volumes than in previous year

Just like our customers' heating energy needs, electricity generation volumes at our renewable energies plants are also influenced by weather conditions. Wind volumes play a key role in determining the volume of electricity generated by our turbines and are particularly important in this respect.

In the regions relevant to us, the volume of usable wind power in the 2019 financial year was around 1 % higher overall than the long-term average. The wind yield fell short of the previous year's figure, which over the same period had exceeded the long-term average by around 4 %. For this comparison, we draw on the "EMD-ConWx Mesoscale" wind index with a reference period (20-year average).

DEGREE DAY FIGURES



PRESENTATION OF EARNINGS PERFORMANCE

The period under report is the 2019 financial year, which started on 1 October 2018 and ended on 30 September 2019. Unless otherwise indicated, the comments below refer to the MVV Energie Group ("MVV"), i.e. all companies fully consolidated and shareholdings recognised at equity.

As of 30 September 2019, we implemented the decision taken by the IFRS Interpretations Committee (IFRS IC) on the "Physical settlement of contracts to buy or sell a non-financial item (IFRS 9)". Upon the settlement of forward transactions recognised as derivatives through profit or loss pursuant to IFRS 9 the respective sales and cost of materials are therefore recognised at current spot prices. As these measurement items are not cash-effective and also do not influence our operating business, we adjust our sales and cost of materials to exclude them. Prior to implementation of the decision, the previous measurement was reversed through profit or loss and recognised in other operating income or expenses. Sales and cost of materials were recognised in the amount of the agreed forward prices. This means that, as of the balance sheet date, sales, cost of materials and other operating income and expenses have been adjusted to exclude IFRS 9 items.

MVV

Euro million	**FY 2019**	FY 2018	+/– change	% change
Development in turnover				
Electricity (kWh million)	20,246	23,556	– 3,310	– 14
Heating energy (kWh million)	6,286	6,598	– 312	– 5
Gas (kWh million)	25,719	21,209	+ 4,510	+ 21
Water (m³ million)	41.1	41.3	– 0.2	0
Combustible waste delivered (tonnes 000s)	2,300	2,328	– 28	– 1
Adjusted sales excluding energy taxes	3,683	3,903	– 220	– 6
of which electricity sales	1,668	2,095	– 427	– 20
of which heating energy sales	374	359	+ 15	+ 4
of which gas sales	718	548	+ 170	+ 31
of which water sales	89	87	+ 2	+ 2
Adjusted EBIT	225	228	– 3	– 1

Within sales, we eliminate IFRS 9 measurement items, which came to a net total of Euro – 23 million at 30 September 2019 and of Euro 28 million at 30 September 2018. The reduction in adjusted sales reflects the lower volume of electricity trading volumes. Moreover, since the beginning of the 2019 financial year one amendment due to IFRS 15 means that items relating to the allocations paid under the German Renewable Energies Act (EEG) have been netted between sales and cost of materials. This reduced the volume of sales compared with the previous year. Overall, the adjusted EBIT of Euro 225 million fell only slightly short of the previous year's figure and was therefore consistent with our earnings forecast. As expected, our project development business performed positively and supplied higher earnings contributions. Moreover, adjusted EBIT for the 2019 financial year was positively influenced by a year-on-year increase in the at-equity result. Turbine damage at our biomass power plant at Ridham Dock in March 2019 meant that our UK plant availability levels in the 2nd half of the past financial year fell short of those in the first half. Positive developments in electricity and biomass prices in particular enabled us to compensate for the negative impact of this. Furthermore, earnings were adversely affected by follow-up costs for the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK), which is being replaced by a modern gas-powered CHP plant. We worked to counter these charges on earnings by continuously enhancing our efficiency and cutting our costs.

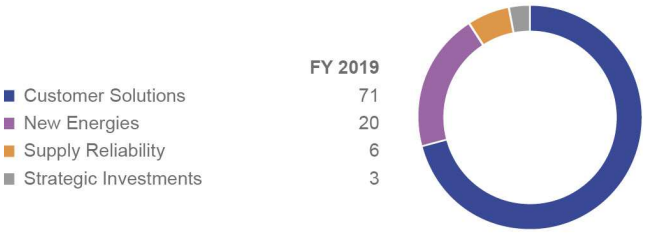
In the 2019 financial year, MVV generated 88 % of its consolidated sales in Germany (previous year: 95 %), while 12 % of sales were generated abroad (previous year: 5 %).

ADJUSTED SALES EXCLUDING ENERGY TAXES BY REGION

Shares (%)

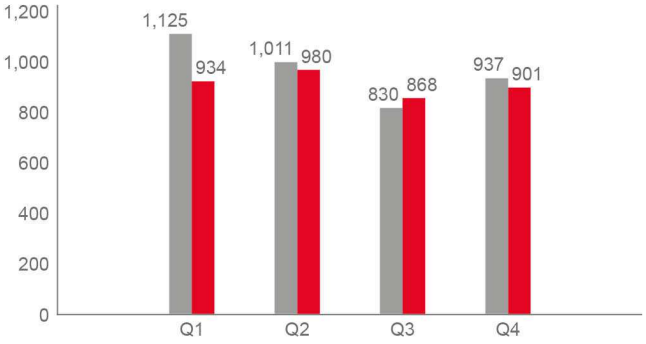
ADJUSTED SALES BY REPORTING SEGMENT

Shares (%)



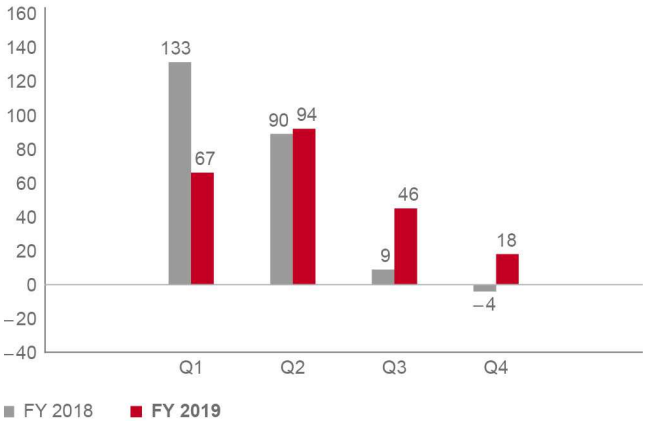
ADJUSTED SALES EXCLUDING ENERGY TAXES BY QUARTER

Euro million



ADJUSTED EBIT BY QUARTER

Euro million



Customer Solutions reporting segment

Customer Solutions				
Euro million	FY 2019	FY 2018	+/– change	% change
Development in turnover				
Electricity (kWh million)	19,676	22,958	– 3,282	– 14
Heating energy (kWh million)	4,582	4,742	– 160	– 3
Gas (kWh million)	25,394	20,838	+ 4,556	+ 22
Water (m³ million)	40.2	40.4	– 0.2	0
Combustible waste delivered (tonnes 000s)	155	160	– 5	– 3
Adjusted sales excluding energy taxes	2,632	2,819	– 187	– 7
Adjusted EBIT	26	47	– 21	– 45

Mainly as a result of lower trading volumes, electricity turnover fell short of the previous year. This reduction was due to lower portfolio and direct marketing volumes. Heating energy turnover was also lower than in the previous year, with this being due above all to weather conditions. The rise in gas turnover was driven, among other factors, by higher marketing volumes for individual portfolio customers.

The reduction in sales was principally due to the netting of items between sales and cost of materials. This netting, required under IFRS 15 since the beginning of the 2019 financial year, did not have any impact on earnings.

Start-up costs incurred to develop innovative products and services and establish new business activities were partly offset by positive items resulting from sales activities and energy marketing. In comparing the earnings performance with the previous year, it should also be noted that earnings in the previous year were significantly influenced by two factors: the sale of assets relating to multi-utility contracts and the impairment loss recognised on goodwill at MVV Enamic.

New Energies reporting segment

New Energies

Euro million	FY 2019	FY 2018	+/– change	% change
Development in turnover				
Electricity (kWh million)	409	416	– 7	– 2
Heating energy (kWh million)	1,014	1,151	– 137	– 12
Gas (kWh million)	218	254	– 36	– 14
Combustible waste delivered (tonnes 000s)	2,047	2,064	– 17	– 1
Adjusted sales excluding energy taxes	734	738	– 4	– 1
Adjusted EBIT	109	90	+ 19	+ 21

Electricity turnover fell slightly compared with the previous year. Due above all to a damaged turbine at Ridham Dock, plant availability in our environmental energy business fell short of the previous year. The reduction in heating energy, gas and waste volumes resulted from lower plant availability due in particular to downtime for inspection measures.

Sales were at the same level as in the previous year.

In the previous year, segment earnings were negatively affected by the impairment loss recognised on goodwill at the Juwi subgroup. In our environmental energy business, the positive development in electricity and biomass prices in particular enabled us to compensate for the negative impact of lower plant availability. Our project development business performed more positively – benefiting in particular from a stronger international business.

Supply Reliability reporting segment

Supply Reliability

Euro million	FY 2019	FY 2018	+/– change	% change
Adjusted sales excluding energy taxes	229	256	– 27	– 11
Adjusted EBIT	69	62	+ 7	+ 11

The reduction in sales was mainly due to the netting of market premiums and allocations paid under the German Renewable Energies Act (EEG). This measure, required under IFRS 15, does not have any impact on earnings.

In the previous year, segment earnings were positively affected on a one-off basis by the sale of fibre optic networks at MVV Energie AG. Earnings for the year under report were adversely affected by follow-up costs at the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK). These factors were more than offset by a higher at-equity result and positive regulatory effects, leading to an overall increase in adjusted EBIT in the Supply Reliability segment.

Strategic Investments reporting segment

Strategic Investments

Euro million	FY 2019	FY 2018	+/– change	% change
Development in turnover				
Electricity (kWh million)	161	181	– 20	– 11
Heating energy (kWh million)	690	705	– 15	– 2
Gas (kWh million)	107	117	– 10	– 9
Water (m³ million)	0.9	0.9	0	0
Combustible waste delivered (tonnes 000s)	98	104	– 6	– 6
Adjusted sales excluding energy taxes	86	87	– 1	– 1
Adjusted EBIT	20	25	– 5	– 20

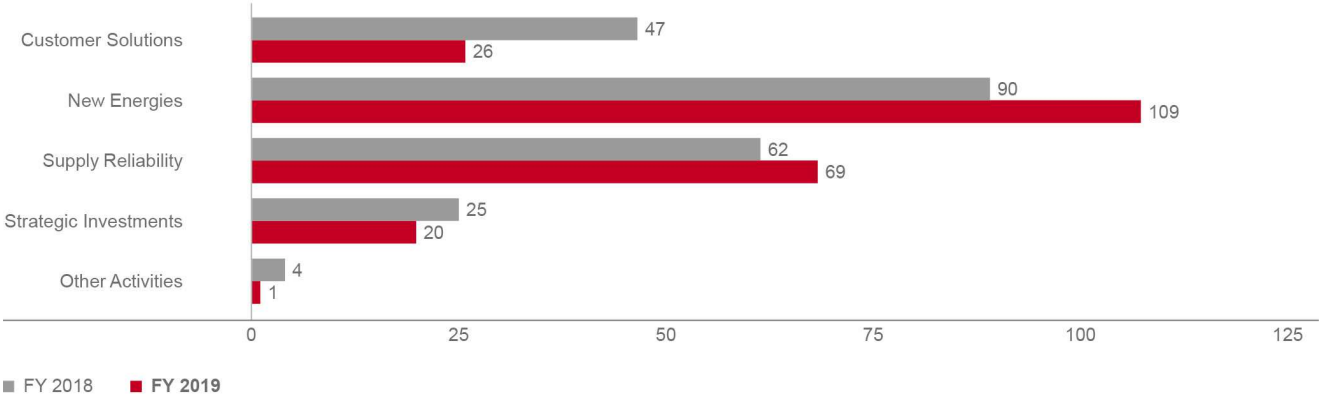
The earnings performance was influenced on the one hand by start-up costs incurred to develop new business fields and by downtime at a plant. On the other hand, changes arose in provisions: In the previous year, provisions were reversed, while in the year under report new provisions were added.

Other Activities reporting segment

Other Activities				
Euro million	**FY 2019**	FY 2018	+/– change	% change
Adjusted sales excluding energy taxes	2	2	0	0
Adjusted EBIT	1	4	– 3	– 75

The main reason for the reduction in adjusted EBIT was the amended allocation of overhead costs.

ADJUSTED EBIT BY REPORTING SEGMENT
Euro million



Reconciliation with adjusted EBIT

In the following table, we show how we reconcile the EBIT reported in the income statement for the 2019 financial year with the adjusted EBIT relevant for management purposes.

Reconciliation of EBIT (income statement) with adjusted EBIT from 1 October to 30 September			
Euro million	**FY 2019**	FY 2018	+/– change
EBIT as reported in income statement	165	257	– 92
Financial derivatives measurement item	+ 56	– 31	+ 87
Structural adjustment for part-time early retirement	0	0	0
Restructuring result	–	– 1	+ 1
Interest income from finance leases	+ 4	+ 3	+ 1
Adjusted EBIT	**225**	**228**	**– 3**

For our value-based management, we refer to adjusted EBIT and calculate this key operating earnings figure by adjusting our operating earnings before interest and taxes to eliminate, among other items, the positive and negative items due to fair value measurement as of the reporting date of financial derivatives recognised pursuant to IFRS 9. These came to a net total of Euro – 56 million at 30 September 2019 and Euro 31 million at 30 September 2018. These measurement items reflect the development in prices on the commodities and energy markets. They have no impact on payments, neither do they affect our operating business or dividend.

Development in key income statement items

Adjusted cost of materials fell by Euro 131 million to Euro 2,827 million and thus less sharply than sales. This was due above all to our project development business, the first-time application of IFRS 15 and higher prices for CO_2 emission rights. Furthermore, the increase in gas trading volumes is also reflected in the cost of materials.

At Euro 438 million, **adjusted employee benefit expenses** were Euro 16 million higher than in the previous year. The main reasons for this increase were the first-time full consolidation of DC-Datacenter-Group in the 3rd quarter of our 2019 financial year and collectively agreed pay rises.

Excluding IFRS 9 measurement items, the development in **adjusted other operating income** **Notes to Income Statement (Note 4), Page 109** in the previous year was shaped by the sales of fibre optic networks and of assets relating to multi-utility contracts, as well as higher reversals of provisions. In the year under report, these effects were partly offset by higher income from emission rights. As a result, the adjusted other operating income of Euro 117 million fell only Euro 27 million short of the previous year.

Also excluding IFRS 9 measurement items, **adjusted other operating expenses** **Notes to Income Statement (Note 7), Page 110** decreased by Euro 26 million to Euro 186 million. As well as lower additions to write-downs and receivables defaults, this development was largely due to lower rental, leasehold and leasing expenses.

In the **income statement** **Page 87,** IFRS 9 measurement items are included under other operating income and other operating expenses. Their net balance led to a negative item of Euro 56 million in the 2019 financial year. In the previous year, the measurement item was positive at Euro 31 million.

At Euro 183 million, depreciation was approximately at the previous year's level.

The goodwill write-downs **Notes to Income Statement (Note 14), Page 113** of Euro 34 million recognised in the previous year mainly relate to impairment losses recognised on goodwill for Juwi and at MVV Enamic.

At Euro – 57 million, the **adjusted financial result** was Euro 8 million lower than in the previous year, a development mainly due to higher expenses incurred to discount provisions.

Net of the adjusted financial result, the **adjusted EBT** of Euro 168 million for the 2019 financial year was lower than in the previous year (Euro 179 million).

Adjusted annual net income increased by Euro 4 million and amounted to Euro 115 million for the year under report. This was due to a reduction in adjusted taxes on income to Euro 53 million (previous year: Euro 68 million). This in turn resulted on the one hand from the lower volume of earnings in the tax balance sheet and on the other hand from tax-exempt transactions and non-period tax income.

At Euro 17 million, adjusted minority interests were at the same level as in the previous year. **Adjusted annual net income after minority interests** rose to Euro 98 million (previous year: Euro 94 million). On this basis, adjusted earnings per share amounted to Euro 1.49 (previous year: Euro 1.43). The number of shares remained unchanged at 65.9 million.

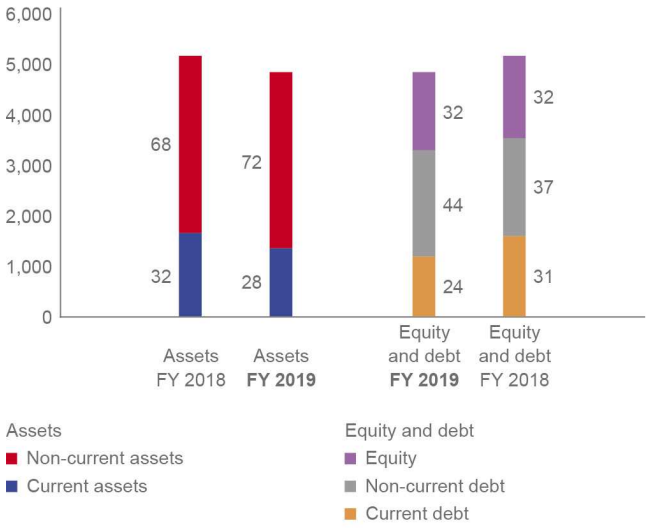
PRESENTATION OF ASSET POSITION

Balance sheet structure

Euro 000s	30 Sep 2019	30 Sep 2018	% change
Assets			
Non-current assets	3,463,827	3,493,137	– 1
Current assets	1,358,370	1,646,844	– 18
Total assets	**4,822,197**	**5,139,981**	**– 6**
Equity and debt			
Equity	1,535,267	1,625,214	– 6
Non-current debt	2,109,348	1,922,200	+ 10
Current debt	1,177,582	1,592,567	– 26
Total equity and debt	**4,822,197**	**5,139,981**	**– 6**

BALANCE SHEET STRUCTURE

Euro million, shares (%)



Balance sheet development

Total assets came to Euro 4,822 million at the balance sheet date, Euro 318 million lower than at 30 September 2018 **Balance Sheet, Page 89.**

On the asset side of the balance sheet, **non-current assets** fell by Euro 29 million to Euro 3,464 million. Material changes related above all to non-current other receivables and assets **Notes to Balance Sheet (Note 22), Page 123**. Chiefly as a result of measurement items for energy trading transactions, this line item fell by Euro 238 million to Euro 71 million. This development was opposed by an increase in property, plant and equipment by Euro 46 million to Euro 2,634 million, with this mainly being due to advance payments and construction in progress. Alongside the construction of the gas-powered CHP plant in Kiel and a new energy from waste plant in Dundee in Scotland, these also related to the linking up of our waste-powered CHP plant in Mannheim to the regional district heating grid. With the first-time application of IFRS 16, leases have been recognised since 1 October 2018 as a right-of-use asset and a corresponding lease liability from such time as the leased item becomes available. Consistent with this, we have reported right-of-use assets for the first time. At 30 September 2019, these amounted to a total of Euro 150 million.

Current assets fell by Euro 288 million to Euro 1,358 million. The reduction in current other receivables and assets **Notes to Balance Sheet (Note 22), Page 123** by Euro 324 million to Euro 442 million was principally due to measurement items for energy trading transactions. Cash and cash equivalents **Notes to Balance Sheet (Note 26), Page 125** rose to Euro 358 million, up Euro 47 million compared with the previous year's balance sheet date. The increase in liquid funds was chiefly due to the taking up of debt capital to finance major current projects.

Our **equity** including non-controlling interests amounted to Euro 1,535 million at the balance sheet date and thus fell Euro 90 million short of the previous year's figure **Notes to Balance Sheet (Note 27), Page 126.**

For Group management purposes, we adjust our consolidated balance sheet at 30 September 2019 to eliminate cumulative IFRS 9 measurement items. On the asset side, we eliminate positive fair values of derivatives and allocable deferred taxes, which totalled Euro 350 million (30 September 2018: Euro 988 million). On the equity and debt side, we eliminate negative fair values and allocable deferred taxes, here Euro 358 million, from debt (30 September 2018: Euro 912 million). In equity, we eliminate the net balance of Euro – 8 million (30 September 2018: Euro 76 million). This led to **adjusted equity** of Euro 1,544 million at 30 September 2019 (30 September 2018: Euro 1,550 million). As a percentage of the adjusted total assets of Euro 4,472 million (30 September 2018: Euro 4,152 million), the adjusted equity ratio came to 34.5 % at 30 September 2019, as against 37.3 % at 30 September 2018.

Non-current debt increased to Euro 2,109 million, up by Euro 187 million compared with the previous year's balance sheet date. Due above all to the taking up of loans, **non-current financial debt Notes to Balance Sheet (Note 30), Page 132** rose by Euro 370 million to Euro 1,534 million. By contrast, **non-current other liabilities Notes to Balance Sheet (Note 31), Page 133** fell by Euro 183 million to Euro 221 million. This development chiefly resulted from the year-on-year decrease in the value of derivative financial instruments. This was due to realisation and the lower level of market prices, which reduced the fair values of energy trading transactions recognised under IFRS 9.

Current debt fell by Euro 415 million to Euro 1,178 million. This development was significantly influenced by **current other liabilities Notes to Balance Sheet (Note 31), Page 133** which, due above all to IFRS 9 measurement items, decreased by Euro 374 million to Euro 461 million. Largely as a result of the repayment of current liabilities to banks, **current financial debt Notes to Balance Sheet, Note 30, Page 132** declined by Euro 54 million and totalled Euro 169 million.

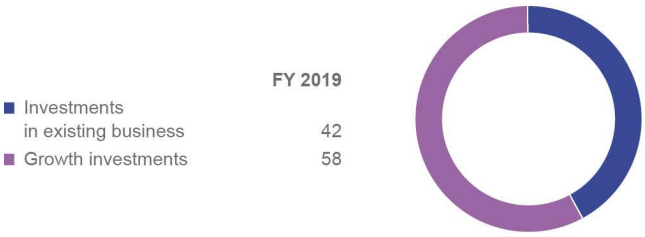
Investments

We invested a total of Euro 310 million in the 2019 financial year (previous year: Euro 290 million).

Investments

Euro million	FY 2019	FY 2018	+/– change	% change
Customer Solutions	37	30	+ 7	+ 23
New Energies	119	81	+ 38	+ 47
Supply Reliability	124	157	– 33	– 21
Strategic Investments	16	11	+ 5	+ 45
Other Activities	14	11	+ 3	+ 27
Total	**310**	**290**	**+ 20**	**+ 7**
of which growth investments	181	124	+ 57	+ 46
of which investments in existing business	129	166	– 37	– 22

INVESTMENTS
Shares (%)



Our largest investment projects in the 2019 financial year included:

- Expanding our Friesenheimer Insel location in Mannheim
- Taking over an energy from waste plant and building a new CHP plant in Dundee/Scotland
- Building the gas-powered CHP plant in Kiel
- Developing windfarms for our proprietary portfolio
- Maintaining and renewing our distribution grids
- Expanding and increasing the density of our district heating grids

Furthermore, we invested in our portfolio of shareholdings.

PRESENTATION OF FINANCIAL POSITION

Due above all to the taking up of new loans to finance projects and the first-time application of IFRS 16, **current and non-current financial debt** rose by Euro 316 million to Euro 1,702 million. This increase was countered by the repayment of existing loans in regular instalments or upon final maturity. **Net financial debt** (current and non-current financial debt less cash and cash equivalents) increased by Euro 269 million to Euro 1,345 million.

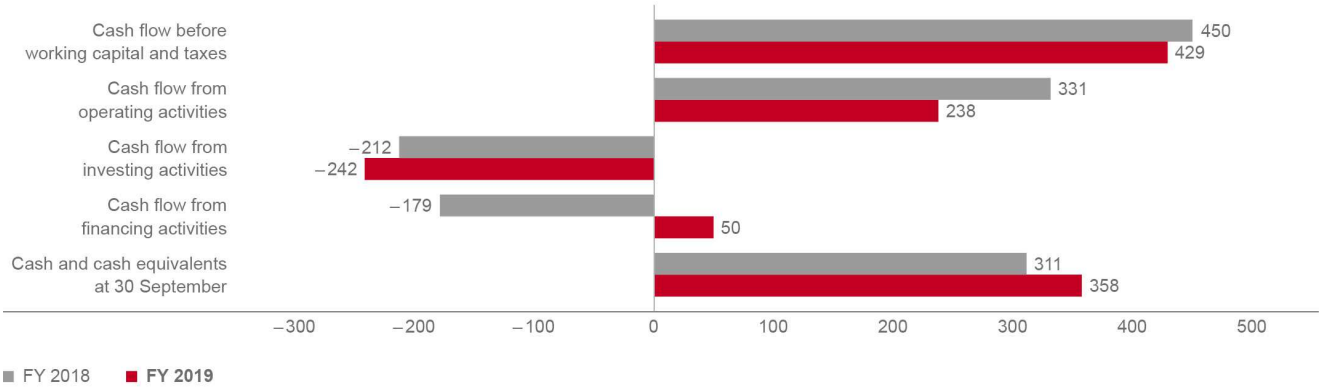
The significant reduction in earnings before taxes (EBT) compared with the previous year was partly offset by the positive impact of eliminating non-cash income and expenses and the non-operating result. As a result, the **cash flow before working capital and taxes** fell by Euro 21 million. The largest positive item related to the elimination of non-cash IFRS 9 measurement items.

The **cash flow from operating activities** fell Euro 93 million short of the previous year. This development was due on the one hand to the slight decrease in the cash flow before working capital and taxes. On the other hand, the reduction was intensified above all by higher inventories and contract assets in the project development business and repayments of margins in the trading business (security for counterparty default risk) as a result of market prices. By contrast, the cash flow benefited in particular from changes in trade receivables and payables resulting from improved working capital management. In the previous year, substantial fluctuations in prepayments received on orders significantly reduced the cash flow from operating activities. By contrast, the change in the current financial year is notably less marked.

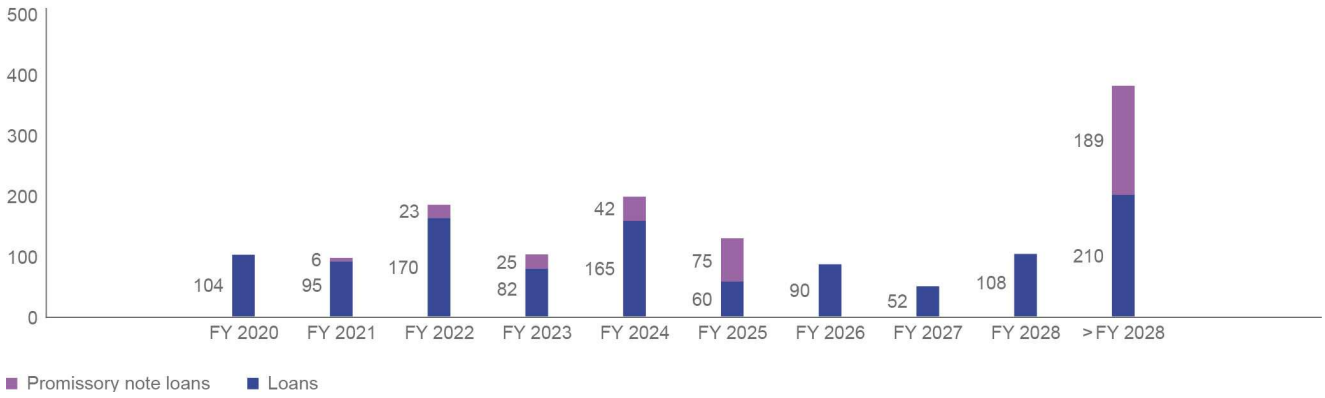
The development in the **cash flow from investing activities** was mainly influenced by the higher inflow of cash generated in the previous year due to the sale of non-current assets. Furthermore, the cash flow from investing activities was also affected by the payment made to increase the shareholding held in DC-Datacenter-Group. These factors were countered above all by divestments, which had a correspondingly positive impact on the cash flow. Payments for investments in property, plant and equipment and intangible assets were at approximately the same level as in the previous year. Overall, the cash flow from investing activities decreased by Euro 30 million compared with the 2018 financial year.

The **cash flow from financing activities** rose year-on-year by Euro 229 million, a development chiefly due to higher net borrowing. This largely involved taking up promissory note loans to finance current major projects. Furthermore, the cash flow from financing activities was influenced by the payment made to acquire the remaining shares in Juwi.

CASH FLOW STATEMENT
Euro million



REPAYMENT PROFILE
Euro million



Professional financial management

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

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

MVV Energie AG manages a cash pool for itself and 34 other companies within our Group. In this capacity, it manages, procures and secures both its own short-term liquidity and that of the subsidiaries connected to the pool. Long-term financing required for investments is provided to the subsidiaries in the form of shareholder loans.

Rating

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

COMBINED NON-FINANCIAL DECLARATION

General information

By publishing this Combined Non-Financial Declaration (NFD), we have complied with our reporting obligations pursuant to § 315b and § 315c in conjunction with § 289b et seq. of the German Commercial Code (HGB). We submit this declaration for the MVV Group (MVV) and its parent company, MVV Energie AG. The guidelines and concepts applied by MVV and MVV Energie AG are consistent with each other; no non-financial targets refer solely to MVV Energie AG. The NFD comprises this chapter and forms part of the Combined Management Report. The reporting in the NFD refers to MVV and thus, as in other sections of this Annual Report, to all subsidiaries fully consolidated in the consolidated financial statements. If, for select reporting topics, we focus on our major locations in Mannheim, Offenbach, Kiel and Wörrstadt and if individual key figures include shareholdings recognised at equity, then we indicate this accordingly. To avoid redundancies within our Combined Management Report, in relevant sections of the NFD we refer to further information included in other chapters. References to disclosures outside the Combined Management Report constitute supplementary information and do not form part of the NFD.

The Supervisory Board commissioned Pricewaterhouse-Coopers GmbH Wirtschaftsprüfungsgesellschaft (PwC), Frankfurt am Main, to perform a limited assurance audit on the NFD. This was based on the International Standard on Assurance Engagements ISAE 3000 (revised). The audit opinion can be found on **Page 187.**

As an energy company with a focus on sustainability, we take our responsibility towards society and the environment seriously. We are consistently working to minimise any potentially negative implications of our business activities and to make measurable contributions to restructuring the energy supply and protecting the climate and environment. In our Annual Report and on our website we have for many years now provided information about the challenges we face and the progress we have made as company that is aware of its responsibilities and acts sustainably. We will be publishing a separate Sustainability Report for the 2019 financial year on our website in the first quarter of 2020. We are preparing this in accordance with the core option of the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) in the GRI Standards version. By publishing the Sustainability Report we will in time-honoured fashion satisfy the transparency requirements of our stakeholders. To identify which sustainability topics are of particular significance for us, in 2019 we again performed a materiality analysis in accordance with GRI. In the second stage, we allocated the results of this analysis, where appropriate, to the aspects listed in § 289c HGB, namely environmental concerns, employee concerns, social concerns, respect for human rights and combating corruption and bribery. We reviewed which disclosures were needed for these aspects to provide an understanding of the course of business, business results and situation of MVV Energie AG and the Group, as well as the implications of our business activities for these aspects. The table on the following page provides on overview of these disclosures. In our NFD, we base our description of concepts and our non-financial key figures on GRI Standards, but do not comply with all aspects of these standards in this report.

Business model and risk analysis

As one of Germany's leading energy companies, we aim to provide our industrial, SME, commercial and private household customers with a reliable and affordable supply of environmentally-friendly energy and to support them by offering innovative solutions enabling them to implement their own energy turnarounds. In this, we cover all major stages of the energy industry value chain. Further information can be found in the Business Model and Corporate Strategy chapters **Pages 18 to 21.**

Within our existing risk management system, we record and evaluate all material risks associated with our business activities and business relationships **Page 79.** In our risk management system, we also record and evaluate any material non-financial risks that may have severe negative implications for our business performance. The review process performed on non-financial risks in the 2019 financial year concluded that there were no risks which satisfied the materiality criteria set out in § 289c (3) No. 3 and 4 HGB.

SUSTAINABILITY MANAGEMENT

Our sustainability management focuses on those topics, processes and measures that we view as forming part of our core business **Business Model, Page 18 and Corporate Strategy Pages 19 to 21.** Our strategic sustainability targets **Page 19** were adopted by the Executive Board for the years 2016 to 2026 and are an integral component of our corporate strategy.

Our sustainability management is anchored across various levels of the Group. The Executive Board bears overall strategic responsibility. We continually review, evaluate and manage MVV's performance on the basis of sustainability indicators and medium-term targets. We also evaluate investment projects by reference to sustainability criteria. In organisational terms, the sustainability programme is located in our group strategy and energy industry department, where the team coordinates the sustainability strategy, plans projects and measures in connection with our group-wide sustainability management and implements these. It regularly reports to the steering committee on group level, as well as to the Executive Board.

Disclosures on contents of combined non-financial declaration

Contents of combined non-financial declaration		
Aspects pursuant to § 289 HGB	**MVV area of action pursuant to GRI materiality analysis**	**Disclosures on concepts, targets, measures, results, due diligence processes and non-financial key figures pursuant to § 289c HGB in section**
Environmental concerns	Decarbonisation and energy turnaround	Climate protection Renewable energies
	System change	Supply reliability
Employee concerns	Employee concerns	Training and development Diversity Occupational safety
Social concerns	Social commitment	Social commitment
Respect for human rights and combating corruption and bribery	Value chain[1]	Respect for human rights and combating corruption and bribery
	Compliance[1]	

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

Environmental concerns aspect

Decarbonisation and energy turnaround

Since 2018, climate protection has become even more prominent as a topic within society, among the general public and in the political arena. With new analyses, such as the IPCC Special Report 1.5°C, climate science has underlined the urgency of adopting a far more ambitious approach towards decarbonisation, not least as global warming is advancing far more quickly than projected just a few years ago. Taken together with the fact that Germany will miss its climate protection targets for 2020, the results of the Commission on Growth, Structural Change and Employment (the so-called "Coal Commission") and international and national movements within society, there is ever greater momentum in the field of climate and energy policy.

While the "2050 Climate Protection Plan" adopted in 2016 only defines sector CO_2 reduction targets and CO_2 budgets until 2030, since 2019 the Federal Government has been compiling specific policy measures to safeguard compliance with the decarbonisation targets for 2030. There is political consensus concerning the accelerated exit from coal by 2038 at the latest together with a more rapid expansion in renewable energies to 65 % by 2030. In September 2019, the "Climate Cabinet" of the Federal Government adopted the key points of the 2030 Climate Protection Programme. These include imposing prices on CO_2 emissions resulting from fuels not covered by European emissions trading. With a broad mix of additional subsidies, pricing instruments and regulatory law, the Federal Governmental aims to accelerate decarbonisation in private households and companies alike and thus ensure that the climate protection targets set for 2030 are actually met.

National decarbonisation has attained a new quality due to the increasing calls for long-term climate neutrality. This would involve moving away from the European and national target, which initially provided for reducing emissions in a range of 80 % to 95 % by 2050. By contrast, climate neutrality implies not only decarbonising by at least 95 %, but also compensating for or capturing unavoidable residual emissions. For the energy industry, climate neutrality means on the one hand that the use of fossil fuels will have to be reduced more rapidly than previously planned.

On the other hand, more renewable energies will have to be planned and implemented to cover the full decarbonisation of other sectors, for example by working with power-to-gas or power-to-liquids. Decarbonisation and energy turnaround are of core significance to us as an energy company.

Climate protection

Our objective is climate neutrality
We are committed to the Paris Climate Accord and will achieve climate neutrality as a company by 2050 at the latest. Our strategic sustainability targets for the period from 2016 to 2026 mean that we have already set clear and measurable milestones as we head to climate neutrality.

Our decarbonisation strategy covers four areas:

- Generation positions

  We will reduce emissions from our conventional energy generation positions **Page 48** to zero by 2050 at the latest. The trajectory here depends on the specific time at which existing power and heating energy plants are decommissioned, as well as on the relevant replacement investments, including the availability of green gas products, such as renewable hydrogen or biomethane. Key aspects of the underlying conditions will be fixed by the legislation governing the exit from coal.

- Renewable energies

  We have pressed ahead with expanding renewable energies for years now and will maintain this focus. One ambitious interim target involves doubling our own renewable electricity generation volumes in the period from 2016 to 2026 **Page 49**. Furthermore, conventional heating energy generation will be replaced by low-CO_2 alternatives and gradually by renewable sources.

- Climate neutrality at our customers

  Our products and services promote climate neutrality at and by our customers. Today, we already facilitate substantial reductions in CO_2 in other industries and sectors, for example by means of energy efficiency measures, by planning and operating renewable energies plants and by offering innovative services. We will significantly cut energy-related emissions at our customers and improve their climate footprints. Decarbonisation at our customers will be reflected in higher annual net CO_2 savings and the scope of projected volumes of renewable energies. For both these factors, we set specific interim targets in 2016 already for the period until 2026
  Page 48 and Page 49.

- Handling residual emissions

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

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

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

Our climate balance sheet for the 2019 financial year

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

Direct CO_2 emissions designated as Scope 1 under the Greenhouse Gas Protocol arise upon energy generation at our proprietary plants or at plants from which we procure contingents.

Direct CO_2 emissions are influenced by weather-based demand for heating energy, as well as by the development in wholesale electricity prices and, related to this, capacity utilisation rates at our generation plans. MVV is not able to influence these factors. In the medium to long term, the development in direct emissions will largely depend on the dates on which existing plants are decommissioned and the replacement investments implemented.

The coal-powered joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK), in which Stadtwerke Kiel owns a 50 % stake, was decommissioned in the 2019 financial year. The new gas-powered CHP plant will start operations in the 2020 financial year. In the before/after comparison, the decommissioning of GKK has significantly reduced emissions at the Kiel location in absolute terms. Viewed from a full consolidation perspective, however, MVV's direct CO_2 emissions will not decrease once operations begin at the gas-powered CHP plant, but may possibly rise slightly. That is because our 50 % stake in GKK involves a shareholding recognised at equity whose CO_2 emissions were outside MVV's reporting boundaries from a fully consolidated perspective. By contrast, the new, highly efficient gas-powered CHP plant will be fully consolidated. Following the launch of operations, 100 % of its emissions will therefore be reported under our direct CO_2 emissions.

CO_2 key figures depending on reporting boundaries

	MVV plants	Upstream/downstream stages of value chain	Overall economy
CO_2 emissions	Direct emissions (Scope 1)	Indirect emissions (Scope 2/3)	
CO_2 reductions	Direct emissions (Scope 1) Net CO_2 saving	Indirect emissions (Scope 2/3) Net CO_2 saving	Net CO_2 saving

The counterintuitive circumstance that a reduction in CO_2 by around two thirds in absolute terms does not impact positively on our direct emissions underlines the highly limited meaningfulness of this key figure in terms of the success achieved in decarbonisation. The same applies to other investments which may lead to higher direct CO_2 emissions despite a local reduction in CO_2 emissions. For this reason, we record and report on all reductions in CO_2 arising in the economy as a whole as a result of our strategic measures and investments by way of the "net CO_2 saving" key figure.

Indirect CO_2 emissions comprise greenhouse gases arising in upstream and downstream stages of the value chain. CO_2 emissions in upstream value chain stages arise at suppliers manufacturing products and services purchased by MVV. These relate, for example, to the production of photovoltaics systems and wind turbines or to procurement of electricity not generated by MVV. Emissions activities in downstream stages of the value chain chiefly involve the use of natural gas supplied by MVV to customers. Reporting on indirect CO_2 emissions forms part of any complete climate balance sheet. These disclosures are nevertheless largely of an informational nature, as we act here exclusively as a sales company and cannot control or even influence the CO_2 balance sheet of these commodities.

In the short term, the development in our indirect CO_2 emissions is largely dependent on sales volumes for electricity, gas and heating energy, as well as on the performance of the renewable energies project development business. In this respect, the reduction in the 2019 financial year was mainly due to lower sales volumes, lower fuel use and less capacity installed by our project development business.

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

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

Here, we account for climate-effective CO_2 savings along the entire value chain. We assess the extent to which all of the new strategic activities, projects and investments at our group of companies impact on their direct and indirect greenhouse gas emissions. For all activities, we record the average CO_2 savings for a maximum period of ten years from the beginning of the measure. We do not account for historic reduction projects and financial transactions.

The target also includes our at-equity shareholdings, whose specific target contributions we present in our separate Sustainability Report. However, the path towards the 2026 target year will not follow a linear trajectory. It will depend on the time at which new plants, such as the gas-powered CHP plant in Kiel, commence operations, as well on the market and regulatory climate, as these factors influence the attractiveness of investments and emission-cutting projects and the speed at which they can be implemented.

In the year under report, net CO_2 savings at our fully consolidated companies amounted to 485,507 tonnes of CO_{2eq} (previous year: 484,789 tonnes of CO_{2eq}). We achieved additional savings with energy efficiency projects and by launching operations with new renewable energies plants. Our at-equity shareholdings also slightly increased their CO_2 reductions compared with the previous year, in this case mainly as a result of activities relating to the supply of green heating energy at Stadtwerke Ingolstadt.

Climate balance sheet

1,000 tonnes $CO_{2\,eq}$	FY 2019	FY 2018	+/– change	% change
Direct CO_2 emissions (Scope 1) [1]	1,545	1,547	– 2	0
Indirect CO_2 emissions (Scope 2 and 3) [1, 2, 3]	6,354	8,393	– 2,039	– 24
Net CO_2 saving	486	485	+ 1	0

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

2 Indirect Scope 2 emissions (location-based) cover the Mannheim, Kiel and Offenbach locations and amount to 8 thousand tonnes of CO_2; these figures are based on calendar years; indirect Scope 3 emissions for GHG Protocol categories 1, 3, 9 and 11 amount to 6,346 thousand tonnes of CO_2.

3 The method used to calculate indirect Scope 3 emissions was developed further in the 2019 financial year. The figures are therefore only comparable with the previous year's figures to a limited extent.

Renewable energies

Renewable energies contribute to climate protection targets

By 2050, electricity generation in Germany should be based almost entirely on renewable energies. They have a crucial role to play in meeting national climate protection targets. This situation harbours growth potential for our company; not least because of this, renewable energies are a key focus of our strategic alignment. By expanding renewable energies, we are also making a measurable contribution on behalf of society as a whole to the success of the energy turnaround and achievement of climate protection targets.

Here too, we set two specific sustainability targets in 2016 already and intend to reach these by the end of the 2026 financial year.

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

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

The renewable energies electricity generation capacity at our fully consolidated companies amounted to 474 MW at the end of the 2019 financial year, 7 MW higher than in the previous year. This increase was due to the fact that we included wind turbines from Juwi's portfolio for the first time in the 2019 financial year. Electricity generation capacity at our at-equity shareholdings also showed a slight year-on-year increase.

We will be extending our renewable energies generation portfolio in the 2020 financial year. Our Juwi and Windwärts subsidiaries, for example, are currently building two windfarms with a total capacity of around 24 MW. We will be including these in our proprietary generation portfolio upon their completion in the 2020 financial year.

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

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

Since the beginning of the 2017 financial year, we have connected renewable energies plants with capacities of 1,882 MW to the grid. In the 2019 financial year, we connected 460 MW of new capacities **Page 50.**

Forward-looking generation portfolio

At the end of the 2019 financial year, electricity generation at renewable energies plants (including biomass CHP and the biogenic share of waste/refuse-derived fuels) accounted for a 63 % share of our total electricity generation volumes (previous year: 62 %).

Overall, we generated 1,095 million kWh of climate-neutral electricity at our renewable energies plants in the year under report.

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

MW_e	FY 2019	FY 2018	+/– change	% change
Biomass and biogas plants [1]	104	104	0	0
EfW/RDF	160	161	– 1	– 1
Wind power	204	196	+ 8	+ 4
Hydroelectricity	2	2	0	0
Photovoltaics	4	4	0	0
Total	**474**	**467**	**+ 7**	**+ 1**

1 Including biomethane plants

The heating energy generation capacity at our renewable energies plants for the first time also includes the figure for our energy from waste plant in Dundee.

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

MW_t	FY 2019	FY 2018	+/– change	% change
Biomass and biogas plants	119	119	0	0
EfW/RDF	719	682	+ 37	+ 5
Total	**838**	**801**	**+ 37**	**+ 5**

Increasing significance of our project development business

With our Juwi and Windwärts subsidiaries, we offer end-to-end project development and services for planning, building and managing operations at renewable energies plants.

Concluded development of new renewable energies plants

MW_e	FY 2019	FY 2018	+/– change	% change
Wind power	62	336	– 274	– 82
Photovoltaics	398	675	– 277	– 41
Total	**460**	**1,011**	**– 551**	**– 55**

The project development business is by its very nature volatile. The volume of new renewable energies plants at which operations are launched each year depends, among other factors, on social and political acceptance, the length of approval processes, regulations governing subsidies for renewable energies, as well as on specific implementation dates for individual projects, and can therefore vary widely from year to year.

Operations management for renewable energies plants

MW_e	FY 2019	FY 2018	+/– change	% change
Wind power	1,246	1,295	– 49	– 4
Photovoltaics	2,288	1,768	+ 520	+ 29
Total	**3,534**	**3,063**	**+ 471**	**+ 15**

System change

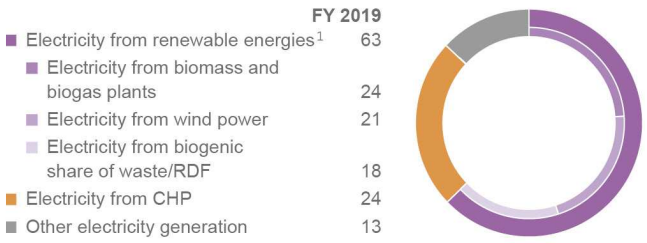
Energy companies play a key role in the energy system transformation. They do this by investing in the energy infrastructure to prepare this for the energy turnaround and make it fit for the future. At the same time, they perform what is for society the important task of ensuring a reliable and stable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

Secure energy supply

Gradual conversion of our generation portfolio

As we shape our course towards the energy system of the future along social, ecological and economic lines, we are working to an increasing extent with renewable and to a decreasing extent with conventional energies and relying here on a variety of energy sources and technologies. Doubling our proprietary electricity generation from renewable energies between 2016 and 2026 **Page 49** will change our generation portfolio, which is set to become even more diversified. This kind of generation portfolio will help us to ensure a secure energy supply for our customers. That is particularly true for the supply of heating energy to those private, business and industrial customers connected to our district heating and industrial steam grids in Mannheim, Offenbach and Kiel.

ELECTRICITY GENERATION
Shares (%)



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

Electricity generation volumes

kWh million	FY 2019	FY 2018	+/– change	% change
Biomass and biogas plants	418	498	– 80	– 16
Biogenic share of waste/RDF	309	274	+ 35	+ 13
Wind power	370	367	+ 3	+ 1
Hydroelectricity	2	6	– 4	– 67
Photovoltaics	4	3	+ 1	+ 33
	1,103	**1,148**	**– 45**	**– 4**
Electricity from CHP	418	501	– 83	– 17
Other electricity generation	224	187	+ 37	+ 20
Total	**1,745**	**1,836**	**– 91**	**– 5**

The reduction in electricity generation volumes at biomass and biogas plants was due above all to turbine damage at our biomass power plant at Ridham Dock and the resultant lower level of plant availability. Our plants which generate

energy from waste and refuse-derived fuels (biogenic share of waste) generated more electricity, a development due to the fact that inspection and planned maintenance work had reduced electricity generation volumes in the previous year.

The decrease in the volume of electricity generated using CHP largely resulted from the reduced use of our heating energy-based CHP plants in Kiel and Offenbach. The growth in other electricity generation was chiefly driven by higher electricity generation volumes at our energy from waste plants.

Heating energy generation volumes

kWh million	FY 2019	FY 2018	+/– change	% change
Biomass and biogas plants	198	202	– 4	– 2
Biogenic share of waste/RDF	1,725	1,851	– 126	– 7
	1,923	**2,053**	**– 130**	**– 6**
Other heating energy generation	1,754	1,837	– 83	– 5
Total	**3,677**	**3,890**	**– 213**	**– 5**

The reduction in heating energy volumes was mainly due to weather conditions.

Biomethane generation volumes

kWh million	FY 2019	FY 2018	+/– change	% change
Biomethane generation	233	254	– 21	– 8

The year-on-year reduction in biomethane generation volumes was attributable to the lower energy content of the substrates, as well as to lower plant availability levels.

Safeguarding grid stability despite growing grid loads

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

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

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

The Executive Board and management bodies are provided with an annual overview of interruptions and continually informed about the implementation of measures to counter such interruptions. We draw strategic conclusions on this basis and factor these into our investment and maintenance projects.

We invested Euro 103 million in maintaining and expanding our grids in the 2019 financial year.

Electricity supply interruptions (SAIDI)

Minutes/year	2018 [1]	2017 [1]	+/– change	% change
Grid regions				
MVV Netze Mannheim	29.8	18.5	+ 11.3	+ 61
Energienetze Offenbach	6.3	8.0	– 1.7	– 21
SWKiel Netz	15.3	12.2	+ 3.1	+ 25
Germany [2]	13.9	15.1	– 1.2	– 8

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

The SAIDI figures for the Mannheim grid region in 2017 and 2018 were significantly influenced by an increased number of interruptions on medium-voltage level. These resulted from the use of a special component. In 2018, one related interruption in particular meant that the SAIDI figure was significantly higher than in the previous year. By mid-2019, grid components of this type were replaced in a special project. We expect this to impact positively on the SAIDI figure for 2019.

Following a result at the lower end of the long-term range in the previous year, the SAIDI figure for the Stadtwerke Kiel grid region returned to the expected level in 2018. Here too, we reported a slightly higher number of interruptions on medium-voltage level.

Employee concerns aspect

We offer attractive and secure jobs to around 6,100 employees. That is a great responsibility, and one that we are aware of and account for in our strategic decisions.

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

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

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

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

We aim to protect the physical and mental wellbeing of our own employees and of those employees who work on our behalf. To this end, we are continually working to improve work safety at the Group. Consistent with this objective, the work safety committees organised on a decentralised basis offer structured programmes and measures about which the Executive Board is also kept regularly informed.

We employed a group-wide total of 6,113 individuals as of 30 September 2019. The increase compared with the previous year was mainly due to the first-time consolidation of DC-Datacenter-Group in the year under report.

Number of employees (headcount)

	30 Sep 2019	30 Sep 2018	+/– change	% change
MVV [1]	6,113	5,978	+ 135	+ 2
of which Germany	5,232	5,137	+ 95	+ 2
of which abroad	881	841	+ 40	+ 5

1 Including 330 trainees (previous year: 312)

Our employees abroad include 500 employees at our Czech subgroup, 241 at Juwi's foreign shareholdings and 135 at the British subsidiaries of MVV Umwelt.

Training and development

Training with promising prospects for the future

Training acts as a key pillar of MVV's recruitment strategy. We therefore offer a wide variety of training programmes.

In Mannheim alone, we offer the next generation of employees training in more than 20 different commercial and technical vocations, as well as combined training and study programmes. In the year under report we took on two refugees for the first time as employees. In Mannheim, Offenbach, Kiel and Gersthofen close to Augsburg, we are among the largest trainers in the regions.

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

As of 30 September 2019, a total of 330 young women and men were in training at MVV. Our trainees also include five former refugees who are training as specialists in metals technology and industrial electricians.

In 2019, we participated in a STEM (science, technology, engineering and maths) internship that we are offering with other companies in the region. Pupils from Year 9 upwards spend five days at five companies getting to know five training vocations and five study programmes in STEM subjects. This innovative approach, in which our trainees and our students present the contents of their subjects in practical terms, enables us to arouse young people's interest in STEM vocations and provide them with initial guidance.

Since 2018, we have taken part in the European research project EATAP (European Apprenticeship Talent Program). In cooperation with partners from Austria, Lithuania and the UK, we are looking into ways of promoting the talent of high-potential apprentices in STEM vocations in line with common standards across Europe. In the year under report, we also took part once again with our City College partner in Plymouth in the ERASMUS+ European exchange programme for trainees in programmes offered by the Chamber of Industry and Commerce (IHK).

Targeted personnel development

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

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

We aim to develop the potential of our employees.

When it comes to the individual further development measures we provide to our employees, we have set one key focus on the topic of digitalisation. In the past financial year, we held more than 30 events in Mannheim, with topics ranging from specialist areas, such as artificial intelligence, robotics, blockchain and augmented reality, to general knowledge transfer and digital aids in everyday office life through to questions relating to the interplay of ethics and digitalisation. One of our key focuses in the 2020 financial year will be on collaboration. Looking at our everyday working life in a large organisation, the aim here will be to network our cooperation even more closely, share knowledge, accept mutual impulses and information and integrate new topics into our own work processes.

In Mannheim, we work with a management review system to record the skills and further training needs of our managers and high-potential employees and to plan their next career steps. This involves a graded process including self-assessment and third-party assessment, internal management review conferences and concluding feedback talks held between employees and managers. In the year under report, 239 managers and employees with management potential took part in this programme. Individual development measures are implemented under the responsibility of specialist departments, while employees with management potential are developed within a well-established talent management process. This function is being continually expanded to enable the company to retain high-potential employees. Our understanding of talent also extends to specialist and upcoming staff, such as trainees and career starters.

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

Diversity

Equal opportunity on all levels

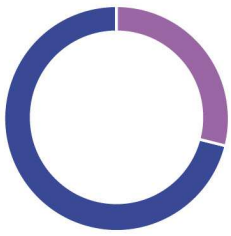
Women have traditionally accounted for a comparatively low share of the overall workforce at energy companies, and MVV is no exception in this respect. That is why we aim to offer more targeted and closer support to women. We are convinced that different skills and management styles impact positively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

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

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

WOMEN AND MEN
Shares (%)

	FY 2019
Women	29
Men	71



Status: 30 September 2019

Women accounted for 29 % of our workforce and 15 % of our managers at 30 September 2019. For MVV Energie AG, we report on the share of women in both first and second management tiers. In August 2017, the Executive Board set targets to be achieved by 30 September 2021. By that date, the share of women in the first management tier should have reached 25 %, with a corresponding target of 30 % for the second management tier. At 10 %, the share of female managers in the first tier as of 30 September 2019 was slightly lower than in the previous year (30 September 2018: 11 %). The share of women in the second management tier rose year-on-year and, at 29 %, almost reached the specified target (30 September 2018: 22 %).

To reach our targets, we are adopting various approaches, drawing on a variety of promotional measures and programmes and expanding these further. One major package of measures involves offering targeted personnel development to women with suitable potential. One example is the individual support offered to women in mentoring schemes. In X-Company-Mentoring, a cross-company programme organised each year in cooperation with other well-known companies in the region, male and female mentors in the management tiers of participating companies pass on their skills and experience to talented female employees for a period of one year. This is intended to support employees in their own personal development, with a separate special focus on management. A further focal point involves building networks between current participants and those who took part in the programme in previous years. As part of our corporate membership of "European Women's Management Development", an association for professional women, we offer free membership for interested female employees. This way, they can benefit from free contingents of places in presentations and seminars. Since the 2018 financial year, we have offered an internal lecture series specially targeted at women. These lectures, which have attracted great interest, deal with career-related topics such as how to deal with power and status, as well as body language.

Occupational health and safety

Avoiding accidents

One important matter for us involves protecting the physical and mental health of our employees and of those employees who work on our behalf. We therefore make permanent efforts to improve work safety at the Group.

As well as laying down organisational and technical framework requirements for occupational, fire, plant and environmental safety, we also regularly reassess our occupational safety and prevention measures and develop these further. Our work safety committees, comprising both employer and employee representatives, are formed by the companies on location. We liaise closely with professional associations and employee representatives and agree our occupational safety and accident prevention strategies with them.

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. With an electronic instruction system we offer work safety training units specially tailored to individual workplaces. This way, our employees can flexibly and individually address a variety of basic work safety topics. As well-informed contact partners for occupational health and safety in their organisational units, our safety officers also perform an important function. They are regularly trained by our occupational safety specialists and work safety coordinators, who communicate our company-specific safety requirements and prevention focuses.

We aim to make keep the lost time injury frequency rate (LTIF) at MVV as low as possible.

We regularly inspect our plants and operating divisions to identify weak points and make every conceivable effort to prevent accidents. We systematically evaluate accidents at the Group.

Our accident statistics and accident prevention measures are regularly evaluated on Executive Board level, with further measures also being discussed and planned.

Accident statistics

	FY 2019	FY 2018	+/– change	% change
Lost time injury frequency rate (LTIF) [1, 2, 3]	7.7	6.7	+ 1	+ 15

1 Includes all fully consolidated companies in Germany and individual at-equity shareholdings in Germany
2 Calculation based on work-related accidents from first day of absence per 1,000,000 working hours
3 Basis for centrally recorded FTE figures:
FTE figures at reporting date on 30 September
Basis for non-centrally recorded FTE figures:
FTE figures received directly from companies at reporting date on 30 September
Working hours = number of FTEs (full-time equivalents) at reporting date on 30 September multiplied by 1,700 hours (≙ 1 FTE)

Our target for the 2019 financial year amounted to 4.6 and was based on our target of achieving an LTIF figure of 3.9 by the 2020 financial year. By systematically recording and evaluating accidents and regularly communicating accident statistics, we recognised at an early stage that we would not reach the target set in the year under report. We therefore took immediate measures to counter this trend.

We implemented our new inspection concept in further areas of the company and stepped up our regular safety briefings in order further raise awareness for safety-related issues on all levels. Furthermore, we analysed all work-related accidents in detail, processed these and made suitable information available to our employees in the “Learning from previous accidents” section of our electronic instruction system. We backed up these measures with campaign days focusing on occupational health and safety.

We will continue to make every effort to avoid accidents and work-related health risks and to reach our targets in this area. We will therefore be further intensifying our activities in the field of occupational health and safety.

Social concerns aspect

Social commitment

As a company with regional roots, we are an active part of society in the locations and regions in which we operate. We are aware of our relevance to society in this respect. We assume responsibility for our decisions, actions, products and services, and that towards our customers and capital providers, as well towards the environment and the society in which we live. The value we create on site makes us a major economic factor at our locations. We make investments, award contracts to local or regional businesses where possible, secure jobs, offer high-quality training and pay taxes and duties. It goes without saying that we do not use any questionable measures to avoid taxes or move profits across borders.

Regional focuses

At the same time, the companies within our Group support local and regional projects, especially in the fields of social welfare, education, science, culture and sport. One key focus is on promoting upcoming talent and young people. Based on shared values, the specific structure and scope of regional social commitment is organised on a decentralised basis. Staff on location are familiar with local needs, have contacts to local projects and determine the priorities they would like to address with their activities. In most cases, the support provided is financial, taking the form of donations or sponsoring.

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

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

In dialogue with stakeholders

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

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

We attach great value to maintaining an open and transparent dialogue with our stakeholders, and that both in our one-to-one contacts and in the publications on our websites, in press releases, on social networks and in specialist formats such as analysts and press conferences. We take part in public discussions and other events, such as specialist energy industry conferences and public information events. We play an active role in the relevant bodies, associations and networks, participate in research projects and take part in the public debate focusing on the transformation of the energy system. Via our membership in industry associations, we participate in energy policy and energy industry discussions. We are members, for example, in the following associations relevant to the areas in which we operate: Bundesverband der Energie- und Wasserwirtschaft e. V. (BDEW), Verband kommunaler Unternehmen e. V. (VKU), Energieeffizienzverband für Wärme, Kälte und KWK e. V. (AGFW), Bundesverband Neue Energiewirtschaft e. V. (BNE), Bundesverband Wind-Energie e. V. (BWE) and Bundesverband deutscher Wohnungs- und Immobilienunternehmen (GdW). Not only that, our subsidiaries and shareholdings on location are involved in local initiatives and networks. Apart from membership fees and project contributions, we do not make payments to associations or other institutions. We occasionally finance studies and surveys on matters relating to the energy industry. These are published and our involvement is suitably signalised.

We have the responsibility to use our resources to promote the conversion in the energy system to provide a more sustainable and efficient energy supply. Acceptance by local populations is crucial for many projects aimed at expanding renewable energies and the infrastructure needed for these. In view of this, in the 2019 financial year we were once again actively involved in planning and implementing projects together with local populations and their representatives on location, promoting acceptance for these projects on the basis of dialogue and reaching decisions that also convince third parties. We perform these measures on a project-by-project basis.

Respect for human rights and combating corruption and bribery aspect

Value chain

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

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

The majority of our procurement volumes involve energy carriers such as electricity and natural gas. We typically hedge these by way of financial transactions but do not physically procure them. For these commodities, we are not aware of any material sustainability-related topics that we are able to influence directly.

One matter of public interest is the origin of the hard coal used at power plants and whether we exert influence on production conditions at the coal mines. The only coal-powered plant we operate ourselves is the CHP plant in Offenbach. For this, we directly procured around 76 thousand tonnes of hard coal in the 2019 financial year. Most of this came from Russia. Due to our longstanding relationships with suppliers, we are familiar with the conditions there. We nevertheless do not have any direct contractual relationships to mine operators but, given the low volumes involved, procure the fuels via intermediaries. Not only that, our very low volume of demand means that we have hardly any possibility of exerting influence on location. Hard coal is also used at the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM), where we are minority shareholders. Here, we have no direct influence on business activities and fuel procurement, as we are not the operators of the plant. We are nevertheless aware of our responsibility and exert our influence by raising sustainability topics and requesting information.

At our biomass-fired power plants, we chiefly use waste timber, residual forest timber and green cuttings. We obtain these fuels from disposal companies and incinerate them in accordance with strict legal requirements. Most of the waste timber incinerated comes from the regions surrounding the respective plants.

Other than fuel procurement, our remaining procurement volumes are relatively low. They mostly involve procuring goods and highly qualified services from contract partners often known to us for many years.

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

Contractual relations with suppliers and service providers are additionally governed by our procurement terms and compliance guidelines, which are published on our website at **www.mvv.de/centralprocurement**. Our procurement terms include specific requirements in terms of compliance, adherence to employee rights and environmental protection. We expect our suppliers, for example, to uphold the basic employee rights set out in the international conventions of the United Nations (UN), the International Labour Organization (ILO) and the Organisation for Economic Co-operation and Development (OECD), as well as the UN Global Compact.

Suppliers to MVV Energie, Energieversorgung Offenbach, Juwi and Stadtwerke Kiel are all assessed in terms of sustainability, risks and compliance, as are the subcontractors we approve. Within our supplier management system, all suppliers are required to provide disclosures on whether they have compliance or anticorruption requirements and a code of conduct, as well as on whether they are committed to the UN Global Compact. Furthermore, they must disclose whether they have a sustainability concept and, if so, how this is implemented. Corresponding information and certificates are deposited in our supplier management system. Should we commission a supplier, then as standard practice we make our compliance requirements a component of the contract. Among other issues, these provide for contractual penalties in the event of corruption and bribery and require compliance with basic employee rights. Both aspects are monitored in our compliance management system. Compliance with social welfare standards also forms part of our contract awarding process. As a general rule, we do not obtain data from suppliers located further upstream in the supply chain.

The overwhelming share of our business activities take place in Germany, the UK and the Czech Republic, i.e. in European Union member states where respect for human rights is a core aspect of entrepreneurial activity. Within our supplier management, we have taken specific measures to perform a sustainability evaluation of select business areas with potentially critical conditions. If we access new regions or markets outside Europe, this mostly relates to our project development business. To safeguard respect for human rights along the value chain there as well, and more clearly than previously, in the 2019 financial year we launched new processes and measures within the respective compliance management systems. These will become part of standard processes in the 2020 financial year. Acquisitions of companies or shareholdings are subject to a painstaking review process that also covers compliance with human rights, adherence to compliance-related requirements and further sustainability aspects, such as environmental protection and occupational safety.

Large numbers of subcontractors, most of which based in European Union countries, work on behalf of MVV. As human and employee rights are legally protected in these countries, we assume that employment conditions there are humane. High safety standards are also important to us for our subcontractors. We are therefore committed to ensuring that they comply with legal requirements and have issued corresponding requirements which provide, for example, for health and safety instructions to be issued to employees at third-party companies. At present, however, we do not perform systematic audits of our subcontractors. We do not keep comprehensive records of working conditions at our subcontractors, especially at their production locations.

Compliance

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

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

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

Our CMS is structured in such a way as to ensure that breaches of compliance are basically avoided in advance, above all by working with preventative measures in the respective business processes (systemic compliance). We already check relevant processes in sensitive areas during the respective operating process, for example, and act early to take corrective measures where necessary. Donations and payments to parties and political organisations are strictly prohibited. Payments to equity providers are made exclusively in the form of dividends.

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

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

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

Alongside a number of minor infringements, two more notable incidents occurred at a subgroup in the period under report. One related to breaches of the law committed by a temporary manager, who was dismissed immediately, while the other involved a tax-related error.

To make sure that all of MVV's managers and all employees with contact to customers or suppliers are well informed of general compliance requirements and familiar with the legal requirements relevant to their respective business units, we also provide regular training. The topics covered by this training include the requirements of capital market, securities and stock market law, competition and cartel law, combating money laundering, sanction lists and energy industry law. We provide extensive training to new management staff. For this, upcoming management staff and newly appointed managing directors take part in a seminar held over several days with attendance obligatory for all management staff from section manager upwards. In the 2019 financial year, 304 employees at the Mannheim subgroup and 330 employees at the other subgroups took part in this training. During this period, a further 190 individuals completed an online training programme provided by our Stadtwerke Kiel subsidiary.

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

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

Business Performance of MVV Energie AG

Notes to Annual Financial Statements of MVV Energie AG (HGB)

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

The annual financial statements of MVV Energie AG, MVV's consolidated financial statements and the combined management report for the 2019 financial year are published in the Federal Gazette (Bundesanzeiger). The complete 2019 annual financial statements of MVV Energie AG can be downloaded at **www.mvv.de/investors,** as can the consolidated financial statements and the combined management report.

Presentation of earnings performance of MVV Energie AG

Income statement of MVV Energie AG

Euro 000s	**FY 2019**	FY 2018
Sales	1,474,286	2,246,218
less electricity and natural gas taxes	– 113123	– 124.598
Sales less electricity and natural gas taxes	**1,361,163**	**2,121,620**
Increase or reduction in finished and unfinished products	173	0
Other own work capitalised	674	1,730
Other operating income	29,574	44,105
Cost of materials	1,158,676	1,880,426
Employee benefit expenses	75,255	75,398
Depreciation and amortisation	17,328	19,901
Other operating expenses	89,790	98,108
Financial result	76,790	66,901
Taxes on income	27,720	46,082
Earnings after taxes	**99,605**	**114,441**
Other taxes	449	456
Annual net income	**99,156**	**113,985**
Allocation to other revenue reserves	39,840	54,669
Unappropriated net profit	**59,316**	**59,316**

As already outlined in last year's outlook, since the 2019 financial year our large industry, renewable energies generation and municipal utilities customers have been centrally managed by MVV Trading. To this end, we have leased a sub-operation to MVV Trading. That was the main reason for the year-on-year reduction in sales less energy taxes at MVV Energie AG by Euro 761 million to Euro 1,361 million. MVV Energie AG thus met its forecast of generating sales of between Euro 1.3 billion and Euro 1.5 billion. These sales were generated exclusively in Germany. The electricity business accounted for 59.6 % of total sales (previous year: 75.1 %) and thus remained the strongest division in terms of sales at MVV Energie AG.

At Euro 1,159 million, cost of materials was Euro 721 million lower than in the previous year. The change in this line item thus largely reflected the aforementioned development in sales.

Other operating income decreased by Euro 14 million. This reduction was primarily due to the sale of fibre optic networks in the previous year.

MVV Energie AG had 900 employees at 30 September 2019, 19 more than at the previous year's balance sheet date. At Euro 75 million, employee benefit expenses were at the same level as in the previous year.

Mainly as a result of an adjustment to terms due to regulatory requirements, depreciation and amortisation declined by Euro 3 million to Euro 17 million. No impairment losses were recognised on non-current assets in the year under report or the previous year.

Other operating expenses fell by Euro 8 million to Euro 90 million in the 2019 financial year. Material items here related to lower costs for personnel allocations and IT services due to the leasing of a sub-operation to MVV Trading.

The financial result improved year-on-year by Euro 10 million to Euro 77 million. This development was due above all to lower write-downs of financial assets.

Earnings after taxes decreased by Euro 14 million to Euro 100 million. As previously forecast, net of other taxes MVV Energie AG generated a lower volume of annual net income in the 2019 financial year, in this case of Euro 99 million (previous year: Euro 114 million). This development was mainly influenced by the fact that the previous year's figure was positively affected by the sale of fibre optic networks. This item was countered in the previous year by the write-down recognised on the carrying amount of MVV Enamic. Based on the profit utilisation resolution adopted by the Annual General Meeting on 8 March 2019, the unappropriated net profit of Euro 59.3 million was fully distributed to shareholders of MVV Energie AG. The dividend amounted to Euro 0.90 per share.

Revenue reserves of Euro 39,840 thousand were formed from the annual net income for the year under report. MVV Energie AG reported unappropriated net profit of Euro 59 million as of 30 September 2019. The Annual General Meeting will be held on 13 March 2020 and will decide on the dividend proposal adopted by the Executive and Supervisory Boards; the Supervisory Board will decide on its proposal on 2 December 2019.

Presentation of asset and financial position of MVV Energie AG

Balance sheet of MVV Energie AG

Euro 000s	30 Sep 2019	30 Sep 2018
Assets		
Non-current assets		
Intangible assets	533	612
Property, plant and equipment	436,108	387,552
Financial assets	1,482,984	1,461,449
	1,919,625	**1,849,613**
Current assets		
Inventories	13,085	30,252
Receivables and other assets	270,391	316,834
Cash and cash equivalents	111,693	79,048
	395,169	**426,134**
Deferred expenses and accrued income	587	595
	2,315,381	**2,276,342**
Equity and liabilities		
Equity		
Share capital	168,721	168,721
Capital reserve	458,946	458,946
Revenue reserves	474,431	434,591
Unappropriated net profit	59,316	59,316
	1,161,414	**1,121,574**
Income grants received	42,774	45,067
Provisions	85,982	109,803
Liabilities	1,025,211	999,898
	2,315,381	**2,276,342**

Total assets increased year-on-year by Euro 39 million to Euro 2,315 million.

The asset side of the balance sheet is largely shaped by financial assets. As of 30 September 2019, these totalled Euro 1,483 million, equivalent to a 64 % share of total assets. The corresponding figures for the previous year were Euro 1,461 million and 64 % respectively. The growth in financial assets by Euro 22 million was due above all to additions to the capital reserve at an associate. Property, plant and equipment increased year-on-year by Euro 48 million to Euro 436 million. This was chiefly due to investments made in connection with linking the CHP plant in Mannheim to the city's district heating grid.

Current assets decreased to Euro 395 million, down Euro 31 million compared with 30 September 2018, with this being primarily due to the reduction in receivables and other assets on account of the sub-operation leased to MVV Trading, as well as to lower inventories. By contrast, cash and cash equivalents rose by Euro 33 million, with this mainly being due to changes in loan movements.

The company increased its equity by Euro 40 million in the year under report. Equity therefore totalled Euro 1,161 million at the balance sheet date. The equity ratio of 50.2 % at 30 September 2019 was slightly higher than the previous year's figure of 49.3 %, reflecting the solid equity resources available at MVV Energie AG.

Mainly as a result of lower tax provisions, the provisions line item decreased by Euro 24 million to Euro 86 million, while liabilities rose by Euro 25 million to Euro 1,025 million. The increase in liabilities was due to opposing items: While liabilities to banks rose due to the taking up of new loans, trade payables and liabilities to associates decreased as a result of the leased sub-operation.

MVV Energie AG performs the financing function for its associates. In this capacity, it safeguards the operating liquidity of numerous companies and, in the form of shareholder loans, supplies these with the long-term capital they need for investments. An adequate volume of committed credit lines is available to secure liquidity.

2019 activity statements

With its 2019 activity statements, MVV Energie AG has satisfied its obligations pursuant to § 6b of the German Electricity and Gas Supply Act (German Energy Industry Act – EnWG) and § 3 of the German Metering Point Operation Act (MsbG). In our internal financial reporting we maintain separate accounts for the activities of electricity and gas distribution, for metering operations, for other activities within the electricity and gas sectors and for other activities outside the electricity and gas sectors. Furthermore, we also prepare balance sheets and income statements for our electricity and gas distribution and our metering operations.

Electricity distribution

The electricity distribution activity field reported sales of Euro 44 million for the year under report (previous year: Euro 46 million). At Euro 44 million, gross performance for the 2019 financial year fell slightly short of the previous year's figure. Measured in terms of total electricity sector sales of Euro 675 million (previous year: Euro 1.6 billion), sales in the electricity distribution activity are of subordinate significance. Alongside income from the leasing of its electricity grids to MVV Netze GmbH, earnings in the electricity distribution activity field at MVV Energie AG also include income from concession duties. MVV Netze GmbH manages and operates the distribution facilities and grids at MVV Energie AG and is responsible for their maintenance. Other operating income resulting from the charging on of the concession duty to MVV Netze GmbH through to 30 September 2019 was opposed by corresponding other operating expenses. Electricity distribution generated annual net income of Euro 3 million in the 2019 financial year (previous year: annual net deficit of Euro – 1 million).

As of 30 September 2019, total assets in the electricity distribution activity field came to Euro 131 million (previous year: Euro 126 million). This corresponds to a 34 % share of total assets in the electricity sector at MVV Energie AG (previous year: 37 %). Property, plant and equipment relating to electricity distribution hardly changed compared with the previous year's balance sheet date. At Euro 120 million (previous year: Euro 113 million), this item accounted for a 92 % share of total electricity distribution assets (previous year: 90 %). On the equity and liabilities side, electricity distribution liabilities rose from Euro 42 million to Euro 44 million. Liabilities to associates mainly involve liabilities due to MVV Netze GmbH.

Metering operations (mME/iMSys)

Consistent with the unbundling requirements of § 3 (4) Sentence 2 MsbG with corresponding application of § 6b (3) EnWG, sales of Euro 0.4 million were reported for metering operations using modern measuring equipment and intelligent measuring systems in the year under report (previous year: Euro 0 million). Gross performance for the 2019 financial year amounted to Euro 0.4 million. Measured in terms of total electricity sector sales of Euro 675 million (previous year: Euro 1.6 billion), sales in the mME/iMSys metering operations activity field are of subordinate significance. Earnings in the mME/iMSys metering operations activity field at MVV Energie AG include income from the leasing of electricity meters (mME/iMSys) to Soluvia Energy Services GmbH. Soluvia Energy Services GmbH is the shared services company of the MVV Group. As a metering point operator and smart meter gateway administrator, it per-

forms services which include all metering services. These are countered by depreciation of the electricity meters (mME/iMSys), which are recognised under non-current assets at MVV Energie AG. In the 2019 financial year, mME/iMSys metering operations posted annual net income of Euro 18 thousand (previous year: Euro 0 thousand).

At 30 September 2019, total assets in the mME/iMSys metering operations activity field amounted to Euro 1.6 million (previous year: Euro 0 million), corresponding to a 0.4 % share of total assets in the electricity sector at MVV Energie AG. At the balance sheet date, property, plant and equipment relating to mME/iMSys metering operations amounted to Euro 1.5 million (previous year) and thus accounted for a 94 % share of total assets in mME/iMSys metering operations (previous year: 0 %). On the equity and liabilities side, liabilities of Euro 1.5 million were reported for mME/iMSys metering operations. These mainly involve liabilities due to other activity fields.

Gas distribution

In the year under report, the gas distribution activity field posted sales of Euro 26 million (previous year: Euro 28 million). Gross performance fell by Euro 2 million in the 2019 financial year. When compared with total gas sector sales of Euro 97 million (previous year: Euro 217 million), the gas distribution activity field is of subordinate significance. By analogy with electricity distribution, as well as income from the leasing of its grids to MVV Netze GmbH earnings in the gas distribution activity field also include income from concession duties. Through to 30 September 2019, the other operating income from charging on the concession duty to MVV Netze GmbH was opposed by corresponding other operating expenses. In the year under report, the gas distribution activity field generated annual net income of Euro 7 million (previous year: Euro 8 million).

At the balance sheet date on 30 September 2019, total assets in the gas distribution activity field came to Euro 103 million (previous year: Euro 97 million) and accounted for some 58 % of total assets in the gas sector at MVV Energie AG (previous year: 74 %). At Euro 97 million, property, plant and equipment in gas distribution was Euro 9 million higher than in the previous year and corresponded to a 94 % share of total assets in this activity field (previous year: 91 %). On the equity and liabilities side, gas distribution liabilities rose from Euro 31 million to Euro 35 million. Liabilities to associates mainly involve liabilities due to MVV Netze GmbH.

Corporate Governance Declaration (§ 289f HGB)

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

We published the Corporate Governance Declaration together with the Declaration of Conformity as a component of our Corporate Governance Report on **Page 65** and on our website at **www.mvv.de/corporate-governance** on 4 November 2019.

Declaration pursuant to § 312 AktG

The Executive Board has compiled a report on relationships with associates for the 2019 financial year (dependent company report) pursuant to § 312 AktG. In this report, it states: “MVV Energie AG received commensurate compensation for each of the transactions listed in its report on relationships with the City of Mannheim and associates based on the circumstances known to the Executive Board at the time at which the transactions were performed.”

Non-Financial Declaration (§ 315b, § 315c in conjunction with § 289b et seq. HGB)

The Non-Financial Declaration for the 2019 financial year has been jointly compiled for MVV Energie AG and the MVV Energie Group (“MVV”) and published as a Combined Non-Financial Declaration in the Combined Management Report in this Annual Report on **Page 44.**

Corporate Governance

MVV views high-quality transparent corporate governance as forming the basis for responsible company management and supervision aimed at long-term value creation. Among other factors, this involves close cooperation on a basis of trust between the Executive and Supervisory Boards and employees, consideration of the interests of all stakeholders, transparent reporting, candid corporate communications and compliance with all applicable laws. We are convinced that high-quality corporate governance enhances the trust placed in the company by our shareholders, as well as by our customers, business partners, employees and the general public.

The Executive and Supervisory Boards report below on corporate governance at MVV Energie AG. We combine this report with our Corporate Governance Declaration; the latter includes the Declaration of Conformity with the German Corporate Governance Code pursuant to § 161 of the German Stock Corporation Act (AktG) and those further disclosures requiring inclusion pursuant to § 289f of the German Commercial Code (HGB).

REPORT OF EXECUTIVE AND SUPERVISORY BOARDS

The Executive and Supervisory Boards once again addressed MVV's corporate governance in detail in the 2019 financial year. As in previous years, in the year under report MVV Energie AG complied with all recommendations made by the Code in its most recent version dated 7 February 2017, which was published in the Federal Gazette on 24 April 2017 and republished in the Federal Gazette in corrected form on 19 May 2017. The same applies with just one exception to the suggestions made in the Code. Point 2.3.3 of the Code suggests that shareholders should have the possibility of watching the entire Annual General Meeting via communication channels such as the internet. However, we only broadcast the introductory words by the meeting chairman and the presentation by the CEO live on our website at **www.mvv.de/investors.** We also publish the introductory words and presentation as a video subsequent to the Annual General Meeting.

Shareholders and Annual General Meeting

Shareholders in MVV Energie AG exercise their voting and control rights at the Annual General Meeting. Each shareholder is entitled to participate in the Annual General Meeting if he or she registers within the relevant deadline and meets the conditions for participating in the meeting and exercising voting rights. Shareholders may make statements on all agenda items at the meeting and submit relevant questions and motions. For voting purposes, each share entitles its holder to one vote. By casting their votes before or during the meeting, our shareholders may participate in the adoption of all resolutions of material relevance to the company. In this respect, shareholders can draw on a range of options – they can vote in person or via a proxy of their choice, be represented by a voting proxy appointed by MVV Energie AG to act in line with their instructions, or by a bank or shareholders' association. Moreover, shareholders have the option of submitting their votes by post in advance of the Annual General Meeting provided that they register within the respective deadlines. Alternatively, all declarations may also be communicated electronically using our password-protected shareholder portal at MVV's website.

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

Transparent and prompt communications

We aim to ensure a high degree of transparency and equal treatment for our shareholders. We have therefore set ourselves the standard of providing all stakeholders with simultaneous, equivalent and extensive information about material developments and the company's situation. Prompt sources of information for this purpose chiefly include our websites – and here especially **www.mvv.de** and **www.mvv.de/investors.** The information we publish here includes our financial reports, analysts' conference presentations, press releases, ad-hoc announcements and our financial calendar. We always meet the reporting obligations incumbent on us under the German Stock Corporation Act (AktG), the German Commercial Code (HGB) and the German Securities Trading Act (WpHG).

Disclosures on auditor

The Annual General Meeting of MVV Energie AG held on 8 March 2019 elected PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft, (PwC), Essen, as auditor for the 2019 financial year. This was preceded by a selection process conducted in accordance with the Audit Regulation (Regulation (EU) No. 537/2014). Prior to this election, the Supervisory Board convinced itself of the auditor's inde-

pendence. We comply with the statutory requirements resulting from the Audit Regulation and from § 316 et seq. HGB. These concern the selection, appointment and rotation of the auditor and of those responsible for managing the audit, as well as the commissioning of non-audit services.

Reporting and audit of financial statements

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

The auditor audits the annual financial statements of MVV Energie AG as prepared by the Executive Board. Once they have been discussed by the Audit Committee, these financial statements are examined, approved and thus adopted by the Supervisory Board. Following detailed scrutiny by the Audit Committee, the consolidated financial statements prepared by the Executive Board and audited by the auditor are also presented to the Supervisory Board for its own review and approval. In its audit of the financial statements, the auditor also audits the combined management report.

The quarterly statements for the 1st quarter and 1st nine months are prepared by the Executive Board and discussed with the Audit Committee prior to publication, as is the half-year financial report. These publications are not subject to any review requirement by the auditor.

CORPORATE GOVERNANCE DECLARATION WITH DECLARATION OF CONFORMITY

We published the following Corporate Governance Declaration on our website at www.mvv.de/investors on 4 November 2019. In this, we report pursuant to § 289f (2) HGB on the Declaration of Conformity with the German Corporate Governance Code submitted by the Executive and Supervisory Boards and describe those corporate governance practices at our company that go beyond legal requirements in the fields of compliance and risk management, our dual management system, the mode of operation of the Executive and Supervisory Boards and our measures to promote diversity on all levels.

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

The Executive and Supervisory Boards adopted the following Declaration of Conformity with the German Corporate Governance Code in September 2019:

The Executive and Supervisory Boards of MVV Energie AG hereby declare that the company complied with and continues to comply with the recommendations of the German Corporate Governance Code Government Commission in the version of the Code dated 7 February 2017, which was published in the Federal Gazette on 24 April 2017 and republished in corrected form in the Federal Gazette on 19 May 2017.

Compliance and risk management

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

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

MVV's Compliance Officer, who also heads our group legal, compliance and materials division, is responsible for our CMS in terms of its contents, organisation and processes. In cooperation with the various organisational units involved, the Compliance Officer compiles the relevant compliance regulations, documents them and sees to their implementation within business processes. Furthermore, he is responsible for ensuring that employee training measures are implemented and that all CMS processes are adhered to. The Compliance Officer reports to the Executive Board

and the Audit Committee. Furthermore, he acts in an advisory capacity to accompany measures intended to prevent and, where necessary, investigate any violations of the law, corruption or deliberate acts harmful to the company.

We have provided our CMS with a preventative structure (so-called systemic compliance): Breaches of compliance are chiefly avoided by implementing preventative measures in the respective business processes. We perform advance checks on relevant processes in sensitive areas, for example, and act early to take corrective measures where necessary. Donations and payments to parties and political organisations are strictly prohibited. Payments to equity providers are made exclusively in the form of dividends.

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

Alongside a number of minor infringements, two more notable incidents occurred at a subgroup in the period under report. One related to breaches of the law committed by a temporary manager, who was dismissed immediately, while the other involved a tax-related error.

All of MVV’s managers and all of its employees with contact to customers or suppliers are provided with regular training to make sure that they are well informed of general compliance requirements and familiar with the legal requirements relevant to their respective business units. These include, for example, the requirements of capital market, securities and stock market law, competition and cartel law, combating money laundering, handling sanction lists and the requirements of energy industry law. We provide extensive training to new management staff. To this end, upcoming management staff and newly appointed managing directors attend a seminar held over several days, with attendance obligatory for all management staff from section manager upwards. In the 2019 financial year, 304 employees at the Mannheim subgroup and 330 employees at the other subgroups took part in this training. During this period, a further 190 individuals completed an online training programme provided by our Stadtwerke Kiel subsidiary. From a specific management level upwards, all managers and managing directors of our subsidiaries and specific shareholdings are required to submit a Compliance Management Declaration (CMD) at the end of each financial year. In this, they must state whether all compliance regulations and legal requirements have been complied with. In the CMD we also ask, among other issues, whether the employees of the individual manager have received the required instruction and suitable training for the CMS. Moreover, in the context of the CMD the managers also respond in detail to questions specifically tailored to circumstances at their respective business unit.

The energy industry supply chain is greatly influenced by fuel trading, which is handled on energy exchanges or in bilateral agreements. A significantly smaller share of our total procurement volumes relate to other suppliers who provide us with goods or perform highly qualified services for us. Here too, we attach great value to compliance in our cooperation with these suppliers. We work with supplier management systems and request information from new suppliers, particularly with regard to anti-corruption measures, environmental protection and social responsibility. The basis for our cooperation with suppliers and service providers in Germany and the European Union is provided by the applicable laws and regulations, as well as by those compliance regulations, forms of conduct and work practices relevant to us. These include, for example, the international conventions of the United Nations (UN), the International Labour Organization (ILO) and the Organisation for Economic Cooperation and Development (OECD), as well as the UN Global Compact.

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

Dual management system

MVV Energie AG is a listed stock corporation with its legal domicile in Mannheim and is therefore governed by the requirements of German corporate law. The dual management system comprising the Executive and Supervisory Boards is one basic principle of this legislation. These two boards are strictly separate in terms of their composition and function. The Executive Board is responsible for managing the company and conducting its business, while the Supervisory Board is entrusted with advising and monitoring the Executive Board. The Executive and Supervisory Boards of MVV Energie AG work together closely and on a basis of trust in the interests of the company.

Composition and mode of operation of Executive Board

The Executive Board, which manages the company under its own responsibility, pursues the objective of generating sustainable and profitable growth. It determines the company's strategic alignment and lays down its financial, investment and personnel planning. It assesses whether the strategy is being implemented in a targeted manner and whether the risk management system is fit for purpose. Furthermore, it monitors risk controlling, the internal control system in respect of the financial reporting process (IKS) and the compliance management system, as well as more far-reaching decentralised management and controlling systems. When reaching decisions, it takes due account of the interests of the company's stakeholders.

The Supervisory Board has imposed a Code of Procedure governing the activities of the Executive Board: This lays down the divisional responsibilities as well as those tasks and decisions incumbent on the overall Executive Board. Moreover, it defines the responsibilities of the Chief Executive Officer (CEO), the ways in which Executive Board resolutions are adopted and those transactions which require Supervisory Board approval. The Executive Board must comprise at least two members and currently has four positions/divisions: CEO/Commercial Affairs, Personnel, Technology and Sales.

The CEO coordinates the work within the Executive Board. Furthermore, he represents the Executive Board externally. Other than this, Executive Board members enjoy equal rights and are jointly responsible for managing the company. Each member of the Executive Board manages their division under their own responsibility but nevertheless subordinates the specific interests of their division to the overriding interests of the company.

Diversity concept for composition of Executive Board

In 2018, the Supervisory Board compiled and adopted a diversity concept which formulates the targets and criteria underlying the composition of the Executive Board.

The composition of the Executive Board is consistent with MVV's entrepreneurial approach. The Executive Board of MVV Energie AG should be composed in such a way that qualified leadership, control and business management is at all times guaranteed for MVV Energie AG and the MVV Group. Candidates for the Executive Board of MVV Energie AG have to be able to correctly assess the economic situation and technical framework of a listed energy supplier with municipal roots and to successfully shape its sustainable development. Individual members of the Executive Board are not expected to have the full range of specific specialist skills, competencies and experience required. However, their qualities should complement each other and, where appropriate, overlap in such a way that the Executive Board as a whole has the necessary specialist skills and variety of experience. The members of the Executive Board bear joint responsibility for managing the company and the Group. They should therefore have sufficient expertise to be able to supervise each other's activities and represent each other.

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

Furthermore, the following aspects are also accounted for in the diversity concept for the composition of the Executive Board:

The upper age limit of 65 years should be complied with when concluding employment contracts. The term of first-time appointments should not exceed three years. Moreover, the Supervisory Board should work together with the Executive Board to find long-term succession solutions. The Supervisory Board had set itself the target of raising the share of women on the Executive Board: In 2017, it set a target of 25 % to be reached by 30 September 2021. The appointment of Verena Amann to the Executive Board as of 1 August 2019 meant that this target was achieved two years earlier.

Composition and mode of operation of Supervisory Board and its committees

The Supervisory Board advises the Executive Board with regard to its management of the company and supervises its activities. Its responsibilities also include appointing and dismissing members of the Executive Board. The Supervisory Board is involved in all decisions of fundamental significance for the company. In view of this, the Executive Board informs the Supervisory Board regularly, promptly and comprehensively of its strategy and other fundamental matters of corporate planning. Furthermore, the Executive Board reports to the Supervisory Board on the company's business performance and situation, as well as on its risk situation and risk management.

The Supervisory Board of MVV Energie AG consists of 20 members – of these, ten represent the company's shareholders and ten its employees; their terms in office are identical. Eight of the shareholder representatives are elected by the Annual General Meeting, while two are directly delegated by the City of Mannheim, namely the Lord High Mayor and the relevant specialist head of department. This provision applies to the extent that the City of Mannheim is a shareholder and – directly or indirectly – holds shares corresponding to more than half of the company's share capital. The employee representatives are elected by employees in accordance with the German Codetermination Act (MitbestG). The Supervisory Board Chairman coordinates the work of the Supervisory Board, whose activities are governed by a Code of Procedure.

To perform its activities efficiently, the Supervisory Board of MVV Energie AG has formed five specially qualified permanent committees which prepare and supplement its own activities. The Audit Committee regularly meets at least five times a year, while the Personnel, Nomination, Mediation and New Authorised Capital Creation Committees are convened when necessary.

The **Audit Committee** addresses corporate planning, strategy and the performance of individual business fields, as well as the development and structure of individual controlling systems. It also deals with fundamental financial reporting issues. Furthermore, it is responsible for preparing the selection of the auditor, performing an advance review of and discussing the annual and consolidated financial statements and discussing the interim consolidated financial statements for the1st half and the interim financial statements for the 1st quarter and the 1st nine months of the financial year with the Executive Board. The Committee also monitors the effectiveness of the internal control system (IKS), internal audit and risk management system and checks whether the organisational precautions taken to comply with legal requirements and internal company guidelines (compliance) are sufficiently effective. The tasks incumbent on the Audit Committee also include determining key audit focuses and setting thresholds for the commissioning of non-audit services. The Audit Committee comprises three shareholder and three employee representatives. Professor Heinz-Werner Ufer is the Chairman of this committee. As an independent and expert member, he meets the requirements of § 100 (5) and § 107 (4) of the German Stock Corporation Act (AktG) and of Point 5.3.2 (3) Sentences 2 and 3 of the German Corporate Governance Code (DCGK). The Supervisory Board Chairman is a permanent guest in the committee.

The work of the **Personnel Committee** relates in particular to preparing Supervisory Board resolutions concerning the conclusion, amendment and rescission of employment contracts with Executive Board members. It proposes suitable candidates to the Supervisory Board for appointment to the Executive Board. In this, it takes due account of legal requirements and of the recommendations and suggestions contained in the German Corporate Governance Code. Based on these preparatory measures performed by the Personnel Committee, the Supervisory Board is responsible for appointing new members to the Executive Board and for decisions relating to existing employment contracts. When selecting new Executive Board members, the Supervisory Board develops and works with current requirement profiles based on the diversity concept for the composition of the Executive Board. The Personnel Committee comprises six members: the Supervisory Board Chairman, who is also Personnel Committee Chairman, his deputy and four Supervisory Board members, of which two shareholder and two employee representatives.

The responsibilities of the **Nomination Committee** involve proposing suitable candidates to the Supervisory Board for its own proposals to the Annual General Meeting. In this, it takes particular account of legal requirements, the diversity concept and the recommendations and suggestions made by the German Corporate Governance Code. Moreover, it determines the targets for the composition of the Supervisory Board. The five committee members include the Supervisory Board Chairman, who also chairs the committee, and four further shareholder representatives.

Consistent with § 27 (3) of the German Codetermination Act (MitbestG), the **Mediation Committee** submits further personnel proposals to the Supervisory Board in cases where the two-third majority required to appoint and dismiss Executive Board members is not achieved in the first ballot.

The **New Authorised Capital Creation Committee** is charged with exercising the powers of the Supervisory Board in connection with any capital increase based on authorised capital. This committee comprises eight members: the Supervisory Board Chairman, who also chairs the committee, his deputy and six further Supervisory Board members, of which one employee representative and five shareholder representatives.

Diversity concept for composition of Supervisory Board

A diversity concept has also been developed for the Supervisory Board. This formulates the targets for and criteria governing the composition of the Supervisory Board.

The specialist and personal requirements set out in the profile – which the Supervisory Board of MVV Energie AG meets in its current composition – are on the one hand intended to ensure a transparent and systematic selection process for new Supervisory Board members and on the other to provide a suitable and well-balanced composition for the Board as a whole. The aim is to ensure that the Supervisory Board of MVV Energie AG is composed in such a way that it can at all times provide qualified supervision and advice to the Executive Board in its activities on behalf of MVV. Candidates for the Supervisory Board of MVV Energie AG have to be able to correctly assess the economic situation and technical framework of a listed energy supplier with municipal roots and to successfully accompany its sustainable development. Individual Supervisory Board members are not expected to have the full range of specific specialist skills, competencies and experience required. However, their qualities should complement each other and, where appropriate, overlap in such a way that the full Board has the competence and variety of experience needed for it to perform the duties incumbent on the Supervisory Board and its committees.

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

To provide information about the experience, expertise and skills of our Supervisory Board, we have published members' CVs on our website at **www.mvv.de/investors.**

Furthermore, the following aspects are also accounted for in the diversity concept for the composition of the Supervisory Board:

Due account must be taken of the upper age limit of 70 years when proposing candidates; as a general rule, this limit should not be exceeded during the term in office. With regard to the length of membership, elected Supervisory Board members should, where possible, remain on the Board for no less than one and no more than three full terms in office.

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

One task incumbent on the Nomination Committee involves implementing the diversity concept for the composition of the Supervisory Board. It proposes suitable candidates to the Supervisory Board for its election proposals to the Annual General Meeting. In this, it takes due account of legal requirements and of the recommendations and suggestions in the German Corporate Governance Code. Before nominating a proposed candidate, the Supervisory Board ascertains whether the potential candidate has sufficient time to perform the duties associated with the position and whether he or she has any business and/or personal links to the group of companies or its competitors. The selection of

employee representatives for the Supervisory Board is governed by the provisions of codetermination law.

Conflicts of interest and independence of Supervisory Board members

Any conflicts of interest arising on the part of Executive or Supervisory Board members are disclosed to the Supervisory Board immediately. In respect of Point 5.4.2 of the German Corporate Governance Code, we are of the opinion that all members of the Supervisory Board are independent in the spirit of the Code. There are no personal or business, i.e. commercial, links between the company and its management bodies. We also view Supervisory Board members who sit on the city council or work for the city administration and are delegated by the City of Mannheim as being independent in the sense of this recommendation. The City of Mannheim owns a majority of the shares in MVV Energie AG. Pursuant to the Municipalities Code of the State of Baden-Württemberg, the city council is the topmost political body representing the city. It is therefore logical that the City of Mannheim, as principal shareholder in MVV Energie AG, should be represented on the company's Supervisory Board by members of the city council and the city administration. The decisive factor in determining independence is whether there are any material conflicts of interest. This is particularly not the case for those Supervisory Board members appointed in line with the Articles of Association, namely Dr. Peter Kurz and Christian Specht. The same is true of the other Supervisory Board members who sit on the city council or did so in the 2019 financial year.

Report on equal participation of women and men

The Supervisory and Executive Boards of MVV Energie AG are convinced that the company can only generate sustainable business success when responsibility is assigned to women and men on a basis of equality. Particularly in view of demographic change, it makes sense – for both social and economic reasons – to promote all talents regardless of their gender. Among other benefits, this approach also proactively counters the effects of any shortage of specialist and management staff. To date, women have only made up a comparatively low share of the overall workforce at companies operating in the energy sector. The Supervisory and Executive Boards of MVV Energie AG believe that increasing the share of women working at the group of companies on a long-term basis is key to the company's successful further development. We therefore aim to gradually raise the female share of our Group's workforce to 35 % by 30 September 2021, up from the equivalent figure of 27 % as of 30 June 2015. With a 29 % share of female employees as of 30 September 2019, we came slightly closer to reaching this target. We also aim to raise the share of female managers, in this case to 25 % compared with 14 % as of 30 June 2015. As of the balance sheet date on 30 September 2019, this key figure came to 15 %. To enable us to meet our targets by 30 September 2021, we will consistently implement our range of promotional measures and programmes, and in particular our targeted personnel development for women with suitable potential, and will expand these measures and programmes in the years ahead.

For MVV Energie AG, we report on the share of women in both the first and second management tiers. In August 2017, the Executive Board set new targets to be achieved by 30 September 2021. By that date, the share of women in the first management tier should have reached 25 %, with a corresponding target of 30 % for the second management tier. At 10 %, the share of female managers in the first management tier as of 30 September 2019 was slightly lower than in the previous year (30 September 2018: 11 %). The share of women in the second management tier rose year-on-year and, at 29 %, almost reached the specified target (30 September 2018: 22 %). Alongside measures already in place to promote female employees, we are implementing measures to attract more applications from promising external and internal female candidates.

Compensation Report

In what follows, we explain the principles of our compensation system for the Executive Board of MVV Energie AG. We also provide information about the structure and level of compensation paid to members of our Executive Board and our Supervisory Board.

There was one change in the composition of the Executive Board in the period under report: Verena Amann took up her position as Personnel Director as of 1 August 2019.

EXECUTIVE BOARD COMPENSATION

Compensation system

The Supervisory Board regularly reviews the system and level of compensation paid to members of our Executive Board and also determines both of these aspects. The resolutions required in this respect are prepared by the Supervisory Board Personnel Committee. Our compensation system is structured in such a way as to incentivise the sustainable long-term development in the company's value and its economic success. We take due account of the requirements of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG), as well as of the recommendations in the German Corporate Governance Code.

The Executive Board compensation consists of non-performance-related and performance-related components. Should an Executive Board member prematurely leave his or her position, the following requirements apply to any potential compensation agreement: Payments to a retiring Executive Board member may not exceed the value of two annual compensation packages and may also not exceed the compensation due for the remaining term of the employment contract. No transitional allowances are granted upon the premature termination or non-extension of the employment contract. No payments were either committed or made by third parties to Executive Board members in connection with their activities as such.

Non-performance-related compensation

The non-performance-related compensation components comprise fixed basic compensation, fringe benefits and pension commitments.

The fixed compensation is paid in prorated instalments in the form of a monthly salary. Furthermore, Executive Board members receive fringe benefits which they tax individually in accordance with the relevant requirements. These mainly involve contributions to insurance policies customary to the market and the non-cash benefit in kind resulting from company car use.

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

Performance-related compensation

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

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

Compared with the annual bonus, the sustainability bonus accounted for the predominant share of variable compensation paid to the members of MVV's Executive Board in the 2019 financial year. No further multiyear compensation is provided for, neither does the company maintain any stock option programmes or comparable instruments.

Total compensation of the Executive Board

Compensation totalling Euro 2,439 thousand was paid to the Executive Board of MVV Energie AG in the year under report (previous year: Euro 2,209 thousand).

In the following tables, we provide information about the benefits granted and the actual incomes paid in the year under report in accordance with the recommendations of the German Corporate Governance Code and on total compensation pursuant to German Accounting Standard 17 (DRS 17). Given the structure of our compensation system, the benefits granted and actual incomes paid are identical.

Former members of the Executive Board received benefits of Euro 531 thousand in the year under report (previous year: Euro 513 thousand). We stated provisions totalling Euro 21,401 thousand for pension obligations to former Executive Board members and their surviving dependants (previous year: Euro 16,532 thousand). Of this total, an amount of Euro 347 thousand was added in the year under report (previous year: Euro 336 thousand).

Compensation of related parties

Management staff performing key functions are counted as related parties pursuant to IAS 24. Alongside the Executive Board, this group of persons also includes active division heads and authorised representatives of MVV Energie AG. Our division heads and authorised representatives receive their compensation exclusively from MVV Energie AG. The corresponding compensation totalled Euro 3,015 thousand in the year under report (previous year: Euro 2,439 thousand), with Euro 2,906 thousand of this involving payments with current maturities (previous year: Euro 2,332 thousand). Division heads and authorised representatives receive a defined contribution company pension amounting to up to 8.6 % of their fixed compensation, unless they are insured via municipal supplementary pension companies (ZVKs). They themselves can select which biometric risks they would like to cover. The total expenses incurred for this compensation amounted to Euro 108 thousand in the 2019 financial year (previous year: Euro 107 thousand).

Benefits granted and income paid

	Dr. Georg Müller, CEO				Verena Amann, Personnel Director (since 1 August 2019)			
		Min	Max			Min	Max	
Euro 000s	**FY 2019**	FY 2019	FY 2019	FY 2018	**FY 2019**	FY 2019	FY 2019	FY 2018
Fixed compensation [1]	524	524	524	507	52	52	52	0
Fringe benefits [2]	31	31	31	30	6	6	6	0
Other activities [3]	16	16	16	17	0	0	0	0
Total	**571**	**571**	**571**	**554**	**58**	**58**	**58**	**0**
Variable compensation	444	0	1,048	391	49	0	104	0
Total pay	**1,015**	**571**	**1,619**	**945**	**107**	**58**	**162**	**0**
Pension expenses [4]	245	245	245	247	211	211	211	0
Total compensation	**1,260**	**816**	**1,864**	**1,192**	**318**	**269**	**373**	**0**

	Ralf Klöpfer, Sales Director				Dr. Hansjörg Roll, Technology Director			
		Min	Max			Min	Max	
Euro 000s	**FY 2019**	FY 2019	FY 2019	FY 2018	**FY 2019**	FY 2019	FY 2019	FY 2018
Fixed compensation [1]	313	313	313	303	313	313	313	303
Fringe benefits [2]	46	46	46	73	26	26	26	39
Other activities [3]	11	11	11	10	16	16	16	14
Total	**370**	**370**	**370**	**386**	**355**	**355**	**355**	**356**
Variable compensation	296	0	626	261	296	0	626	261
Total pay	**666**	**370**	**996**	**647**	**651**	**355**	**981**	**617**
Pension expenses [4]	191	191	191	192	196	196	196	227
Total compensation	**857**	**561**	**1,187**	**839**	**847**	**551**	**1,177**	**844**

1 Annual fixed compensation including CEO allowance of Euro 211 thousand for Dr. Georg Müller
2 Contributions to health insurance, nursing care insurance, voluntary contributions to employers' mutual insurance association, non-cash benefits/benefits in kind
3 Compensation for board activity at subsidiaries and shareholdings (entitlement in respective financial year)
4 Service cost from commitments of pensions and other benefits pursuant to IAS 19

Pension obligations

	Development in virtual pension accounts			Pension provision	Allocation to pension provision	
Euro 000s	Balance at 1 Oct 2018	Pension contribution	**Balance at 30 Sep 2019 [1]**	**Balance at 30 Sep 2019 [2]**	Service cost	Interest expenses
Dr. Georg Müller	2,566	162	2,845	6,194	245	82
Verena Amann	0	16	16	211	211	0
Ralf Klöpfer	630	125	781	1,838	191	20
Dr. Hansjörg Roll	534	142	697	1,628	196	18
Total	**3,730**	**445**	**4,339**	**9,871**	**843**	**120**

1 Including interest
2 Equivalent to present value of vested claims

SUPERVISORY BOARD COMPENSATION

Compensation system

The Articles of Incorporation of MVV Energie AG stipulate that members of the Supervisory Board should receive fixed annual compensation and a meeting allowance, the amount of which is determined by the Annual General Meeting. The compensation paid to our Supervisory Board members is commensurate to the responsibility they bear and to the scope of their activities. Each Supervisory Board member received annual compensation of Euro 10 thousand in the 2019 financial year. The Supervisory Board Chairman received annual compensation of Euro 20 thousand and his deputy was paid Euro 15 thousand. Members joining or leaving the Supervisory Board during the financial year received prorated compensation. Furthermore, the Audit Committee Chairman received additional annual compensation of Euro 5 thousand, while the other members of the committee each received Euro 2.5 thousand. Each Supervisory Board member received Euro 1 thousand for each meeting of the full Supervisory Board or committee meeting attended. The Supervisory Board Chairman receives twice this amount for each meeting of the Supervisory Board, as does the Audit Committee Chairman for each meeting of the Audit Committee.

Total compensation of Supervisory Board

Compensation totalling Euro 400 thousand was paid to Supervisory Board members in the year under report (previous year: Euro 412 thousand).

Supervisory Board compensation FY 2019

Euro	Supervisory Board compensation	Meeting allowances
Dr. Peter Kurz, Chairman	20,000	19,000
Johannes Böttcher	10,000	6,000
Timo Carstensen	10,000	6,000
Ralf Eisenhauer	10,000	10,000
Peter Erni	12,500	10,000
Detlef Falk	12,500	9,000
Dieter Hassel	10,000	4,000
Barbara Hoffmann	10,000	5,000
Prof. Dr. Heidrun Kämper	10,000	6,000
Heike Kamradt	17,500	15,000
Brigitte Kemmer	10,000	5,000
Dr. Antje Mohr	10,000	6,000
Dr. Lorenz Näger	12,500	7,000
Steffen Ratzel	10,625	9,000
Peter Sattler	10,000	6,000
Bernhard Schumacher	10,000	6,000
Christian Specht	11,875	7,000
Katja Udluft (until 30 June 2019)	7,500	5,000
Prof. Heinz-Werner Ufer	15,000	16,000
Susanne Wenz (since 11 July 2019)	2,222	1,000
Jürgen Wiesner	10,000	10,000
Total	**232,222**	**168,000**

Takeover-Related Disclosures

The Combined Management Report includes takeover-related disclosures as per § 289a (1) and § 315a (1) of the German Commercial Code (HGB). The Executive Board has examined these disclosures and offers the following explanatory comments:

Composition of share capital

At the balance sheet date on 30 September 2019, the company's share capital totalled Euro 168,721,397.76 and was divided into 65,906,796 individual non-par registered shares with a prorated amount in the share capital of Euro 2.56 per share. Each share entitles its holder to exercise one vote at the Annual General Meeting of MVV Energie AG, as well as to the rights and obligations accruing to it by law and the Articles of Incorporation.

Restrictions on voting rights and transferability; shares with special rights

As far as we are aware, a consortium agreement including provisions for the exercising of voting rights and the transfer of shares is in place between the City of Mannheim, MKB Mannheimer Kommunalbeteiligungen GmbH, MV Mannheimer Verkehr GmbH and RheinEnergie AG. There are no shares with special rights conferring powers of control.

Direct or indirect shareholdings exceeding 10 % of voting rights

The City of Mannheim indirectly held 50.1 % of the shares in MVV Energie AG at the balance sheet date, while EnBW Energie Baden-Württemberg AG, Karlsruhe, held a direct stake of 28.8 % and RheinEnergie AG, Cologne, directly held 16.3 % of the shares. These disclosures are based on the voting right notifications provided to us by the three shareholders.

Control of voting rights

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

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

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

Amendments to the Articles of Incorporation must be undertaken in accordance with § 133 and § 179 AktG in conjunction with § 19 of the company's Articles of Incorporation. Pursuant to § 19 (1) of the Articles of Incorporation, a simple majority of the share capital with voting entitlement participating in the adoption of a resolution is also sufficient to amend the Articles of Incorporation, unless mandatory legal provisions require a larger majority. Pursuant to § 11 (3) of the company's Articles of Incorporation, the Supervisory Board is authorised to adopt amendments to the Articles of Incorporation that only affect the respective wording.

Powers of Executive Board to issue and buy back shares

By resolution on 13 March 2015, the Annual General Meeting authorised the Executive Board until 12 March 2020 to acquire treasury stock up to an amount of 10 % of existing share capital upon adoption of the resolution.

By resolution on 8 March 2019, the Annual General Meeting also authorised the Executive Board until 7 March 2024, subject to approval by the Supervisory Board, to raise the share capital by a total of up to Euro 51.2 million by issuing up to 20 million new individual non-par registered shares on one or several occasions in return for cash and/or non-cash contributions.

The Executive Board of MVV Energie AG has not yet made use of these authorisations.

Compensation agreements and change of control clauses

There are no material agreements at MVV Energie AG that are subject to a change of control resulting from a takeover bid (change of control clause). The company also has not concluded any compensation agreements with members of the Executive Board or with employees for the event of a takeover bid.

Outlook, Opportunity and Risk Report

- Energy policy background and business climate in energy industry remain challenging
- Slight sales and earnings growth expected
- Investments set to remain high

OUTLOOK

Macroeconomic framework

According to the autumn survey of Germany's leading economic research institutes, the German economy slowed significantly in the 2019 calendar year as a result of global trade disputes and the outstanding questions surrounding Brexit. The experts have predicted gross domestic product growth of 0.5 % for 2019 as a whole, compared with 1.5 % in the previous year. The German economy is expected to grow by 1.1 % in 2020.

Energy policy framework

For MVV's future business performance, the following factors are particularly relevant: the 2030 Climate Protection Programme and its implementation in individual legislative initiatives, the legislation governing the exit from coal in Germany and accompanying measures, as well as the EU "Clean Energy Package" requiring implementation in member states. The international renewable energies project development business is materially influenced by the respective national ambitions.

Energy industry developments

Given the increasing complexity of the renewable energies project development business, postponements may arise in the realisation of projects and the respective earnings. The sales business is still characterised by great competitive pressure. Furthermore, digitalisation is gaining ever greater momentum in the energy industry.

Executive Board summary of expected business performance

For the 2020 financial year, we expect the climate in which we operate to remain challenging overall. We will continue to implement our strategy consistently and invest in energy efficiency, renewable energies and supply reliability. We are pursuing measures to enhance efficiency and reduce costs across all areas of our company. This way, we are providing MVV with a foundation for its sustainable and profitable growth.

Expected sales performance

For the **Customer Solutions** reporting segment, we expect adjusted sales to slightly exceed the previous year's figure. We expect business volumes to develop stably in our retail, business customer and energy trading businesses.

Sales in the **New Energies** reporting segment are expected to rise significantly and we expect positive developments in our project development and environmental energy businesses in particular.

For the **Supply Reliability** reporting segment, we expect sales to show moderate growth upon the launch of operations at the gas-powered CHP plant in Kiel.

From a current perspective, we expect **MVV's** adjusted sales (excluding energy taxes) to increase slightly compared with the previous year (Euro 3.7 billion). Our sales performance will depend above all on trading activities and commodity prices, project realisation in the renewable energies project development business and sales activities, as well as on weather conditions.

Expected earnings performance

In the **Customer Solutions** reporting segment, we expect adjusted EBIT to approximate to the previous year's level. The earnings performance depends in particular on the development in weather conditions, as well as on the market and competitive climate.

Operating earnings in the **New Energies** reporting segment are influenced by the development in waste and biomass prices, the availability of our plants, and weather conditions and wind volumes. Not only that, our project development business is generally subject to greater volatility. Overall, we expect to see a significant increase in adjusted EBIT in the New Energies segment.

Factors that influence earnings in the **Supply Reliability** reporting segment include developments in conventional generation spreads, procurement costs for fuel and CO_2 emission rights and the availability of our plants. Furthermore, fuel transport costs may also increase, for example as a result of low water levels. One significant factor for our earnings performance in the 2020 financial year in particular relates to the launch of operations at our new gas-powered CHP plant in Kiel. Overall, we expect adjusted EBIT in the Supply Reliability reporting segment to approximately match the previous year's level.

Based on the developments outlined above for the reporting segments, on Group level we expect **MVV's** adjusted EBIT for the 2020 financial year to slightly exceed the previous year's figure (Euro 225 million).

Expected performance of MVV Energie AG in separate financial statements

For the 2020 financial year, we expect sales (excluding energy taxes) at MVV Energie AG to approximately match the previous year's level (Euro 1.3 billion). Sales and sales volumes in the heating energy business are significantly influenced by weather conditions, particularly during the heating period.

MVV Energie AG generates the predominant share of its operating earnings from its grid business, sales activities and income from interests held in group shareholdings. Overall, we expect annual net income after taxes for the 2020 financial year to approximate to the level reported for the previous year (Euro 99 million).

Stable dividend

With our continuity-based dividend policy, we aim to ensure a solid return for our shareholders. In view of this, the Executive Board intends to distribute a dividend of Euro 0.90 per share for the 2019 financial year, and thus at the same level as in the previous year. The Supervisory Board will decide in December 2019 on the dividend proposal to be submitted to the 2020 Annual General Meeting.

Planned investments

We will continue to maintain our pace of investment. From a current perspective, we will moderately increase our volume of investment in the 2020 financial year while retaining the same strategic investment focuses.

Capital resources and financing structure

We have very good access to the financial market and are therefore able to cover MVV's financing and liquidity needs at all times. Our adjusted equity ratio of around 35 % will enable us to continue making a high volume of investments in the energy system of the future. We finance investments in our existing business primarily from depreciation. For our growth projects, we draw on retained earnings and on optimised project-based financing facilities. We pool projects with structural similarities and comparable terms and work with the bank and promissory note loan market. By defining and adhering to key figures as guidelines for debt-financed growth, we ensure an implicit rating on investment grade level for MVV.

Forward-looking statements and forecasts

Our Combined Management Report for MVV (IFRS) and MVV Energie AG (HGB) includes forward-looking statements that are based on current assumptions and estimates. Although the Executive Board is convinced that these assumptions and budgets are accurate, actual future developments and actual future earnings may deviate from these forecasts due to high current levels of uncertainty and numerous internal and external factors.

OPPORTUNITY AND RISK REPORT

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

Explanation of internal control system (IKS)

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

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

Moreover, Executive Board members, the managing directors of our subsidiaries and select division and group division heads are required to submit internal balance sheet oaths on a quarterly basis.

Basic principles and organisation of IKS system

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

The consolidated financial statements are prepared in a multistage process. This begins at individual subsidiaries, which prepare their financial statements and have these audited by their respective auditor. With the assistance of consolidation software, we then aggregate these financial statements into the consolidated financial statements at MVV Energie AG. Our consolidation process is based on written guidelines, compliance with which is checked upon preparation of the financial statements. The consolidated financial statements are reviewed by the Audit Committee and the full Supervisory Board before being approved and adopted by the Supervisory Board and published in line with the relevant requirements.

Our IKS system consistently requires application of the dual control principle and the separation of critical functions for all processes involved in preparing the financial statements. Our guidelines, process instructions and approval processes are supported by an information and communications system. All companies included in our consolidated financial statements are required to base their accounting and reporting on uniform guidelines that are applicable to annual and interim financial statements. These guidelines lay down the accounting policies requiring application under IFRS and also include requirements as to how we have to meet other reporting obligations, such as industry-specific or regulatory obligations. Moreover, in preparing the financial statements we also aggregate further qualitative and quantitative information that is relevant for the purpose of preparing these. In specified processes, we regularly discuss this information with representatives of the various specialist departments. Within the framework of our quality assurance, we record this information and thus ensure that all

relevant data is fully documented. We have subdivided our day-to-day accounting and the preparation of the annual financial statements on the basis of functional perspectives and structured this in individual process steps performed on all hierarchical levels. We have installed automatic or manual checks in all process steps involving risks.

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

Uniform standards across all locations

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

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

Using specialist software, the processes relevant to financial reporting are documented together with the embedded internal checks and made available to all employees on MVV's intranet. Where need be, this process documentation has been supplemented to include regulations applicable to individual cases.

Regular reporting

Working with measures including its control process, the group controlling department monitors whether the targets set out in the business plan and approved by the Supervisory Board are actually met. Variances, whether to planned developments or to developments in the previous year, are documented and included in the quarterly financial reports provided to the Executive Board. These present the business performance in detail and include comments on all reporting segments and business fields. Based on the insights thereby gained, suitable measures are proposed in these reports. The Executive Board manages MVV's business on the basis of this information.

Explanation of risk management system (RMS)

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

Basic principles and organisation of RMS system

The Executive Board determines the company's risk policy and lays down all processes and responsibilities. Responsibility for operative risk management is located with the legal business units and business fields and, more specifically, with so-called risk bearers. These are the employees responsible for operating earnings at the respective business units. One of their core tasks involves regularly reviewing the current business situation. They identify material opportunities and risks and assess the potential implications of these for adjusted EBIT. They report their assessments in standardised form to our central risk controlling function on a regular basis. The tasks incumbent on risk bearers also include implementing, or monitoring the implementation, of measures enabling risks to be managed or reduced and opportunities to be exploited.

Our central risk controlling function monitors the risk situation at the Group. It continually monitors those opportunities and risks which are relevant to our business and aggregates these into an opportunity/risk profile. This profile represents a net analysis, as it already accounts for all countermeasures taken to reduce risks. Existing opportunities and risks are aggregated using probability methods.

RISK MANAGEMENT SYSTEM

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

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

Supervision of IKS and RMS systems

Both the IKS and the RMS systems are implemented, maintained and supervised by the executive boards and managing directors of consolidated subsidiaries. As part of a risk-based audit plan, our group internal audit department audits both systems regularly, detects any weaknesses and monitors whether the improvements introduced are taking effect.

The Supervisory Board and the Audit Committee of MVV Energie AG check the appropriateness of the structure and functionality of the two systems each year.

Presentation of opportunity/risk situation

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

EXPECTED RISK SITUATION IN FY 2020

Risk category		Risk class
PRICE RISKS	» Market prices: • Clean dark spread • Clean spark spread » Fluctuations in procurement prices • Waste and biomass prices » Exchange rates » Interest rates	MEDIUM
VOLUME RISKS	» Fluctuations in turnover: • Weather conditions and wind volumes • Economic climate » Competition and efficiency » Procurement uncertainties for waste volumes and biomass	MEDIUM
OPERATING RISKS	» Renewable energies project development » Construction projects » Plant operation » Personnel » IT risks	MEDIUM
LEGISLATIVE RISKS	» Regulation » Legal risks	MEDIUM
FINANCING RISKS	» Receivables default » Refinancing » Liquidity » Countries	LOW
STRATEGIC RISKS	» Strategic decisions (including investments)	LOW

Risk[1] in % of operating earnings (adjusted EBIT) at Group:
high: > 40 % medium: 10 % to 40 % low: 0 % to 10 %

1 Budget variance in earnings: likely average maximum damages in the financial year in which the resultant charge on earnings may arise

Price opportunities and risks

In the price opportunities and risks category we include price fluctuations in commodities on both procurement and sales markets, exchange rate movements and interest rate changes. To limit interest rate, exchange rate and commodity risks, we make use of financial instruments **Notes to Balance Sheet (Note 35), Page 137.**

Fluctuations from marketing our generation positions
The clean dark spread (CDS), the clean spark spread (CSS) and the result of marketing electricity generated at our environmental energy plants are each calculated as the difference between the electricity revenues on wholesale markets and the costs incurred to generate the electricity. Items included – in each case together with the costs of CO_2 emission rights – in the costs of electricity generation are: the costs of coal in the case of the CDS, the costs of gas (including transport costs and currency translation differences) for the CSS and the costs of substrates in the case of environmental energy plants. We work with suitable hedging strategies to limit potentially negative implications for our generation portfolio management.

Both the CDS and the CSS continued to be listed at low levels in the year under report. Low electricity generation spreads impact negatively on adjusted EBIT in Supply Reliability, the reporting segment to which the marketing of our power plant capacities in the combined heat and power business field is allocated.

We monitor and evaluate potential opportunities and risks resulting from fluctuating waste prices, and that both in the German and in the British market. Not only that, we also track the development in biomass prices across Europe. Our material and substrate flow management enables us to identify potential risks in the New Energies reporting segment at an early stage and mitigate these with suitable measures.

Any recovery in market prices for electricity may present us with opportunities.

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

Changes in exchange rates
Exchange rate movements may create opportunities or harbour risks for us in connection with fuel procurement, our involvement in the UK and the Czech Republic and our international project business. We limit these risks with natural hedges and futures transactions.

Changes in interest rates
Our finance department continually monitors the interest rate risks relevant to our business. Where possible, we finance our investment projects with fixed interest rates for congruent terms. We already account in our company planning for the potential impact of rising interest rates when projects are refinanced. Changes in interest rates also impact on our project development business. Demand for renewable energies projects may fall, for example, if interest rates rise and other forms of investment become more attractive for investors.

Volume opportunities and risks

Our operating earnings may be positively or negatively influenced by fluctuations in volumes both on the procurement front and on the generation and sales front.

Fluctuations in turnover due to weather conditions and wind volumes
Two key factors influencing our business performance are weather conditions and wind volumes. Weather conditions have a major impact on our turnover with heating energy and gas, particularly during the heating period from September to May. Electricity generation volumes at our wind turbines are dependent on wind volumes. Opportunities arise for our business performance should it be cooler than planned during the heating period and/or should wind volumes exceed our expectations.

Fluctuations in volumes due to changes in economic conditions
MVV is only indirectly affected by macroeconomic developments. If our major industrial and commercial customers cut back their production due to the economic situation, then this may lead them to procure lower volumes of energy from us. On the other hand, we also face opportunities to generate higher sales volumes if our customers step up their production due to economic developments.

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

Procurement of waste volumes and biomass
With regard to incinerating commercial waste and biomass, our adjusted EBIT may be affected both by the total volumes available and by their quality. Both factors are in turn affected by the macroeconomic situation and legal requirements, as well as by plant capacities at competitors and weather-related events. We work to minimise volume risks for our plants by working with professional material and substrate flow management. We also pursue a substitute procurement strategy.

In respect of the UK's decision to leave the European Union (Brexit), there is currently increased uncertainty concerning the future development in volumes and prices for waste and waste timber in the UK and EU market regions.

Operating opportunities and risks

MVV's operating opportunities and risks chiefly arise in connection with its renewable energies project development business and with the construction and operation of energy generation plants and grids.

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

Uncertainties in renewable energies project development business

Projects in our project development business field generally have shorter planning and construction stages than large-scale generation plants. Having said that, these projects also involve uncertainties: In general, the development of relevant markets depends both on the further development in political regulations and on levels of public acceptance. We see key opportunity and risk factors in the onshore wind turbine project development business in Germany as relating to the scope and structure of future project tenders and the development in market interest rates. When implementing projects, the progress made with the respective projects may be negatively influenced by factors such as any delay in obtaining building or operating permits, or failure to obtain such permits, as well as ever higher approval requirements and related issues. Our financial success in the international business is increasingly determined by political and macroeconomic developments in our target markets. Major sources of uncertainty affecting our success abroad include potential disruptions in international trade relationships, which may impact on market access (punitive tariffs) and competitiveness, and the possibility of further interventions in subsidy regimes. We also have opportunities in our renewable energies business given our extensive expertise and great competence in project development and operations management for renewable energies plants.

Risks resulting from progress with construction projects

Large-scale generation plants have long planning and construction stages and harbour corresponding risks. Negative implications for our expected adjusted EBIT could arise, for example, in the event of any delay in the completion and launch of operations at our major projects or if we incur unplanned costs to procure substitute electricity and heating energy or if new developments increase the costs of the projects. We therefore accord great value to ensuring that projects are robustly designed and budgeted in the planning stage already and to detecting and evaluating the material opportunities and risks involved in projects at an early stage of developments.

Any further delay arising in the construction of the new gas-powered CHP plant in Kiel could delay receipt of the relevant grants or reduce their amount. Not only that, any construction cost overrun would impact negatively on the profitability of the project. We counter these risks, to the extent that they are within our control, with professional project organisation and by commissioning suppliers with experience in the sector. Where contractually possible, we pass on the implications of project risks, especially those involving higher costs and deadline overruns, to the contractual partners responsible for such.

Uncertainties resulting from plant operations

Particularly in our Supply Reliability reporting segment, the operation of energy generation plants and grid facilities to supply our customers with energy and utilities involves substantial operating uncertainties for our Group. Unscheduled downtime at plants may lead to a loss of production or interruption of supplies. In this context, additional financial outlays may also be incurred to repair the plant, for substitute supplies to our customers or for contractual penalties.

By performing regular maintenance and monitoring measures, we make every effort to minimise downtime at our plants and the potential resultant risks. This way, we also do justice to our claim to act as a reliable supplier and to avoid any risks to our reputation. Despite this, we cannot entirely exclude the possibility of downtime. To counter this risk in general, we optimise scheduled inspection times within our maintenance strategy. We thus work towards using capacity at our plants over and above the planned hours of use or to increase efficiency rates. This assists us both in realising opportunities due to higher generation volumes and in avoiding grid operation risks. To limit the financial implications of any potential damages, we have agreed insurance policies. Moreover, we assess the risk and environmental protection aspects of potential clean-up projects on derelict land formerly occupied by our plants.

Personnel developments
Our well-qualified and committed employees form the foundation for our company's success. To attract the right employees to us and retain them in the long term, we therefore work with numerous measures. Risks may nevertheless also arise with regard to our personnel. The companies within our Group may also face capacity risks and risks resulting from ageing workforces due to future demographic changes. The extent of these risks depends on the attractiveness of the respective location. To enable us to continue filling key positions with internal candidates, where possible, we will keep providing our staff with targeted training.

In the pension surveys we have compiled, we have also accounted for those factors involving risks from pension obligations. We have included these factors in our budgets **Notes to Balance Sheet (Note 29), Page 129.**

IT risks
Two crucial factors for nearly all our business processes are secure data storage and interruption-free information technology. We therefore accord great priority to systematically protecting our IT infrastructure and IT systems against any potential attacks by third parties.

We continually reduce our IT risks by implementing an extensive range of technical and organisational measures. We make use of security systems and have a restrictive policy towards granting access authorisations to systems and information. We have redundant copies for all our key hardware components and permanently reflect data between production systems and geographically separate backup systems. We also have a backup computer centre.

Legislative risks

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

Regulatory risks
Companies operating in the energy industry face the basic risk (and opportunity) that authorities – such as the Federal Network Agency (BNetzA), cartel offices or lawmakers – may amend the regulatory framework. In the past, this related, for example, to the grid fees set by BNetzA. Energy or climate policy decisions may also have implications for our business performance. Examples here include the regulations governing the expansion in renewable energies, subsidies for CHP plants or political considerations on new requirements to enable national climate protection targets to be met. We counter these risks actively: We participate in the political opinion-forming process, adapt our processes and business models and, where possible, also develop suitable products. This way, we are able to exploit any opportunities arising.

Legal risks
MVV may be exposed to legal risks in connection with court cases, product liability, or unenforceable contracts or contractual terms. We therefore check, negotiate and draft contracts with the aim of limiting these risks. Our compliance management system **Page 65** helps us to avoid any infringements of the law.

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

Financing opportunities and risks

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

Receivables default risks
There is the risk that customers or business partners may fail to settle our invoices, or settle them only in part. This risk may arise in our OTC trading activities in the Customer Solutions reporting segment, for example, or in our long-term supply relationships. To limit this kind of receivables default risk in all reporting segments, we select our business partners with due commercial prudence, check their creditworthiness and, where necessary, agree deposits of securities and guarantees. We are also diversifying our portfolio, thus enabling us to avoid clusters of default risks.

Refinancing and liquidity risks
We refer to the possibility of being unable to obtain necessary liquid funds in future as refinancing and liquidity risk. To cover our capital requirements, we have a variety of financing instruments at our disposal. These include promissory note loans, bilateral loans and syndicated loans. We continually monitor the financial markets, regularly share information with our lenders and carefully monitor our liquidity. This enables us to counter any refinancing and liquidity risks and, where possible, to seize related opportunities. Furthermore, our group-internal cash pool also serves to reduce this risk.

Country risks
For MVV, country risks take the form of transfer risks and the possibility that states may become unable or unwilling to meet their payment obligations. Country risks may impact on our adjusted EBIT due to our international activities in the field of renewable energies project development. We continually monitor any uncertainties relating to the terms of access of our target markets that may arise due to potential disruptions in international trade relationships. Before entering international markets that are new to us, we perform detailed analyses of potential risks. For our existing activities, we observe the political and economic situation on location and continually monitor alternative courses of action. In the event of any deterioration in the situation and our risk position, we may decide to leave the given market.

Strategic opportunities and risks

Good strategic decisions form the basis for any company's success. The energy policy and industry framework have been changing dynamically for years now. This transformation harbours strategic risks, but also gives rise to new opportunities. We review our investment projects in great detail and decide in which markets, technologies, companies and projects we intend to invest, as well as the timing and scope of such investments. These decisions are taken on the basis of in-depth market and competitive analyses and painstaking viability calculations for investments and projects. Our group strategy department liaises closely with the Executive Board to monitor our strategic alignment on an ongoing basis and adjust it to changes in circumstances.

One major component of our corporate strategy **Page 19** is an extensive investment programme. To enable us to achieve our budgeted level of adjusted EBIT, strategically important investments have to generate the expected level of earnings contributions. Even though we review and plan such investments with great care, erroneous assessments or unexpected changes in the macroeconomic framework may reduce the level of adjusted EBIT achieved in future financial years.

Given the transformation in the German energy system, our company still faces a high level of planning uncertainty. Furthermore, it is not clear how the UK's decision to leave the European Union (Brexit) will ultimately impact on our business in the UK. We are closely watching all developments in this regard. A weaker British pound, for example, would reduce our earnings in euros. Other factors that may be affected include interest rates, commodities, demand levels and the regulatory framework. Further developments will depend on the specific structure of the country's exit from the EU.

The energy turnaround and changing market in Germany offer opportunities for innovations, new jobs and profitable growth, particularly in terms of renewable energies, decentralised energy supply, energy efficiency, digitalisation, building refurbishment and sustainable mobility concepts. By consistently implementing our corporate strategy **Page 19,** we are seizing these opportunities. We are raising the energy efficiency of our CHP plant in Mannheim, for example, by connecting it to the existing district heating grid. Not only that, this will also make district heating more environmentally friendly, as the link-up measure will lead to a lower primary energy factor.

For renewable energies, we still see sustainably attractive market potential. The competitive situation in Germany has nevertheless changed in the windfarm project development business. The addition of new wind turbines has been restricted by a market mechanism involving tenders and the simultaneous introduction of maximum capacity caps. Furthermore, it is still unclear whether and when the additional wind power turbines already decided on by politicians will actually be implemented. Based on our assessment, the German biomass market still offers expansion potential and investment opportunities in the field of organic waste fermentation, not least given the ever stricter requirements governing the disposal of organic waste. We see further growth potential abroad in areas such as photovoltaics. Having said that, dependencies on local subsidy regimes and local clients apply here. Not only that, competition is tough, particularly in high-growth Asian markets.

We are extending our decentralised energy management business model by offering innovative new solutions and products. The new gas-powered CHP plant will help to ensure supply reliability in Kiel.

Executive Board summary

MVV's opportunity/risk profile has not changed materially since last year. On the one hand, competitive pressure is unrelentingly high. On the other hand, changes in energy and climate policy still have the potential to impact substantially on our business performance, as is the case at all other companies in the energy industry. This remains a key source of uncertainty. There is great planning uncertainty, particularly for long-term investments in electricity generation plants and the renewable energies project development business. Further developments in Germany will depend on the structure of future tender rounds. In our international target markets for renewable energies, we see key risk factors in local subsidy regimes and macroeconomic developments. Other major factors include the development in political frameworks, market access terms and public acceptance of projects. We expect our industry to be exposed to further fundamental change and underlying conditions to remain unstable. Energy markets are set to remain highly volatile, particularly in view of the current climate debate. Not only that, depending on the specific structure of the exit from the EU the Brexit decision may also impact on our business. Our business activities are therefore still subject to various risks.

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

From the perspective of MVV's Executive Board, there were and are no indications that any risks, whether individual or aggregate, could have endangered the continued existence of the overall company, or of any material subgroup, in the period under report, or which could do so in future.