MVV ENERGIE
ENERGISING MY FUTURE

Annual Report 2016

ENERGY
NEEDS RESPONSIBILITY

MVV Energie

KEY FIGURES

Euro million	**FY 2016**	FY 2015	% change
Sales and earnings			
Sales excluding energy taxes	4,066	3,422	+19
Adjusted EBITDA [1]	425	336	+26
Adjusted EBIT [1]	213	175	+22
Adjusted EBT [1]	139	132	+5
Adjusted annual net income [1]	98	92	+7
Adjusted annual net income after minority interests [1]	95	75	+27
Adjusted earnings per share [1] (Euro)	1.45	1.14	+27
Cash flow			
Cash flow from operating activities [2]	274	255	+7
Cash flow from operating activities per share (Euro)	4.16	3.86	+8
Capital structure			
Adjusted total assets (at 30 September) [3]	4,401	4,073	+8
Adjusted equity (at 30 September) [3]	1,452	1,376	+6
Adjusted equity ratio (at 30 September) [3]	33.0 %	33.8 %	−2
Net financial debt	1,283	1,341	−4
Value indicators			
ROCE	7.6 %	6.6 %	+15
WACC	6.4 %	6.4 %	0
Value spread	1.2 %	0.2 %	> +100
Capital employed	2,806	2,660	+5
Investments			
Total investments	236	470	−50
of which growth investments	121	336	−64
of which investments in existing business	115	134	−14
Employees			
Number of employees (at 30 September)	6,174	5,308	+16
Full-time equivalents (at 30 September)	5,575	4,828	+16

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

2 Previous year's figure adjusted

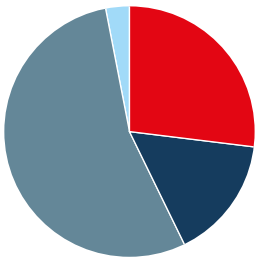
3 Excluding non-operating measurement items for financial derivatives

MVV Energie at a Glance

SALES

4.1 Euro bn

SHARES BY REPORTING SEGMENT



Generation and Infrastructure	27 %
Trading and Portfolio Management	16 %
Sales and Services	54 %
Strategic Investments	3 %

ADJUSTED EBIT

213 Euro m

THE 2016 FINANCIAL YEAR

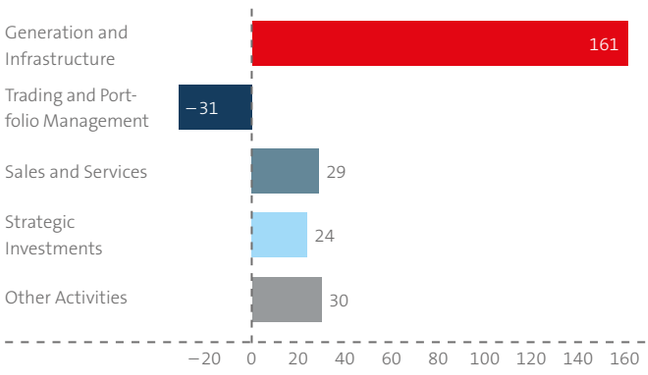
POOLED COMPETENCE:
By acquiring a 63.1 % stake in Juwi and taking over Windwärts, we have pooled our energy industry know-how with the expertise of experienced renewable energies project developers. Combining these different competencies is the key to our joint success in a rapidly changing market.

HIGH-EFFICIENCY BIOMETHANE PLANT:
Together with BayWa r.e., we launched operations at our second joint plant, in this case in Barby (Saxony-Anhalt) in November 2015. This is our fourth plant of this kind in the Magdeburger Börde region. This bioenergy cluster means we can exploit synergies – from substrate procurement through to operations.

AWARD FOR "OPTIMA":
In early 2016, MVV Umwelt was newly included in the list of the 100 most resource-efficient companies in Baden-Württemberg. Thanks to the "OptiMa" project, we can generate almost 40,000 MWh more electricity from the same volume of fuel at our CHP plant in Mannheim. This has simultaneously reduced the plant's CO_2 emissions by more than 30,000 tonnes a year.

THE OPERATING PERFORMANCE OF THE MVV ENERGIE GROUP IN THE 2016 FINANCIAL YEAR WAS INFLUENCED ABOVE ALL BY THE FIRST-TIME FULL CONSOLIDATION OF THE JUWI SUBGROUP AND BY SALES AND EARNINGS CONTRIBUTIONS FROM OUR NEW GENERATION PLANTS. WITH OUR STRATEGIC FOCUS ON EXPANDING RENEWABLE ENERGIES AND BOOSTING ENERGY EFFICIENCY, WE HAVE REVERSED THE DOWNWARD TREND IN EARNINGS SEEN IN PREVIOUS YEARS.

ADJUSTED EBIT BY REPORTING SEGMENT
Euro million



INVESTMENTS

236 Euro million

INNOVATIVE WASTE USE:
Since April 2016, our power plant in Leuna has used an environmentally-friendly flue gas cleaning method promoted by the Federal Ministry of the Environment. Using surplus flue gas heat to supply heating energy enables us to save around 1,600 tonnes of additives and cut our CO_2 emissions by around 5,000 tonnes a year.

STRATEGIC PARTNERSHIP:
MVV Energie and Enerix will be working together to supply decentralised energy in future. As a franchise system, Enerix brings together independent photovoltaics and storage technology specialists for the purpose of selling and installing decentralised energy systems. Together, we now intend to build up a nationwide network of specialist retailers and provide electricity customers with sustainable energy solutions.

NEW WIND TURBINES GO ONLINE:
We have taken over nine new wind turbines into our wind power portfolio, most of which at the windfarm we ourselves developed in Freudenberg. As of 30 September 2016, our wind power portfolio had a total installed capacity of 196 MW_e.

MVV ENERGIE AT A GLANCE

With around 6,200 employees and sales of Euro 4.1 billion, the MVV Energie Group is one of Germany's leading energy companies. We cover all stages of the energy industry value chain – from energy generation, energy trading and energy distribution via proprietary grids through to sales and energy-related services. Our corporate strategy is consistently based on expanding renewable energies, boosting energy efficiency and further expanding the use of highly efficient combined heat and power generation and environmentally-friendly district heating. We are also investing in the future capability of our grids and in modernising our generation plants.

Our sales operations are also aligned to the energy system of the future: We are making our customers, with their individual needs and expectations, the focus of our activities and are developing innovative products and business models. In this, we are building on the mature competence and expertise of our employees. This way, we guarantee a reliable, economical and environmentally-friendly supply of energy to our industrial, commercial and private household customers. At the same time, we can offer secure and attractive jobs to our employees – both now and in future.

TO OUR SHAREHOLDERS

Executive Board

Dr. Georg Müller
Chief Executive Officer
Commercial Director
and Personnel

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

Ralf Klöpfer
Sales

Ralf Klöpfer was born in Backnang in 1966. He studied electrical technology, majoring in the energy industry, and thus laid a foundation for his subsequent career. This took him from Badenwerk AG to EnBW AG, where he built up EnBW Gesellschaft für Stromhandel mbH and the Energy Industry/Optimisation department at EnBW AG. He later worked as Director of Risk Management at EnBW Trading GmbH and as Spokesman of the Management at EnBW Vertriebs GmbH. Following a stint as Managing Partner at enevio GmbH, he was appointed to the Executive Board of MVV Energie AG on 1 October 2013.

Dr. Hansjörg Roll
Technology

Dr. Hansjörg Roll was born in Offenburg in 1965. A graduate in chemical engineering, he went on to obtain a doctorate in engineering. After this, he worked at Badenwerk AG and EnBW Ingenieure GmbH as a project engineer and project director for power plant planning. In 2003, he came to MVV Energie and took over the management of the industrial power plants at Gengenbach and Ludwigshafen. He subsequently held further management responsibilities at what is now MVV Enamic GmbH. He then worked as Managing Director at MVV Umwelt GmbH before being appointed to the Executive Board of MVV Energie AG on 1 January 2015.

Letter from the CEO

DEAR LADIES AND GENTLEMEN,

A secure energy supply is and will remain an absolutely crucial foundation for business and society alike. The energy supply in Germany – and in many other countries across Europe and around the world – is undergoing a fundamental transformation. On the one hand, renewable energies and decentralised structures are coming to the fore, and these are being accompanied and promoted on the other hand by innovative technological approaches. The energy system of the future will look different from what we were used to in the past and still know today.

At core, however, the objectives remain the same – the energy supply has to be reliable, economical and environmentally friendly. MVV Energie sees itself as a pioneer of this transformation, a process which in Germany has become known as the "energy turnaround". If we aim to shape this process successfully, then we need to smartly combine high-efficiency conventional and renewable energies in our generation activities, we need new products and services for our customers, and we need greater energy efficiency at our plants and grids.

We are tackling this responsibility head-on. Our strategy enables us not only to achieve our business objectives, but also to dovetail these directly with ecological and social requirements. We aim to maintain a balance between profitable growth and social responsibility, gradually develop our business model further with this in mind and thus secure the long-term success of our company. This way, we are actively contributing to the conversion in the energy industry while at the same time helping to protect the climate and the environment. This understanding of sustainability is not only in the interests of our shareholders. It also enables us to create and retain sustainable jobs and training positions for our employees.

This mindset is also reflected very clearly in this year's Annual Report. We have compiled this for the first time in compliance with the Sustainability Reporting Guidelines of the Global Reporting Initiative in the G4 version, including sector disclosures for electric utilities.

We are further expanding renewable energies

The further expansion in renewable energies is a key pillar underpinning the success of the energy turnaround and climate protection. It opens up new growth potential for MVV Energie and also forms a cornerstone of our strategic alignment. In the financial years from 2009 to 2016, we invested around Euro 730 million in renewable energies. Alongside biomass, biogenic waste and biomethane, our particular focus here is on onshore wind power. Over the past two years, we have further stepped up our activities. With our Juwi and Windwärts subsidiaries, renewable energies have gained further significance for the MVV Energie Group. The project development business has significantly extended our value chain in this future market.

The results of our investments are clearly apparent. In the year under report, we produced more than 1 billion kWh of electricity from renewable sources. Not only that, we connected renewables projects of almost 700 MW to the grid. Moreover, at the end of the 2016 financial year we had onshore wind turbines with installed capacity of just under 200 MW – an increase of almost 13% compared with the previous year. And we will be pursuing this course further in future.

We support the long-term climate targets

We are committed to the long-term climate targets. In the Paris Climate Protection Agreement signed at the end of 2015, the international community of nations undertook to limit global warming to significantly less than 2 degrees Celsius compared with pre-industrial levels. With its 2050 Climate Protection Plan, the Federal Government has now formulated the underlying conditions for national measures, with targets to be reached by 2030 for all relevant industries. Here, integrated energy – heating energy, mobility and electricity – is rightly set to play an increasingly important role. In the further detailing stages for the plan, it will be important to ensure an appropriate distribution of the resultant burdens and the avoidance of any structural interruptions.

We live energy

If we are to reach our ambitious objectives, then a culture that is shared and lived by us all is especially important. We aim to ensure that our employees and managers identify with our company, that they are highly motivated and committed to our objectives and that we can thus all contribute to the company's success. In view of this, we launched a corporate culture programme in the past financial year already. This way, we are creating a culture that reflects our energy, summarises our interaction and supports our company. After all, our success is driven not by what we say, but rather by what we do and by the means we use to reach our objectives – in short, it is about "Lived Energy". Building on the foundation provided by our four core values of Community, Responsibility, Appreciation and Courage, we can devise convincing solutions and secure our competitive head start.

We increased our sales and earnings

We can look back on another challenging financial year, one we concluded with substantial sales and earnings growth. This was driven by numerous factors – first and foremost by our new generation plants in the UK, positive developments at our Juwi subgroup and our ever larger portfolio of renewable energies plants in Germany. At the same time, we also consistently upheld our efforts to optimise processes and structures and also to maintain cost discipline.

We can therefore afford to be satisfied with our results for the 2016 financial year. We met the targets previously communicated. Our operating earnings of Euro 213 million are not only around 22 % up on the previous year's figure, but also within the forecast range of between Euro 210 million and Euro 215 million. We also met our sales forecast. Sales grew to Euro 4.1 billion and were thus in line with the prediction of more than Euro 4.0 billion. These figures offer proof that we have the right strategy for our market and competitive climate.

We would not have been able to reach these targets without our outstanding employees. I would therefore like to take this opportunity to extend a special thank you on behalf of the whole Executive Board to all employees, managers and employee representatives at our group of companies.

We expect a profitable 2017 financial year

So what does the 2017 financial year have in store for us? We expect our group of companies to grow profitably in the current financial year as well – naturally not at the same pace and on the same scale as in the year under report, in which we benefited from numerous operations launches and the initial consolidation of Juwi. Overall, we expect to be able to achieve slight growth both in consolidated sales and in adjusted EBIT. Alongside growth-related measures, we will continue in future as well to work on enhancing our efficiency, organisation and processes and on boosting our innovative strength and willingness to change. This way, we will be able to steer MVV Energie towards a bright future.

The successful 2016 financial year for MVV Energie means we are able and also intend to uphold our continuity-based dividend policy. The Executive and Supervisory Boards will therefore once again be proposing a dividend of Euro 0.90 for the year under report for approval by the Annual General Meeting on 10 March 2017. We are thus maintaining our longstanding practice of offering our shareholders an attractive return on their capital.

I would like to thank you – also on behalf of my Executive Board colleagues and all employees – very sincerely for the trust you have placed in our company. We would be delighted if you would continue to accompany us on our course.

Yours faithfully,

Dr. Georg Müller
CEO

Supervisory Board Report

Dr. Peter Kurz
Supervisory Board Chairman
of MVV Energie AG

DEAR LADIES AND GENTLEMEN,

Accompanying the performance of MVV Energie AG was a particular pleasure for us in the 2016 financial year. That was because the company achieved substantial growth both in its adjusted EBIT and its value added, and that despite the ongoing difficult framework in the energy market. We were by no means surprised – as expected, the investments made by the company in recent years with a view to the future and backed up by a clear strategy are now paying off. However, MVV Energie AG cannot and will not be sitting back and simply enjoying this success. The energy market is still in the midst of a process of fundamental change, one driven not only by the energy turnaround but also by increasing digitisation. The 2017 financial year, which we have begun on an optimistic note, promises to be another exciting period.

Key focuses of Supervisory Board activities

In the 2016 financial year, we comprehensively and diligently performed our duty of advising the Executive Board in its management of the company and supervising its business activities. To this end, we were in continuous dialogue with the Executive Board. It informed us promptly and extensively about the Group's business performance, its situation and its strategic development. The reports always included an assessment of the risk situation and risk management. In particular, the Executive Board kept us informed about and explained any variances between the actual business performance and the original planning.

Furthermore, we were kept informed on an ongoing basis about developments in the energy industry and energy policy, as well as about the company's investment projects. As Supervisory Board Chairman, I was in close contact with the CEO outside of meetings as well in order to exchange views about current topics and developments.

We examined, questioned and openly discussed all reports and other information provided by the Executive Board in the Supervisory Board and our committees. Our body always had sufficient time to deal with the reports and draft resolutions submitted by the Executive Board. In this, we convinced ourselves of the legality, expediency and correctness of the business management. In our training and development measures, we dealt in the year under report above all with current topics, including the Amendment to the German Renewable Energies Act (EEG) and storage technologies. A further key focus involved new developments in IFRS accounting standards.

Supervisory Board meetings and attendance

The Supervisory Board held four regular meetings in the 2016 financial year, as well as one constitutive meeting and one unscheduled meeting. All Supervisory Board members attended more than half of the meetings of the Supervisory Board and of the committees on which they sat.

Main topics of discussion at Supervisory Board meetings

At our meeting on **3 December 2015**, we approved the agenda for the Annual General Meeting on 4 March 2016 together with the necessary draft resolutions. In this context, we dealt with matters including the candidates to be proposed for the election of new Supervisory Board members by the Annual General Meeting. Furthermore, we discussed the key audit focuses for the 2016 financial year. We examined and approved the consolidated financial statements (IFRS) and the annual financial statements for the 2015 financial year. Furthermore, we approved the Corporate Governance Report for the 2015 financial year, which included the Corporate Governance Declaration and the Declaration of Conformity. At this meeting, the Executive Board also reported to us in detail about the status of the corporate culture project, presented us the corporate values compiled and outlined the forthcoming measures.

At the extraordinary meeting on **29 January 2016**, we held in-depth deliberations concerning the further development of our grid business in Mannheim and Offenbach. The regulatory framework made it necessary to change the structure of our grid companies. We advocated grid operators and technical services working together in a large grid company in each case at the respective locations.

The meeting held on **3 March 2016** served to inform us about the reorganisation of generation activities at MVV Energie AG with a focus on "wind power". Furthermore, we received a report on the latest developments concerning the follow-up solution for the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel - GKK). Moreover, we addressed various current energy policy topics, such as the key points of the Amendment to the German Renewable Energies Act (EEG), the legal requirements governing combined heat and power generation and the new legislation governing the digitisation of the energy turnaround. A further topic dealt with at this meeting was a report on sustainability at the company. We ensured that we were informed in particular about details of the company's sustainability strategy.

The constitutive meeting of the newly elected Supervisory Board was held directly after the Annual General Meeting on **4 March 2016**. At this meeting, I – Dr. Peter Kurz – was re-elected as Chairman and Peter Dinges was elected as Deputy Chairman of our body. In addition, the Supervisory Board elected the members of committees and their chairpersons, where necessary.

On **16 June 2016** our body dealt with the latest investment projects. Alongside this, we also took receipt of the Personnel Report and in this context discussed matters relating to personnel development and the retention of expertise at the company. We held in-depth discussions concerning the potential implications of demographic change for MVV Energie. Moreover, we focused on several topics to further educate our members. Here we dealt with, among other aspects, the requirements of corporate governance and compliance.

The topics addressed at our meeting on **26 September 2016** particularly included the business plan for the 2017 financial year and our three-year plan. Alongside these, we also dealt with corporate governance and agreed to terminate the contract with Udo Bekker, our former Personnel Director. Moreover, we addressed a plant-related investment.

Directors and Officers
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Committee work

The five ▸ **Supervisory Board committees** efficiently prepare the topics addressed and resolutions adopted at Supervisory Board meetings. The committee chairmen report to the Supervisory Board regularly and promptly on their activities and on any forthcoming decisions to be taken at the next Supervisory Board meeting.

The **Audit Committee** held a total of six meetings in the year under report. Key topics at its meetings particularly included the annual financial statements of MVV Energie AG, the consolidated financial statements and the combined management report for the 2015 financial year, as well as the company's situation at the end of the 1st quarter, 1st half and first nine months of the 2016 financial year. The Committee also discussed the company's risk situation and its risk management on a quarterly basis.

Furthermore, the Committee discussed the execution of the audit of the annual financial statements of MVV Energie AG and the Group in the 2016 financial year. It submitted proposals to the full Supervisory Board about the selection of the auditor of the annual financial statements, potential audit focuses and the fee agreement. In addition, the Committee discussed the 2017 business plan and medium-term planning with the Executive Board. Following careful analysis, it recommended that the Supervisory Board should approve the budget for the 2017 financial year. The Committee considered the audit findings and audit plan submitted by the group internal audit department and ascertained that the internal control system (IKS) in respect of the financial reporting process was effective. A further major topic related to the compliance officer's report, which is used by the Supervisory Board to determine the effectiveness of the compliance management system and thus ensure that the system is appropriate and functional. The other topics discussed by the Committee particularly included preparations for the construction of the gas-fired combined heat and power plant in Kiel, developments in terms of the expansion in renewable energies and developments in the Czech energy market.

The **Personnel Committee** met on three occasions in the 2016 financial year. It held in-depth discussions concerning the reappointment of Ralf Klöpfer, the Sales Director, and recommended that the Supervisory Board should extend his contract. The Committee also held extensive discussions concerning the termination of the contract with Udo Bekker, our former Personnel Director. Furthermore, Committee deliberations also focused on matters relating to the compensation of Executive Board members.

The **Nomination Committee** held one meeting in the year under report. On the basis of the requirements profile compiled for Supervisory Board members, it drew on a structured process to prepare personnel proposals for the election of Supervisory Board members by the Annual General Meeting.

The **New Authorised Capital Creation Committee** did not hold any meetings in the 2016 financial year. Like in previous years, there was also no reason for the **Mediation Committee** required by the German Codetermination Act (MitbestG) to be convened.

Composition of Supervisory and Executive Boards

The scheduled term in office of the MVV Energie AG Supervisory Board expired upon the conclusion of the Annual General Meeting on 4 March 2016. Our Supervisory Board comprises 20 members, of which ten shareholder representatives and ten employee representatives, with the latter being elected by employees in accordance with the German Codetermination Act (MitbestG). The Annual General Meeting elects the shareholder representatives – apart from two members who are directly delegated by the City of Mannnheim, namely the Lord High Mayor and the relevant specialist head of department. This requirement applies to the extent that the City of Mannheim is a shareholder and directly or indirectly owns a shareholding corresponding to more than one half of the company's share capital. Of the shareholder representatives, Reinhold Götz, Prof. Dr. Egon Jüttner and Wolfgang Raufelder did not stand for re-election, as a result of which their terms in office expired at the end of the Annual General Meeting. The remaining shareholder representative members of the Supervisory Board were elected by the Annual General Meeting for a further term in office. Barbara Hoffmann, Prof. Dr. Heidrun Kämper and Brigitte Kemmer were newly elected. Of the employee representatives, Daniela Kirchner stood down, while Bernhard Schumacher was newly elected by the workforce as an employee representative.

Dr. Dieter Steinkamp stood down from his position as of 30 September 2016. To succeed him, Dieter Hassel was appointed by court to the Supervisory Board of MVV Energie AG as of 7 October 2016.

I would like to thank the retiring members of the Supervisory Board for their commitment and for the work they contributed to the benefit of the company.

At our meeting on 3 December 2015, we extended the appointment of our Sales Director Ralf Klöpfer, who has been a member of the Executive Board since October 2013, for five years and thus until September 2021. Udo Bekker, who was the Executive Board member with responsibility for personnel since January 2013, left our company as of 30 September 2016. This was amicably agreed at our meeting on 26 September 2016. As Labour Director, he successfully influenced and shaped the further development of the MVV Energie Group in terms of its personnel resources. We would like to thank him for the important ideas he contributed and for his commitment.

Corporate governance

We addressed the recommendations and requirements of the German Corporate Governance Code (DCGK) once again in the year under report and co-signed the Declaration of Conformity with the German Corporate Governance Code submitted by the Executive Board. MVV Energie AG complies with all of the Code recommendations. We approved the ▸ **Corporate Governance Report,** which also comprises the Declaration of Conformity and the Corporate Governance Declaration, at our meeting on 26 September 2016. This report was published on the internet on 4 November 2016.

www.mvv-energie.de/corporate-governance-engl

Handling conflicts of interest

Members of our Supervisory Board are obliged to disclose any conflicts of interest that arise without delay. There were no conflicts of interest in the year under report. We conducted a review and established that our body includes an adequate number of independent members as defined in the German Corporate Governance Code. Further information can be found in the Corporate Governance Report.

Audit of annual and consolidated financial statements

The Annual General Meeting held on 4 March 2016 elected PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft (PwC) as auditor of the financial statements for the 2016 financial year. The auditor presented a declaration of independence to the Supervisory Board.

For the 2016 financial year, the annual financial statements of MVV Energie AG have been prepared pursuant to the German Commercial Code (HGB) and the German Stock Corporation Act (AktG), while the consolidated financial statements and combined management report of the MVV Energie Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as applicable in the EU. The auditor audited the consolidated financial statements and combined management report of the MVV Energie Group and the annual financial statements of MVV Energie AG and granted unqualified audit opinions. The annual financial statements, consolidated financial statements and combined management report for the 2016 financial year are published in the Federal Gazette (Bundesanzeiger).

The Supervisory Board was provided in good time with the following documents: the consolidated financial statements, the combined management report, the annual financial statements of MVV Energie AG, the appropriation of profits proposed by the Executive Board and the auditor's audit reports. Both the Audit Committee and the full Supervisory Board examined these documents in great detail. Both bodies held in-depth discussions of the documents in the presence of the auditor. No objections were raised. At our meeting on 7 December 2016, we approved the consolidated financial statements and the combined management report, as well as the annual financial statements of MVV Energie AG. The annual financial statements are thus adopted. We endorse the appropriation of profits proposed by the Executive Board. The auditor also audited the early warning risk identification system established by the Executive Board pursuant to § 91 (2) AktG. The auditor determined that the system was suited to detect at an early stage any developments that could threaten the company's continued existence.

According to the report compiled by the Executive Board on the company's relationships with affiliated companies (dependent company report) for the 2016 financial year, MVV Energie AG was not disadvantaged by the legal transactions performed with affiliated companies outlined therein. The auditor audited the dependent company report and granted the following audit opinion: "Following our audit and assessment performed in accordance with professional standards, we confirm 1. that the factual disclosures made in the report are accurate and 2. that the company's compensation in the transactions listed in the report was not incommensurately high." Both the dependent company report and the associated audit report compiled by the auditor were provided to the Supervisory Board in good time. Based on its own review, the Supervisory Board concurs with the auditor's assessment and approves its report.

Thanks

Despite the difficult market climate, MVV Energie posted a very successful performance for the year under report. Everyone contributed to this success – from the Executive Board of MVV Energie AG to the management boards and management teams at subsidiaries through to employees and works council members. On behalf of the entire Supervisory Board, I would like to thank them all for this!

Mannheim, December 2016

Dr. Peter Kurz
Chairman

MVV Energie AG Share

Turbulence on stock markets

Developments on international stock markets in the first half of 2016 were initially influenced by the crises in Ukraine and the Middle East. Not only that, macroeconomic weakness in Asia, resulting in a downturn in prices on the international commodities markets, led share prices to decline, as did the low oil price. In March, the European Central Bank cut the base rate to 0 percentage points for the first time in order to counter faltering economic growth and the low level of inflation in the euro area. At the same time, it increased the bond acquisition programme to Euro 80 billion.

At the end of June, the result of the UK referendum in favour of exiting the European Union led to a downturn in international financial and currency markets. Stock markets nevertheless recovered in subsequent weeks and regained their pre-Brexit levels.

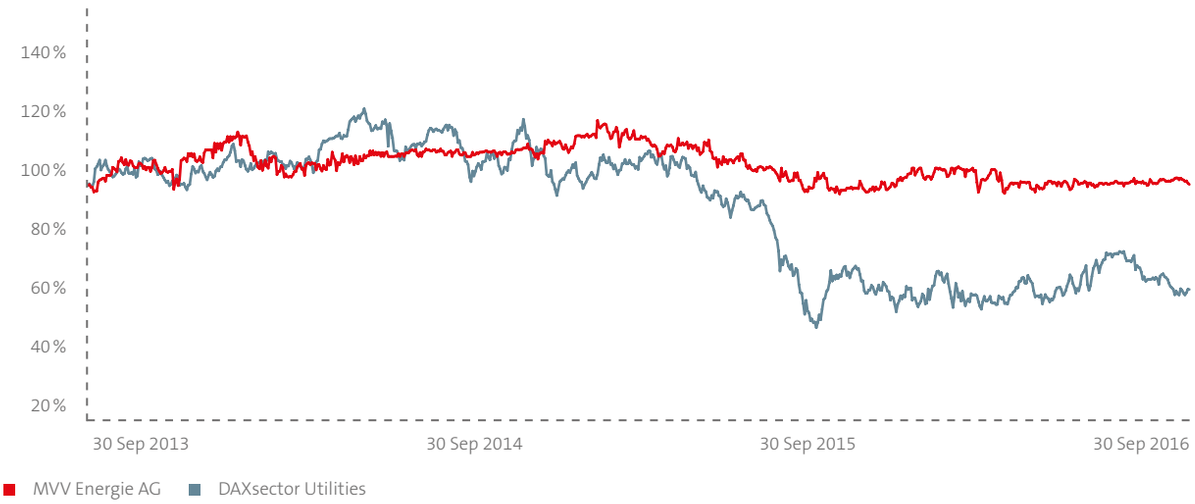
Key figures on share and dividend of MVV Energie AG

		FY 2016	FY 2015
Closing price[1] at 30 September	Euro	19.90	21.15
Annual high[1]	Euro	22.00	26.20
Annual low[1]	Euro	19.30	20.26
Market capitalisation at 30 September	Euro million	1,312	1,394
Average daily turnover	No. of shares	5,630	4,233
Number of shares at 30 September[2]	000s	65,907	65,907
Dividend per share[3]	Euro	0.90	0.90
Dividend total[3]	Euro million	59.3	59.3
Adjusted earnings per share[4, 5]	Euro	1.45	1.14
Cash flow from operating activities per share[5]	Euro	4.16	3.86
Adjusted carrying amount per share[5, 6, 7]	Euro	18.36	17.73
Price/earnings ratio[8]		13.7	18.6
Price/cash flow ratio[8]		4.8	5.5
Dividend yield[8]	%	4.5[3]	4.3

1 XETRA trading
2 Number of shares at 30 September corresponds to weighted annual average
3 Subject to approval by Annual General Meeting on 10 March 2017
4 Excluding non-operating measurement items for financial derivatives, excluding structural adjustment for part-time early retirement, excluding restructuring expenses and including interest income from finance leases
5 Number of shares (weighted annual average)
6 Excluding non-operating measurement items for financial derivatives
7 Excluding minority interests
8 Basis: closing price in XETRA trading on 30 September

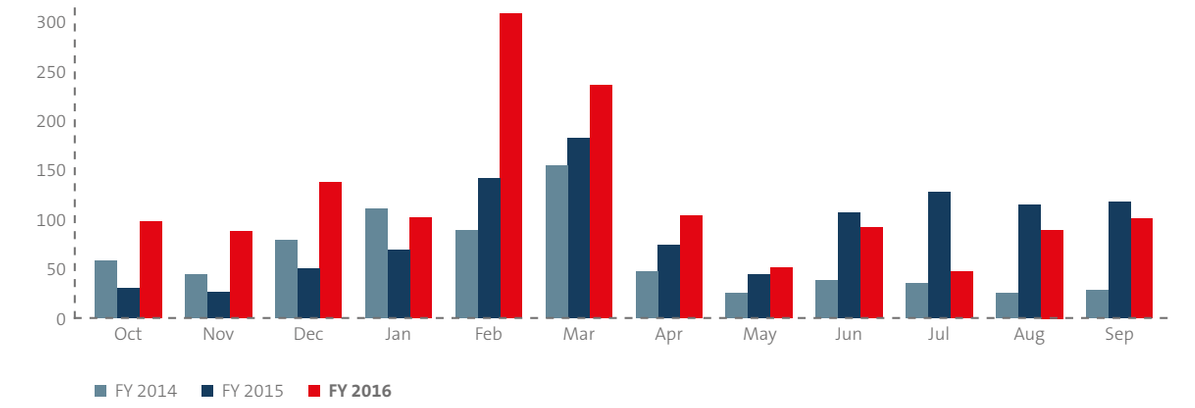
MVV ENERGIE AG SHARE PRICE PERFORMANCE COMPARISON

(%)



MONTHLY SHARE TURNOVER

(no. of shares in 000s)



Data on MVV Energie AG share	
Stock exchanges	XETRA Frankfurt, Official Trading in Frankfurt and Stuttgart, Free Trading in Berlin, Düsseldorf and Hamburg
Transparency level	Prime Standard
Market segment	Regulated Market
Relevant indices	Prime All Share, CDAX, DAXsector Utilities
ISIN International Security Identification Number	DE000A0H52F5
WKN Security Identification Number	A0H52F
Symbol	MVV1
Reuters Instrument Code	MVVG
Bloomberg Symbol	MVV1:GR
Share category	Individual registered shares (ordinary shares), prorated amount of share capital per individual share: Euro 2.56
Share capital	Euro 168,721,397.76
Share capital (number of shares)	69,906,796
Date of initial listing	2 March 1999

Decrease in share price

The MVV Energie AG share was listed at Euro 19.90 on 30 September 2016, corresponding to a decline of 5.9 % compared with the share price of Euro 21.15 on 30 September 2015. Including the dividend of Euro 0.90 per share distributed in March 2016, our share price fell year-on-year by 1.9 %. In the share price performance chart on the previous page we have accounted for the dividend payments made in 2014, 2015 and 2016. While the DAXsector Utilities, the sector index for the energy industry, fell by 35.0 % – reflecting the difficult conditions in the energy market – our share price rose by 0.3 % over the three-year period.

Decrease in market capitalisation, rise in trading volumes

As a result of the share price performance, our market capitalisation decreased from Euro 1,394 million at the previous year's balance sheet date to Euro 1,312 million at 30 September 2016.

The 4.8 % free float share was valued at around Euro 63 million (previous year: Euro 69 million). A total of around 1.4 million MVV Energie shares were traded on all German marketplaces in the 2016 financial year, 33.4 % more than in the previous year. Due above all to this factor, the value of trading volumes rose to around Euro 30 million (previous year: Euro 25 million).

Stable dividend

The Annual General Meeting of MVV Energie AG held on 4 March 2016 followed the proposal submitted by the Executive and Supervisory Boards and approved the distribution of a dividend of Euro 0.90 per share for the 2015 financial year. Based on 65.9 million shares, the distribution sum totalled Euro 59.3 million.

We aim to continue paying our shareholders an appropriate dividend in future as well. The dividend proposal for the year under report was adopted at the Supervisory Board meeting on 7 December 2016. The Executive and Supervisory Boards intend to propose a dividend of Euro 0.90 per share once again for approval by the Annual General Meeting on 10 March 2017. In terms of the share's closing price in XETRA trading on the balance sheet date on 30 September 2016, this would correspond to a dividend yield of 4.5 %.

Our investor relations activities

MVV Energie AG is currently analysed by four financial institutions – Deutsche Bank, Kepler Cheuvreux, Landesbank Baden-Württemberg and M.M. Warburg & Co. As of 30 September 2016, there was one recommendation to buy and three recommendations to hold our share. The share price targets issued by the analysts for our share range between Euro 22.60 and Euro 25.

In the year under report, we presented our company and our strategic alignment to both institutional and retail investors. Furthermore, the Executive Board outlined the latest business performance at analysts' conferences. On our website, we publish ▸ **recordings of our analysts' conferences** as well as the accompanying ▸ **analysts' presentations**.

www.mvv-investor.de

SUSTAINABILITY

Sustainability at MVV Energie

- Diversified generation portfolio
- Renewable energies account for 58 % of electricity generation
- Around 719,000 tonnes of CO_2 equivalents avoided
- High customer satisfaction

SUSTAINABILITY STRATEGY

The future energy supply will gradually become more decentralised and will increasingly be digitally managed. At the same time, it should be more environmentally compatible than at present. To achieve these objectives, the German energy system is undergoing a fundamental transformation, one that is set to last many more years.

Corporate Strategy
Pages 50-52

Our ▸ **corporate strategy** is aligned towards the energy system of the future. We are smartly combining renewable and conventional energies. This way, we on the one hand ensure that we can provide energy in a more environmentally-friendly and flexible manner, and that with great proximity to our customers. On the other hand, we are making sure that the energy supply remains reliable and affordable. Sustainability has been a firm component of our strategy since 2009. It is therefore only consistent that we also factor sustainability considerations into our business decisions.

Supplement to Annual Report
Page 31

We are aligning our economic targets ever more closely to ecological and social factors. We aim to

- Maintain a balance between profitable growth and social responsibility
- Consistently enhance our business model and thus secure our long-term economic success
- Be aware of the ecological and social implications of our own business activities and reduce our impact on the natural world
- Create and retain sustainable jobs and training positions for our employees
- Make a measurable contribution to converting the energy industry and protecting the climate and environment.

www.mvv-energie.de/corporate-governance-engl

Underlying codes of conduct and ethical standards

We are building on transparency, trust-based cooperation and integrity. Our activities are based on responsible corporate management. We ensure compliance with applicable laws and regulations, as well as with internal codes of conduct, and make sure that we act appropriately towards public sector decision makers. Furthermore, we pay particular attention to preventing all aspects of corruption and suitably deal with any cases that come to our notice. These principles and requirements are anchored in internal regulations, guidelines and codes of conduct. These also include the MVV Compliance Management System, which covers all of MVV Energie's substantial commercial activities and business processes and thus ensures compliance with legal requirements.

Our actions are also guided by our ▸ **corporate culture**, which comprises clear values and principles applicable to our cooperation within the company, our every business dealings with customers, partners and competitors and our contact with stakeholders, the authorities and politicians.

We also have detailed emergency management regulations in place. Alongside organisational responsibilities, these specifically also set out the approach to be taken and communications required in various emergency scenarios.

In our ▸ **corporate governance report**, we have provided information about our codes of conduct and the ethical standards to which we are committed. We confirm in this report that we did not detect any notable infringements either of laws or our internal codes of conduct once again in the 2016 financial year. The same also applies to compliance with basic employee and human rights.

G4-56

We take account of the precautionary approach towards handling potential negative implications on the environment by means of our strategic alignment and by integrating sustainability into our business activities. We also account for environmental risks within our ▸ **risk management system.** **G4-14**

SUSTAINABILITY MANAGEMENT

We have anchored sustainability management across all levels of our Group. The Executive Board manages sustainability-related topics on the top strategic level. It is supported in this by the sustainability management team within the strategy department. This team lists the basic questions to be addressed, coordinates the development in the Group's sustainability strategy and individual projects and measures and implements these via the group-wide sustainability programme. Furthermore, our sustainability management team continually reviews and evaluates the Group's performance based on internal sustainability indicators and medium-term targets. **G4-34**

The group-wide sustainability programme forms the mandatory basis for the activities of the sustainability workgroup. This acts as the driving force and as coordinator for all fundamental sustainability-related topics, coordinates all sustainability projects underway across the Group, works on further developing the sustainability programme and monitors its implementation. The most important business fields and locations are represented in this workgroup. This way, all of the major locations at our group of companies and all business fields have actively contributed to our sustainability programme since 2011 already.

Each financial year, we tackle around 10 to 15 new sustainability projects. In the year under report, for example, we worked on the further development of decision-making processes for strategic investments, for which sustainability factors are now being integrated and assessed even more closely. Another project focused on the further development of external sustainability reporting in accordance with GRI-G4. This way, our reporting is not only more transparent, but also targeted more closely to the needs of our stakeholders .

Within our sustainability programme, we also regularly review the materiality of our approach. Among other factors, we determine whether and to what extent various topics are of current or material relevance for the Group. Location-related measures and projects relating to sustainability are implemented by the relevant specialist organisational units and business fields under their own operational responsibility.

Opportunity and Risk Report Pages 101-102

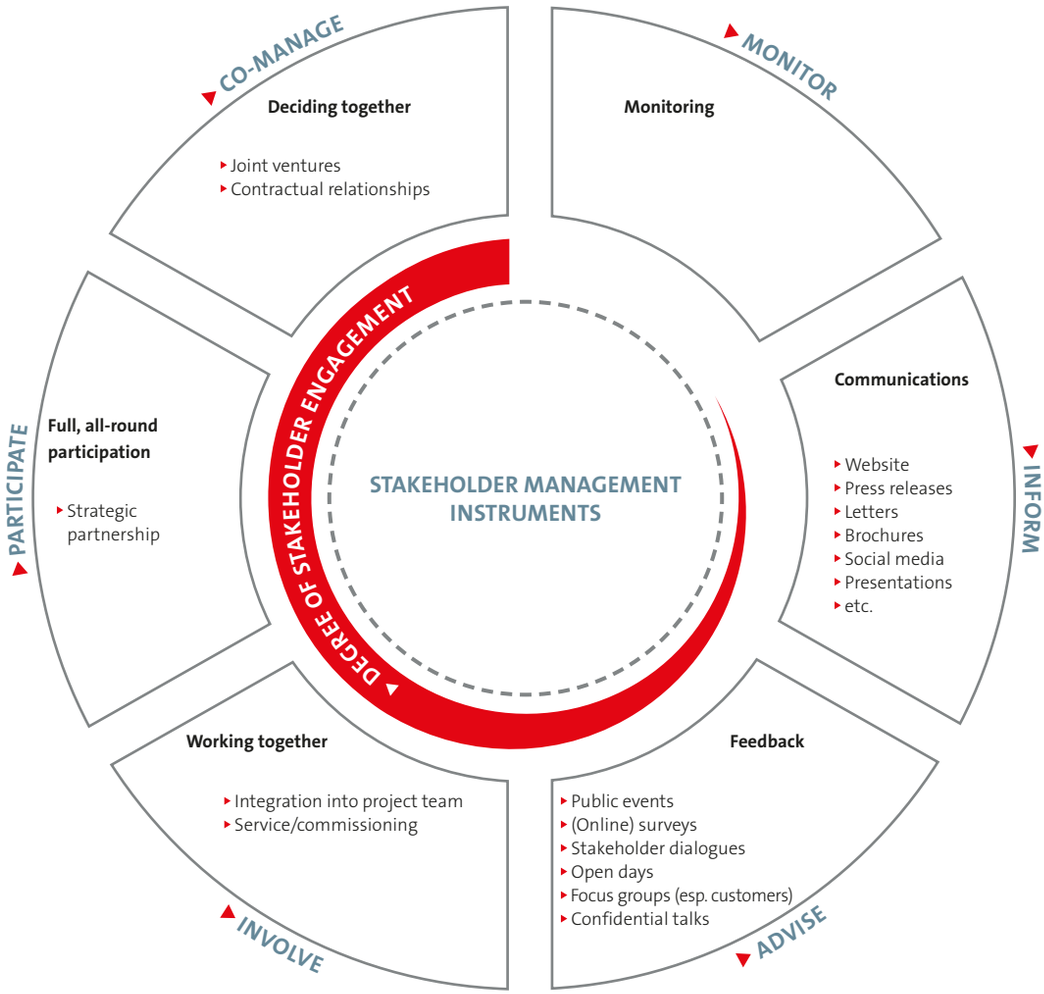
Our sustainability programme focuses on topics, processes and measures that form part of our core business. These include

- Boosting climate protection and efficient resource use by expanding renewable energies plants and generation plants working with highly efficient combined heat and power (CHP) generation
- Reducing primary energy consumption at our companies and our customers – also by offering innovative products
- Reducing our ecological footprint – also in fields outside energy generation
- Continually improving occupational health and safety and reducing accident frequency for our employees
- Taking greater account of and according greater relevance to ecological and social factors in our relationships with suppliers, customers and competitors. **G4-27**

Identifying and involving stakeholders

Due to its large number of locations, business fields and legal units, the MVV Energie Group is of interest to numerous, often heterogeneous groups of stakeholders. We are basically open and willing to talk to all stakeholders and use various forms of communication to facilitate and stimulate dialogue and also to raise awareness for our concerns. Our most important stakeholders include our shareholders, co-shareholders, employees, customers and political representatives. Other significant stakeholders include analysts, non-government organisations (NGOs), associations, the media, local residents at our locations and suppliers. These are supplemented by cooperation partners, business partners and research institutes. **G4-24**

STAKEHOLDER ENGAGEMENT



When updating our sustainability strategy in the context of our strategic sustainability management, we review the relevance of these groups for our Group each year, identify their concerns and determine the extent to which these are to be accounted for. The results of this process are then discussed in the sustainability workgroup. **G4-25** **G4-27**

Our aim is to inform our stakeholders openly and transparently and to find out more about their expectations and opinions. To this end, we work with various instruments.

Via our websites, press releases and social media networks, we regularly make extensive information available. We closely follow our stakeholders' positions on sustainability-related topics and evaluate their concerns. This process is performed in close cooperation with colleagues from specialist departments and companies within the MVV Energie Group. We closely monitor public debate and also evaluate public information events, as well as open days, focus groups and discussions at public events, specialist energy industry conferences and associations. **G4-26**

We take our stakeholders' concerns seriously and factor these into our decisions. We present the most important suggestions received from our stakeholders in our management declarations (Disclosures on Management Approaches - DMAs) which we issue on all ▸ **material sustainability topics**. **G4-27**

Involvement in associations and initiatives

MVV Energie takes part in public debates on the topics of corporate responsibility and the energy system transformation. We play an active role in relevant bodies, associations and research organisations. We also participate in energy policy and energy industry discussions via our membership in industry associations, such as

- Bundesverband der Energie- und Wasserwirtschaft e.V. (BDEW),
- Verband kommunaler Unternehmen e.V. (VKU),
- Energieeffizienzverband für Wärme, Kälte und KWK e.V. (AGFW) and
- Bundesverband WindEnergie e.V. (BWE).

The companies within our Group are also involved in local initiatives and networks. Apart from paying our membership fees and providing occasional financing for studies and surveys on energy industry matters, which are also published, we make no payments to associations.

Furthermore, we are also involved on municipal, regional and social levels at our locations and in our regions by helping to develop energy concepts and climate protection programmes. We are, for example, a shareholder in the climate protection agency ▸ **Klimaschutzagentur Mannheim.** **G4-15** **G4-16**

CDP climate protection reporting

The results of the Carbon Disclosure Project (CDP) ratings published on 25 October 2016 ▸ **CDP Climate Change Report 2016 – DACH 350+ Edition** show how successfully companies in Germany, Austria and Switzerland are working to protect the climate. CDP is the world's leading initiative when it comes to determining key climate and environmental information at companies on behalf of institutional investors. The relevant data is collected from companies each year. On this basis, the CDP awards so-called climate scores on a scale of A to D. MVV Energie has already participated in CDP for many years – in this context we report the climate protection activities actually performed, as well as our objectives, measures and emission reductions. For our climate reporting in 2016 we were awarded the score B/"Management".

Material Sustainability Topics Page 21

www.cdp.net/en/reports/downloads/1232

MATERIALITY ANALYSIS

We have identified the material sustainability topics at our Group in accordance with GRI-G4 and also report extensively on these and on the relevant indicators. We have noted any changes in material topics compared with our 2015 Annual Report.

We aim to provide our stakeholders with detailed information. In view of this, we also present aspects classified as less relevant within the GRI materiality analysis. This information helps to ensure the transparent overall presentation of our corporate responsibility and also meets our stakeholders' expectations in our reporting.

www.klima-ma.de

To determine the contents of the report, we adhered to the multistage approach proposed and outlined in the implementation instructions for the GRI-G4 Guidelines. We performed the internal company process, which is set out below, with external specialist support at times. This included workshops, internal analyses and liaison with those specialist departments that have interfaces to external stakeholders. **G4-18**

Step 1: Based on an overview of the most important global challenges in terms of sustainability, we worked with a multistage process to define our company-specific topics. To this end, we on the one hand consulted specialist departments and companies at MVV Energie and factored in their feedback. On the other hand, we included extensive information directly or indirectly received from our stakeholders in the course of the year under report, as well as the findings of our stakeholder analyses.

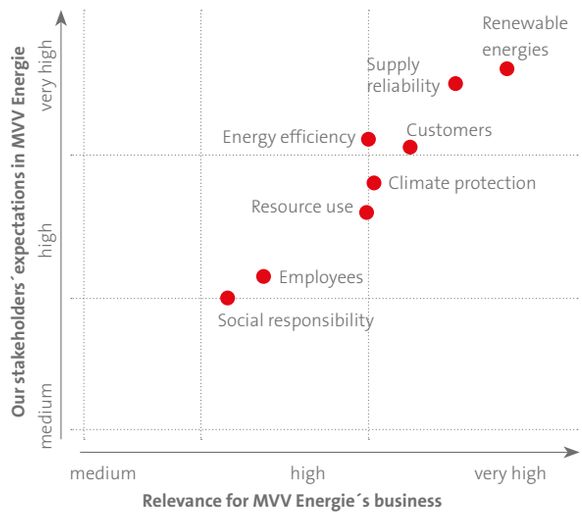
Step 2: We subsequently used a materiality process to prioritise the reporting contents identified for the MVV Energie Group. Here, we accounted not only for the various perspectives, expectations and topics relevant to our stakeholders, but also for the significance these topics have for our company.

Step 3: The validation stage resulted in a list of material topics accompanied by further supplementary information. We then portrayed the material topics in a matrix. We classify a sustainability topic as material when its relevance to stakeholders and/or MVV Energie is high or very high.

Step 4: The results were discussed on Executive Board level and confirmed. Drawing on comparison with the sustainability programme, we then formulated our objectives based on the material topics. **G4-18**

Supply Chain
Pages 22-23

MATERIALITY MATRIX SHOWING THE MOST IMPORTANT SUSTAINABILITY TOPICS AT MVV ENERGIE



G4-19

When performing the materiality analysis for GRI-G4, we updated the materiality matrix published last year. Overall, the assessment of topics has not changed to any significant extent since the previous year. One exception involves the supply chain topic. In the past, our stakeholders already had significantly less marked expectations here than for other sustainability topics. Our stakeholders' expectations showed a slightly downward tendency in our evaluation in the year under report as well. We too aim to focus more closely on the high and very high expectations within our GRI-G4 reporting. As a result of these considerations, we will in future no longer be providing information about the ▸ **supply chain** in our reporting on material topics, but rather in our general standard disclosures below. **G4-22**

The materiality process also clearly revealed that there has been a slight decline in the significance of the supply reliability topic. Associated concerns about capacity bottlenecks and blackouts have also receded in public debate. One topic that has gained in significance, by contrast, is that of the customer – the transformation in the energy system is changing business models, as ever more customers are becoming "prosumers", i.e. are not only consuming, but also generating their own energy. **G4-27**

MATERIAL SUSTAINABILITY TOPICS

Material topic	Aspects reported	Our objective	Material	
	GRI: Aspect within GRI-G4, EU: Sector-specific aspect Sector Disclosure Electric Utilities MVV Energie: Further aspects defined		**Inside** MVV Energie **G4-20**	**Outside** MVV Energie **G4-21**
Renewable energies	Contribution to energy turnaround (MVV Energie)	We aim to expand our proprietary electricity generation from renewable energies.	●	●
Supply reliability	Availability and reliability (EU), Indirect economic impacts (GRI)	We ensure supply reliability in our grid regions. We take measures to reduce any temporary interruptions to supply. We operate a forward-looking infrastructure for the people and companies in our regions.	●	●
Customer	Product labeling (GRI), Data protection and information security (MVV Energie)	We raise our customers' satisfaction with MVV Energie. We ensure data protection and information security with an extensive range of technical and organisational security measures.	●	●
Energy efficiency	Energy (GRI), System efficiency (EU)	We increase plant efficiency levels and reduce emissions from proprietary generation. We reduce grid losses in our heating energy and electricity grids.	●	●
Climate protection	Emissions (GRI)	We aim to further increase annual net CO_2 savings.	●	●
Resource use	Materials (GRI)	We reduce our ecological footprint by expanding highly efficient CHP and district heating and thus reduce the use of non-renewable fuels.	●	●
Employees	Occupational health and safety (GRI), Training and development (GRI)	We continually promote the health of our employees and offer them all-round support. We reduce the frequency of work-related accidents. We will increase the share of women in management positions to 25 % by 2022.	●	
Social responsibility	Economic output (GRI), Local communities (GRI), Commitment to society (MVV Energie)	As a successful economic player, we contribute to regional value creation. We show our commitment by supporting local and regional cultural, sports and education projects.		●

G4-19 **G4-27**

VALUE CHAIN

Within their value chains, companies can directly influence sustainability-related topics along their upstream supply chains. After all, they decide who they wish to do business with and which minimum requirements they place in their suppliers' business activities. From a sustainability perspective, measures to combat corruption, uphold human and employee rights and protect the environment customarily play a major role in our selection process. Our stakeholders also expect us to exert influence on our suppliers by means of our procurement policy.

The most important components of our value chain are

- Purchasing and marketing electricity and natural gas in the international wholesale business
- Procuring waste, biomass and – to a minor extent – coal
- Generating electricity, heating energy and biomethane
- Developing new generation plants, especially onshore wind and photovoltaics plants, for proprietary and third-party operation
- Operating electricity, natural gas and district heating grids and energy storage facilities
- Supplying electricity, gas and heating energy to end consumers and secondary distributors
- Providing energy-related services. **G4-12**

The energy industry supply chain is characterised to a significant extent by fuel procurement transactions, while other suppliers account for a considerably lower share of total procurement volumes.

Dealing with fuel suppliers

We procure electricity and natural gas on the wholesale markets, where fuels are offered as standardised products and numerous players influence trading activities. Having been offered by a producer, fuels often change hands several times between trading partners. As a result, we are often not aware either of identity of the producer or of the origin of the fuel. For the electricity and natural gas commodities we procure we are not aware of any material sustainability topics within our sphere of influence.

In recent years we have received individual enquiries from stakeholders concerning the origin of the hard coal we use at our power plants. In these enquiries, stakeholders also voiced their expectation that we should exert influence on coal mine operators or turn to alternative procurement sources for hard coal should conditions in the coal mines not be acceptable. MVV Energie's business activities primarily involve three hard coal power plants: We hold shareholdings in the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK), the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM) and the combined heat and power (CHP) plant in Offenbach. Based on our levels of shareholding, we used an arithmetic total of 1.3 million tonnes of hard coal at these power plants in the 2016 financial year. The CHP plant in Offenbach is the only plant we actually operate and for which we procure the fuel directly. The volume procured amounts to around 0.1 million tonnes a year. This comes from international coal traders and we do not have any direct contractual relationships to mine operators. Given our market position, which is characterised by low procurement volumes in the global fuel market, our possibilities of exercising influence are also very low. Having said this, we raise the issue of corporate responsibility for ecological and social topics with traders, competitors and stakeholders. We continually assess the information available to us and evaluate responses received from our enquiries to traders. On this basis, we discuss potential sustainability approaches with those responsible.

The biomass we use at our power plants chiefly comprises waste timber, residual forest timber and green cuttings. We obtain these fuels from disposal companies and incinerate them in accordance with strict legal requirements.

Dealing with other suppliers

We expect our suppliers to comply with minimum ecological, welfare and social standards. This expectation is a firm component of our procurement conditions. The basis for cooperation with suppliers and service providers is created by the laws, ordinances and compliance requirements in force in Germany and the EU, as well as by codes of conduct and working practices to which we attach importance. These include, for example, the international conventions of the United Nations (UN), the International Labour Organisation (ILO) and the Organisation for Economic Cooperation and Development (OECD), as well as the UN Global Compact. Within our supplier management system, new suppliers to MVV Energie AG provide disclosures on their efforts to combat corruption, environmental protection factors and social responsibility. We deposit this information and any accompanying certifications in the supplier database. **G4-15** **G4-56**

A large number of subcontractors work on behalf of MVV Energie. The great majority of third-party companies working on our behalf are located in European Union countries. We thus mainly operate in countries in which human and employee rights are respected and legally protected. We therefore also assume that the employment conditions there are humane. One factor particularly important to us relates to safety standards and requirements; these include legal requirements and the corresponding regulations at MVV Energie, such as the issuing of occupational health and safety instructions for employees at third-party companies. The following applies to all suppliers of the MVV Energie Group: We currently do not perform any systematic full supplier audits and also do not comprehensively record data concerning working conditions at our suppliers.

We have published the documents concerning procurement terms, compliance and occupational health and safety for our suppliers on our ▸ **website**.

www.mvv-energie.de/centralprocurement

Material Topics

Notes to Consolidated Financial Statements Page 119

The following information on our material topics refers to the MVV Energie Group, i.e. to all ▸ **fully consolidated companies**. To ensure a high degree of transparency, in many of the following tables we present additional information that includes companies recognised at equity. Most of the energy we generate conventionally comes from the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM) and the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK). We are co-shareholders in both of these plants. For select topics, we focus the reporting on our three major locations of Mannheim, Offenbach and Kiel.

RENEWABLE ENERGIES

Expanding renewable energies is a major cornerstone of climate protection and also a key expectation of our stakeholders. At the same time, it presents our company with growth potential. Our objective is to expand our proprietary electricity generation from renewable energies in order to make our own contribution to the success of the energy turnaround.

Supply Reliability Page 27

Non-Financial Performance Indicators Page 76

We acted in 2009 to update our generation strategy. Since then, we have been building – alongside biomass, biogenic waste and biomethane – on onshore wind power in particular. Over the past two years we have further boosted our activities in this area. Due to the acquisition of a shareholding in Juwi AG and the takeover of Windwärts Energie GmbH, the planning and addition of renewable energies plants have notably gained in significance for our group of companies. Our new generation plants in the UK are now also contributing towards protection the climate. The energy from waste plant in Plymouth uses waste to generate energy, while our biomass power plant at Ridham Dock is powered by waste timber.

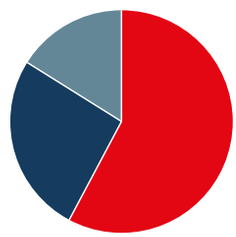
G4 DMA

Our renewable energies generation portfolio

In the financial years from 2009 to 2016 we invested around Euro 730 million in order to expand our generation capacities based on renewable energies and renewable energies project development. In the 2016 financial year, electricity generation at renewable energies plants (including biomass CHP and the biogenic share of waste/refuse-derived fuels) accounted for a 58 % share of our total electricity generation (previous year: 55 %).

ELECTRICITY GENERATION
Shares (%)

	FY 2016
Electricity from renewable energies, including biomass CHP and biogenic share of waste/RDF	58
Electricity from CHP	26
Other electricity generation	16



MVV Energie-1

Information about our electricity generation volumes in the 2016 financial year can also be found in the ▸ **supply reliability** chapter and is listed under ▸ **non-financial performance indicators.**

At the end of the year under report, the electricity generation capacity (installed capacity) of our renewable energies generation plants and waste and refuse-derived fuel (RDF) incineration plants came to 418 MW. Alongside the data for fully consolidated companies, in the following table we also present the data calculated to include companies recognised at equity.

Installed capacity for renewable energies and biogenic share of waste/refuse-derived fuels (RDF)

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
MW_e	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
Biomass and biogas plants	73	72	+1	78	77	+1
Biogenic share of waste/RDF	146	146	0	146	146	0
Wind power	196	174	+13	203	174	+17
Hydroelectricity	2	2	0	2	2	0
Photovoltaics	1	1	0	1	1	0
Total	**418**	**395**	**+6**	**430**	**400**	**+8**

MVV Energie-2

Onshore wind power

We are pressing ahead with expanding onshore wind power. On the one hand, we are drawing on our expertise in developing and managing operations at windfarms in order to implement projects which we primarily market to third parties. On the other hand, we also include individual projects in our proprietary wind power portfolio – such as the wind turbine at Klosterwald Windfarm in Creglingen in the Main-Tauber district, at which operations were launched in October 2015. In September 2016, seven new wind turbines were linked up to the grid at the wind farm in Freudenberg. Our Energieversorgung Offenbach AG subsidiary has also boosted its wind power portfolio. The end of November 2015 witnessed the launch of operations at the eleventh wind turbine at the windfarm on Hungerberg in Rhineland-Palatinate.

As of 30 September 2016, the wind power portfolio of the MVV Energie Group comprised 95 wind turbines with installed total capacity of 196 MW_e.

Furthermore, four of the total of five wind turbines at the windfarm in Hain-Ost commenced operations in September 2016. This windfarm was developed by MVV Energie AG and then transferred to ownership by Stadtwerke Ingolstadt, a company we report under shareholdings recognised at equity.

Biomass plants

Our MVV Umwelt GmbH subsidiary operates two biomass plants in Germany – in Mannheim (20 MW_e) and Königs Wusterhausen (20 MW_e). Furthermore, we are co-owners of a biomass power plant in Flörsheim-Wicker (14 MW_e). At all three locations, MVV Umwelt O&M GmbH is responsible for operations management. These power plants work above all with waste timber, residual forest timber and green cuttings.

Our first biomass power plant abroad has been in operation since the end of the 2015 financial year. The plant with CHP capability at Ridham Dock, UK, has a net electricity capacity of around 23 MW_e. The power plant incinerates around 130,000 tonnes of waste timber from the surrounding region and generates around 155 million kWh of electricity a year. Not only that, it should also supply neighbouring industrial companies with heating energy in future.

These are supplemented by a large number of smaller biomass and biomass CHP plants operated via subsidiaries.

MVV Enamic GmbH owns four biogas plants with installed capacity of around 3 MW in total. At these plants, we mainly use maize and grass silage.

Biomethane plants

The second joint biomethane plant of MVV Energie and Baywa r.e. commenced operations in Barby in the Magdeburger Börde region at the beginning of November 2015. For us, this is already the fourth biomethane plant in Saxony-Anhalt. Like the plants in Klein Wanzleben, Kroppenstedt and Stassfurt, the Barby plant is able to generate around 63 million kWh of biomethane a year and feed this into the public natural gas grid. Each plant uses around 60,000 tonnes of regenerative commodities and residual agricultural materials a year. Information about our biomethane generation plants in the 2016 financial year can be found under ▸ **non-financial performance indicators**.

Non-Financial Performance Indicators Page 77

Energy from waste and refuse-derived fuel (RDF) plants

At our Group's three energy from waste plants in Germany – in Mannheim, Offenbach and Leuna – we incinerate around 1.8 million tonnes of waste and refuse-derived fuel (RDF) a year and use this to produce around 372 million kWh of electricity and 1,222 million kWh of heating energy and steam using combined power and heat (CHP) generation.

Supply Reliability Page 29

Our new waste-fired energy from waste plant with CHP in Plymouth, UK, took up commercial operations at the end of the 2015 financial year. This plant uses around 245,000 tonnes of household, commercial and industrial waste a year to generate electricity and heating energy. In CHP operations, the net electricity capacity amounts to 23 MW_e and the heating energy generation capacity comes to 23 MW_t. Furthermore, MVV Energie CZ operates a waste-fired CHP plant via its TERMIZO a.s. subsidiary. This plant in Liberec in the Czech Republic incinerates and generates energy from around 95,000 tonnes of municipal waste a year.

Non-Financial Performance Indicators Page 77

MVV Enamic operates two industrial power plants based on refuse-derived fuels (RDF) at the industrial parks in Gersthofen and Korbach. Both plants work with CHP to generate electricity and steam and thus exploit the energy potential contained in commercial and domestic waste. The RDF power plants in Gersthofen and Korbach are able to incinerate around 90,000 tonnes and up to 75,500 tonnes respectively of refuse-derived fuels a year.

Heating energy and steam generation

At the end of the year under report, our renewable energies plants and our waste and refuse-derived fuel (RDF) incineration plants had heating energy and steam generation capacity of 816 MW. Alongside the data for fully consolidated companies, in the following table we also present the capacities determined when companies recognised at equity are added.

Information about our heating energy and steam generation volumes in the 2016 financial year can be found in the ▸ **supply reliability** chapter and is listed under ▸ **non-financial performance indicators**.

Heating energy and steam generation capacity

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
MW_t	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
Biomass and biogas plants	134	134	0	134	134	0
Biogenic share of waste/RDF	682	682	0	682	682	0
Heating energy generation capacity from renewable energies	**816**	**816**	**0**	**816**	**816**	**0**
Other plants	1,879	1,897	–1	3,707	3,725	0
Total	**2,695**	**2,713**	**–1**	**4,523**	**4,541**	**0**

G4-EU1

Renewable energies project development

With Juwi AG and Windwärts Energie GmbH, we have extensive expertise within our group of companies when it comes to renewable energies project development and great competence in operations management, i.e. the provision of technical and commercial support for windfarms and solar parks on behalf of their owners.

Newly installed capacity at renewable energies plants

MW_e	**FY 2016**	FY 2015
Wind power	270	31
Photovoltaics	409	0
Total	**679**	**31**

Operations management for renewable energies plants

MW_e	**FY 2016**	FY 2015
Wind power	1,670	429
Photovoltaics	1,601	23
Total	**3,271**	**452**

Compared with the previous year, we reported a substantial increase in the volume of newly installed capacity and in operations management for renewable energies plants. This growth was due to the first-time full consolidation of the Juwi subgroup in the 2016 financial year.

SUPPLY RELIABILITY

Ensuring a reliable and stable electricity supply in Germany – that is one of the most important tasks of energy suppliers and is in the interests of all stakeholders. Given the transformation in the energy system, maintaining supply reliability is becoming ever more complex. Electricity is increasingly generated on a decentralised basis, for example by wind turbines or photovoltaic systems. Electricity feed-in volumes from renewable energies plants nevertheless fluctuate in line with weather conditions and the time of day. Highly efficient, flexible conventional power plants and high-performing grids are required to offset these fluctuations.

Our objective as an energy supplier and distribution grid operator is to provide our customers with a secure and reliable supply of energy around the clock, and that throughout the conversion in the energy system. Electricity supply reliability is also ensured by the structure of electricity generation. It is necessary to make both the electricity supply and electricity demand more flexible and to ensure the availability of sufficiently secure generation capacity. With our ▸ **corporate strategy** of smartly combining renewable and conventional energies, we are facing up to this challenge. Our generation portfolio on the one hand includes proprietary CHP plants and waste and biomass-fired plants. We are also co-shareholders in the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM) and the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK). On the other hand, we have a constantly growing portfolio of renewable energies plants. Here, we are focusing on onshore wind turbines and also use biomass to generate electricity, heating energy and biomethane. To avoid grid downtime, we are continually investing in maintaining and expanding our grid infrastructure, developing smart grids and energy storage systems.

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G4 DMA

Diversified generation portfolio

The MVV Energie Group has a broadly diversified generation portfolio enabling it to contribute towards supply reliability. In this, we combine renewable and highly efficient conventional energies and work with different fuels and generation technologies. This way, we can shape our course towards the energy system of the future along social and ecological as well as economically successful lines. We are further expanding our generation portfolio in the field of ▸ **renewable energies.**

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Non-Financial
Performance Indicators
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Alongside the generation volumes for fully consolidated companies, in the following tables we also present the volumes determined when companies recognised at equity are added. Companies recognised at equity particularly include the large jointly owned power plants in Mannheim and Kiel. Information about our electricity, heating energy and steam generation volumes in the 2016 financial year can also be found under ▸ **non-financial performance indicators**.

Electricity generation volumes

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
kWh million	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
Electricity from renewable energies, including biomass CHP and biogenic share of waste/RDF	1,035	822	+26	1,071	859	+25
Electricity from CHP	470	445	+6	1,214	1,144	+6
Other electricity generation	292	218	+34	2,279	2,045	+11
Total	**1,797**	**1,485**	**+21**	**4,564**	**4,048**	**+13**

G4-EU2

Electricity generation volumes from renewable energies and biogenic share of waste/RDF

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
kWh million	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
Biomass and biogas plants	410	328	+25	446	365	+22
Biogenic share of waste/RDF	281	171	+64	281	171	+64
Wind power	337	317	+6	337	317	+6
Hydroelectricity	6	5	+20	6	5	+20
Photovoltaics	1	1	0	1	1	0
Total	**1,035**	**822**	**+26**	**1,071**	**859**	**+25**

MVV Energie-3

Heating energy and steam generation volumes

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
kWh million	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
Biomass and biogas plants	267	268	0	267	268	0
Biogenic share of waste/RDF	1,836	1,881	−2	1,836	1,881	−2
Heating energy generated from renewable energies	**2,103**	**2,149**	**−2**	**2,103**	**2,149**	**−2**
Other plants	2,033	2,000	+2	4,980	5,003	0
Total	**4,136**	**4,149**	**0**	**7,083**	**7,152**	**−1**

G4-EU2

Limiting grid downtime

Our three large fully consolidated grid companies, namely Netrion GmbH, Energienetze Offenbach GmbH and SWKiel Netz GmbH, aim to avoid grid downtime or to remedy any such downtime as quickly as possible. The key performance figure referred to in our industry is the system average interruption duration index (SAIDI). This presents the average interruption to the supply in minutes per year and customer. The index nevertheless only accounts for unplanned interruptions lasting more than three minutes and not attributable to force majeure.

In the 2015 calendar year, we once again succeeded in providing our customers with an electricity supply that was almost completely free of interruptions. The relatively high figure reported for Netrion's grid region in Mannheim compared with the national average in the 2015 calendar year was due to damages arising during construction work in the summer. This led to a temporary overload of the electricity grid.

Supply interruptions[1]

Grid regions	SAIDI
Netrion Mannheim	27.8
Energienetze Offenbach	4.8
SWKiel Netz	15.3
Germany[2]	12.7

1 2015 calendar year
2 Source: Federal Network Agency (BNetzA)

G4-EU29

In the 2016 financial year, we ▸ **invested** a group-wide total of Euro 73 million in our grids. **G4-EC7** The MVV Energie Group had electricity, district heating, gas and water grids with a total length of around 18,700 km at the end of the 2016 financial year. **G4-EU4**

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CUSTOMER

Our business success is based on our industrial, commercial and private household customers being satisfied with our products, services and customer service and on the trust they place in us. We make their needs and expectations the focus of our actions.

The energy world is changing – and this is also impacting on our customers' needs. There is a growing share of prosumers – ever more customers are becoming both consumers and generators of energy. We are facing up to this challenge not only by convincing our customers with appropriate prices and high-quality service, but also by inspiring them with new products and services individually adapted to their needs. This way, we are supporting our customers in enhancing energy efficiency at their homes or companies and using a higher share of renewable energies in their electricity and heating energy supply. We aim to align our services and solutions even more closely to our customers' interests. To this end, we listen to them closely and seek opportunities for in-depth dialogue with them. We perform regular surveys to assess the quality of our customer service.

The loss or unavailability of customer data of any kind or unauthorised access to such may not only involve economic implications for companies, but also harm their reputations. In view of this, MVV Energie accords great priority to data protection and information security. We draw on an extensive range of technical and organisational security measures to protect data and information. **G4 DMA**

Customer satisfaction

We view ourselves as partners to our customers and aim to forge long-term relationships of trust with them. Our objectives here are high customer satisfaction, high product and service quality and the minimisation of any negative environmental or health implications resulting from the provision of our products. We are therefore working hard to develop innovative products and services to build a sustainable energy supply in which the key focus is on customer benefits. In our Customer Experience and Innovation department, we focus on customer needs across all products and divisions. We are continually analysing customers' experience and wishes and actively involve them in this process. One example of the instruments we use here is our "Customer Atelier" – a platform for interested and committed customers who would like to assist in designing new products and services by regularly sharing their views with us.

Our retail customers are able to seek advice and support either on location at our advice centres or via our free service numbers. Furthermore, we also offer our customers various services online. Since very recently, they have been able to compile cost and consumption forecasts themselves online. Not only that, they can also use the services to enter meter readings, manage documents, amend their bank details or addresses, adjust their instalments, switch energy products or view their consumption to date.

We are permanently working on further improving our services. To measure the quality of our customer services, we regularly perform customer surveys with the market research institute forsa. In the year under report, we increased the frequency of these surveys. Rather than just once a year, as was previously the case, we now obtain customer feedback three times a year and can thus react better and faster to customers' wishes. The latest results show that our retail customers are satisfied overall. Customers were particularly positive in their assessments of the rapid handling and problem solving for their enquiries and of the highly motivated, friendly contact partners. Among other purposes, we also use these surveys to perform target/actual analyses. In liaison with the specialist departments involved, each financial year we stipulate the results we aim to achieve in the following year. Where the results are not consistent with our expectations, an optimisation process is drawn on to discuss and determine suitable improvement measures. One focus of the surveys performed in the year under report also involved finding out more about our customers' expectations concerning ▸ **forward-looking topics** such as e-mobility and battery storage facilities. More than anything, the results reflect a growing desire on the part of our customers to increase the individuality of their own energy supply. **G4-PR5**

Data protection and information security

To safeguard data protection and information security, data protection officers and information security officers have been appointed at the companies within the MVV Energie Group. These officers report to and complement each other. The information security officers use a management system to monitor and control information security. This way, they ensure that data is protected against unauthorised access, loss or manipulation. The data protection officers are responsible in particular for protecting data containing personal information. They aim to prevent any unintended or illegal circulation of such data.

We train our employees in order to raise their awareness of data protection and information security requirements and of how the data should be handled correctly. However, it is not possible to completely prevent cases of inadequate IT security. In mid-March 2016, an individual error resulted in customer data being inadvertently sent to an uninvolved private person by mail. We immediately informed the Baden-Württemberg State Data Protection Officer about the incident and about the measures taken to avoid similar incidents in future. We also directly informed those customers affected. Furthermore, we continued and stepped up the data protection information campaign for employees already launched in 2015. The Baden-Württemberg State Data Protection Officer confirmed that our measures were adequate.

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ENERGY EFFICIENCY

Reducing primary energy consumption is one of the key cornerstones of the energy turnaround. This can only succeed when the volume of energy used is significantly cut in electricity generation, as well as in other sectors such as transport and the heating energy supply. Energy efficiency means both reducing end energy consumption, i.e. at consumers, as well as lowering primary energy use by increasing efficiency rates at generators, for example. When it comes to operating heating energy and electricity grids, efficiency enhancement measures aim to achieve long-term reductions in grid losses. Energy suppliers with proprietary electricity and heating energy generation activities bear a particular responsibility in terms of energy efficiency. For this reason, raising energy efficiency levels is a factor of great importance to us and our stakeholders. Here it is about reducing deployment volumes, CO_2 emissions and thus the negative impact on the environment and simultaneously increasing the economic efficiency of generation plants.

Within our ambitious ▸ **investment programme**, we are focusing, among other factors, on boosting our generation efficiency, for example by working with combined heat and power (CHP) generation. By simultaneously generating electricity and heating energy in CHP, we are able to reduce primary energy requirements. We are continually investing in modernising our plants and grids. With our products and our services, we are also supporting our customers in reducing the energy input at their plants and optimising their energy management. **G4 DMA**

Reducing energy requirements at our generation plants

A large share of our electricity and heating energy generation is attributable to CHP. One suitable key figure for the generation efficiency, or energy yield, of our generation portfolio is the fuel efficiency rate. This presents the energy generated (electricity and heating energy) as a ratio of the energy input (primary energy).

Average fuel efficiency rate

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
%	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
	59	61	−3	61	62	−2

G4-EU11

Resource Use
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We calculate the primary energy factor (PEF) for our major district heating supply systems in Mannheim, Offenbach and Kiel. The PEF presents the ratio of ▸ **primary energy** used to the volume of end energy yielded. It plays an important role in assessing compliance with legal requirements in terms of heating insulation and building facility technology. As a general rule, it holds true that the lower the PEF, the more environmentally-friendly and efficient the energy use is. For our district heating supply system in Mannheim we have certification valid until 2022 that attests a PEF of 0.65. We also have certifications for the district heating supply systems in Offenbach and Kiel, with a PEF of 0.47 valid until 2021 in the case of Offenbach and a PEF also of 0.47 and valid until 2017 for Kiel. The primary energy factor for other fuels such as natural gas or electricity is laid down irrespective of the company involved by the German Energy Saving Ordinance (EnEV).

Absolute primary energy consumption resulting from fuel deployment at our power plants is determined above all by demand on wholesale markets, i.e. by wholesale electricity prices and the generation margin (clean dark spread), as our conventional power plants are operated in accordance with economic criteria. Other than that, weather-dependent electricity and heating energy demand has a significant influence on capacity utilisation rates at our CHP plants. We therefore have only limited ability to control this demand.

We assess the reduction in energy requirements achieved by increasing energy efficiency at our generation plants in the context of modernisation measures on a project-by-project basis. This also reveals the connection between energy efficiency and ▸ **climate protection**, one of our other material topics. As is apparent in the following examples, increased energy efficiency at the plants also leads to lower CO_2 emissions.

At the beginning of 2016, MVV Umwelt GmbH was newly included in the list of the 100 most resource-efficient companies in Baden-Württemberg. In our "OptiMa" project, we increased electricity generation volumes at the CHP plant in Mannheim by around 12 % based on the same volume of fuel input. This way, we generate almost 40,000 MWh more electricity and simultaneously reduce our CO_2 emissions by more than 30,000 tonnes a year.

At our non-recyclable waste incineration and energy generation plant in Leuna, we have been using an environmentally-friendly process to clean flue gases since April 2016. The introdution of a novel dry sorption process enables us to save up to 60,000 MWh of natural gas and 40,000 m³ of water a year. At the same time, this innovative technical solution enables us to use surplus waste heating energy in the heating energy supply.

Energieversorgung Offenbach AG began work on renovating its waste-fired CHP plant in the year under report. Here, the installation of a new flue gas cleaning system will minimise the plant's energy requirements and generate additional heating energy. Moreover, a high-efficiency steam turbine will also be installed, thus more than doubling the volume of electricity fed into the grid each year from 40,000 MWh to 90,000 MWh. Thanks to the improved energy yield, the plant's annual CO_2 emissions will reduce by around 14,000 tonnes. The work was completed in autumn 2016. **G4-EN7**

Grid losses

Grid losses in electricity grids arise when electrical energy is transported and mainly result from electrical resistance in the transmission cables and from transformation losses between various voltage levels. Grid losses in heating energy grids are due to technical factors and depend in particular on the transport route between the source of the heating energy and the heat sink, the level of temperature, weather conditions and the insulation of the transport pipelines.

Climate Protection
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Electricity grid losses

%	**2015[1]**	2014[1]
Mannheim grid region	2.3	2.2
Offenbach grid region	3.2	2.5
Kiel grid region	2.9	2.9

1 Calendar year

District heating grid losses

%	**2015[1]**	2014[1]
	10.7	10.5

1 Calendar year; volume-weighted 3-year average for the Kiel, Mannheim and Offenbach district heating grids

G4-EU12

CLIMATE PROTECTION

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Climate researchers at the Intergovernmental Panel on Climate Change (IPCC) believe that the median temperature worldwide may rise by up to 5 degrees Celsius by 2100 if the use of fossil fuels is not reduced, thus also decreasing greenhouse gas emissions. This would have significant implications for the environment and people's living conditions. Since December 2015, there has been a binding international climate protection framework. The UN Climate Summit in Paris decided to limit global warming to significantly under 2 degrees Celsius, and if possible 1.5 degrees Celsius, compared with pre-industrial levels. The agreement had been ratified by 72 countries by October 2016 and came into effect on 4 November 2016.

At the beginning of September 2016, the Federal Ministry of the Environment published the draft version of the "2050 Climate Protection Plan" that was approved by the Federal Cabinet in November 2016. This plan sets out key points as to how the Federal Government's ambitious climate protection targets can be met across all sectors. Electricity generation should be almost entirely CO_2-neutral by 2050 at the latest. This means that the energy industry also faces the challenge of significantly reducing its greenhouse gas emissions in the years and decades ahead. The use of fossil fuels such as coal, oil and gas will fall substantially in the coming decades as the necessary generation capacities are replaced by renewable energies plants and high-efficiency technologies. Together with the closely linked topics of ▸ **renewable energies** and ▸ **energy efficiency**, the topic of climate protection is a core concern of us and our stakeholders.

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The MVV Energie Group's climate balance sheet is dominated by the greenhouse gases produced upon the generation of electricity and heating energy. These largely involve emissions from existing plants, some of which launched operations in a different energy industry framework several decades ago. Back in 2009 already, MVV Energie communicated that it would no longer be investing in any new coal-fired power plants. This decision was motivated in particular by climate protection considerations. For us, the main focus of climate protection involves avoiding or reducing CO_2 emissions in the energy system as a whole. We achieve this by increasing the generation capacity at renewable energies plants and at generation plants with highly efficient combined heat and power (CHP) generation, supplying our customers with energy generated in environmentally-friendly ways and enhancing our customers' energy efficiency. In our ambitious ▸ **investment programme**, we are relying in particular on climate-friendly technologies. Our focus here is on ▸ **renewable energies**, ▸ **efficient technologies** and a ▸ **decentralised energy supply**. Overall, our strategic measures resulted in net CO_2 avoidance of around 419,000 tonnes of CO_2 equivalents in the energy system in the 2016 financial year (previous year: 245,000 tonnes of CO_2 equivalents).

G4 DMA

Other air pollutant emissions from large combustion plants, such as nitrogen oxides, sulphuric oxides and dust, are also significant to our shareholders as traditional local environmental protection topics, albeit to a lesser extent than greenhouse gas emissions. Moreover, we also aim to avoid or minimise any other harmful effects on the environment arising due to the generation and provision of our products and services. The companies and group shareholdings are responsible on a decentralised basis for the operative management of all environment-related concerns. This is because we work with different technologies and the environmental topics and requirements of local stakeholders vary widely from location to location. Stadtwerke Kiel, for example, is actively participating in the "Climate-Neutral Kiel 2050" project initiated by the city of Kiel. Consistent with the objectives of "Habitat III", the UN conference on sustainable urban development, this project aims to anchor long-term environmental and climate targets on a local level as well. We use suitable management systems for the operative implementation and management of environmental protection measures. Among others, these include environment, energy, quality and compliance management systems, some of which with corresponding national and international certifications. Further orientation is provided by the Sustainability Guidelines, Environmental Protection Guidelines and other guidelines at MVV Energie AG. We also promote and support our employees' sense of responsibility for the environment with a number of ongoing company-internal measures.

Reduction in greenhouse gas emissions

We are committed to the objective of reducing CO_2 emissions to a climate-compatible level by 2050, corresponding to a virtual decarbonisation of electricity generation. Having said this, we do not expect a linear trajectory. In the short term, direct emissions (Scope 1) at our power plants are chiefly determined by weather conditions and energy demand. For structural reasons, our medium-term emissions will therefore also remain at a certain level – for as long as the existing power plants have not yet reached their decommissioning dates. Only in the long term, and by making strategic decisions for replacement energy generation plants, will we be able to ensure that direct greenhouse gas emissions decrease. This development will take several decades and will be implemented step by step. The decommissioning of the joint power plant in Kiel (Gemeinschaftskraftwerk Kiel – GKK), for example, is due to take place in a few years. This will significantly reduce the level of direct CO_2 emissions at all companies fully consolidated and recognised at equity, but will then most likely lead emissions to remain constant at the lower level over a longer period.

The share of CO_2 emissions from our other business activities, for example from logistics/transport or from energy used at other plants, is very low compared with the direct emissions at the generation plants. Our indirect energy-related emissions (Scope 2 emissions) currently account for less than 1 % of total emissions.

Our ability to influence Scope 3 emissions is low to zero. In our business, these emissions are dominated by sales volumes for commodities, i.e. from the resale of electricity and natural gas we do not ourselves produce. Here, we act solely as a sales operation and cannot directly influence the CO_2 balance sheets of these commodities. Our Scope 3 emissions will fall in the long term, as the rising share of renewable energies is reducing specific CO_2 emissions for electricity and natural gas in Germany. This factor is nevertheless countered by potential future sales success: Any rise in our sales volumes with electricity and natural gas we do not ourselves produce would also increase our Scope 3 emissions.

Alongside the figures for fully consolidated companies, in the following overview of CO_2 emissions we also present emissions calculated when companies recognised at equity are included. Companies recognised at equity particularly include the large jointly owned power plants in Mannheim and Kiel in which we are co-shareholders.

CO_2 emissions

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
1,000 tonnes CO_2 equivalents	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
Direct CO_2 emissions (Scope 1)						
G4-EN15	1,056	1,045	+1	4,050	3,881	+4
Indirect CO_2 emissions (Scope 2) [1,2]						
G4-EN16	8	8	0	8	8	0
Indirect CO_2 emissions (Scope 3) [3]						
G4-EN17	7,384	7,067	+4	6,564	6,311	+4

1 Data from 2015 and 2014 calendar years
2 Scope 2 emissions (location-based) include GHG emissions and building-related utility energy for the central business locations of MVV Energie AG (Mannheim), Stadtwerke Kiel (Kiel) and Energieversorgung Offenbach (Offenbach). Due to materiality considerations, we have not broken down the data in greater detail by further location and energy source.
3 Scope 3 emissions include indirect GHG emissions for the following categories in the GHG Protocol: Fuel and energy-related activities, downstream transport and distribution in proprietary grids, and use of products sold (refers to natural gas and biomethane). For fuel-related emissions factors we refer to industry-typical factors at the UBA/DEHSt, for the electricity mix to UBA factors and for district heating to proprietary certification.

The increase in direct CO_2 emissions at fully consolidated companies was mainly due to our waste-fired CHP plant in Plymouth, which only began operations at the beginning of the 2015 financial year. The increase among companies recognised at equity largely resulted from the launch of operations in the previous year at Block 9 at the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM).

By deploying renewable energies plants (RE plants) and with our activities, projects and investments we are making a contribution towards reducing greenhouse gas emissions. The climate-neutral electricity generation at our RE plants enabled us to avoid 719,000 tonnes of CO_2 emissions in the year under report (previous year: 568,000 tonnes of CO_2 emissions). This year-on-year increase was attributable to the expansion in our renewable energies generation portfolio and, consistent with this, to higher renewable energies generation volumes.

Reduction in greenhouse gas emissions

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
1,000 tonnes CO_2 equivalents	**FY 2016**	FY 2015	% change	**FY 2016**	FY 2015	% change
Gross CO_2 avoidance due to renewable energies plants[1]	719	568	+27	743	593	+25
Net CO_2 avoidance due to strategic measures	419	245	+71	339	245	+38

1 To calculate CO_2 savings we multiply proprietary electricity generation volumes broken down by technology with the specific CO_2 avoidance factors for renewable technologies published by the BMWi .

G4-EN19

Due to the feed-in priority for renewable energies, other generation plants, and especially power plants working with fossil fuels, are being edged out of the market. To calculate the volume of gross CO_2 avoidance due to the MVV Energie Group's renewable energies plants, we determine the volume of electricity from proprietary renewable energies generation in the year under report and break this down by technology. We then multiply our proprietary electricity generation volumes with the specific CO_2 avoidance factors for renewable technologies. For this, we use the "Time Series Analysis of the Development in Renewable Energies in Germany of the ▸ **BMWi** based on Data at the Renewable Energies Statistics Workgroup" from August 2016.

www.bmwi.de

To calculate the net CO_2 avoidance resulting from strategic measures at the MVV Energie Group we determine genuine savings benefiting the climate system. We developed the methodology used to calculate measure-specific emissions in 2013 together with the Institute of Applied Ecology (Öko-Institut). We evaluate the impact of all of MVV Energie's new strategic activities, projects and investments in terms of their direct and indirect greenhouse gas emissions. In this, additional emissions (charge) and CO_2 reductions (credit) are netted. This means that alongside electricity, account is also taken of heating energy, services and efficiency measures. The net CO_2 avoidance key figure includes emissions and savings along the entire value chain, i.e. in Scopes 1, 2 and 3. These always refer to the provision or saving of end energy. We record all CO_2 savings for a period amounting to a maximum of ten years from the beginning of the respective measure. No account is taken of historic reduction projects and financial transactions.

The specific CO_2 emissions for our electricity and heating energy products differ in line with the respective generation source and are therefore made available to our customers on a product-specific basis. We do not calculate the specific CO_2 emissions for our electricity and heating energy generation, as we operate a large number of power plants that generate both electricity and heating energy using combined heat and power (CHP) generation. Calculating comparable disclosures on specific CO_2 emissions would require a uniform methodology governing the allocation of the fuels used and resultant emissions to the volumes of heating energy and electricity thereby generated. Given the different types of plant involved, however, no uniform calculation methodology is available within the energy industry. **G4-EN15+EU** **G4-EN16+EU**

Operational environmental protection

A large portion of our environmental protection measures are based on approval requirements and the strict threshold values we meet for the construction and operation of our plants. Moreover, plant-specific emissions at large combustion plants are subject to reporting requirements, with compliance with the prescribed threshold values being monitored by the relevant authorities. In the 2015 calendar year, our plants emitted around 4,200 tonnes of nitrogen oxide (NO_x), around 1,500 tonnes of sulphur dioxide (SO_2) and around 100 tonnes of dust. **G4-EN21+EU**

We are investing in modernising our plants and continually reviewing technical possibilities of reducing air pollutant emissions in the context of a continuous improvement process. Not only that, we work with new technologies and processes, for example to reduce our emissions to a greater extent than stipulated in the relevant legal requirements. The latest example is the deployment of a new process to clean flue gases at our non-recyclable waste incineration and energy generation plant in Leuna. In a project supported by the Federal Ministry of the Environment, we are using a new kind of dry sorption process. This will save 1,600 tonnes of additives and 7,000 tonnes of residual landfill waste a year. The CO_2 reduction potential amounts to around 5,000 tonnes a year. At the same time, this technological solution enables surplus waste gas heat to be used in the heating energy supply.

RESOURCE USE

By generating energy for our customers, we draw on natural resources and thus influence the ecosystem. At our thermal power plants, we also use resources that are not available in unlimited supply, such as ▸ **natural gas and hard coal**, as fuels. The key focus here is on responsible procurement, especially for hard coal, and on reducing primary energy consumption, i.e. ensuring that valuable resources are put to the most efficient possible use. High fuel utilisation rates and environmentally-friendly procurement, such as regional procurement, are also significant for our renewable energies generation plants.

Value Chain
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For us and our stakeholders, optimising our resource use in the long term and ensuring that it is as environmentally-compatible as possible are highly relevant factors. We aim to minimise the overall volume of resources used for energy generation, increase the share of renewable resources used and procure fuels in a responsible manner. This approach forms part of our ▸ **corporate strategy** and is integrated into our processes, such as our investment planning. At our plants, we are already building on ▸ **optimised fuel use for energy generation purposes**. Alongside this, we are continually investing in ▸ **enhancing energy efficiency** at our generation plants and in expanding district heating in conjunction with highly efficient combined heat and power (CHP) generation. In our energy generation, we also accord high priority to the careful handling of pollutants and unavoidable waste by-products, such as ash and slag. **G4 DMA**

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Reducing fuel use and enhancing efficiency

To generate electricity and heating energy, our power plants work with both fossil fuels, in our case mainly ▸ **natural gas and hard coal**, as well as renewable fuels, here mainly ▸ **biomass and the biogenic share of waste/ refuse-derived fuels**.

The increase in biomass and the biogenic share of waste and refuse-derived fuels compared with the previous financial year was due to the launch of operations at our two new UK generation plants – the biomass power plant and the waste-fired CHP plant – at the end of the 2015 financial year.

Fuels used at power plants

	Fully consolidated companies			Fully consolidated companies and companies recognised at equity		
	FY 2016	FY 2015	% change	**FY 2016**	FY 2015	% change
Biomass (tonnes 000s)	518	473	+10	560	515	+9
Biogenic share of waste/RDF (tonnes 000s)	1,820	1,616	+13	1,820	1,616	+13
Natural gas (kWh million)	2,167	2,083	+4	2,180	2,110	+3
Heating oil extra light (HEL) (kWh million)	99	119	–17	100	120	–16
Hard coal (tonnes 000s)	85	88	–4	1,347	1,315	+2

G4-EN1

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One possibility to reduce primary energy use is to enhance fuel efficiency rates. For this reason, we are making targeted investments in highly efficient combined heat and power (CHP) generation. After all, the ▸ **fuel efficiency rate** for CHP is significantly higher than when electricity and heating energy are generated separately. This way, we are making a key contribution to protecting resources and reducing emissions, even if these savings are not directly reportable in our annual fuel use figures. With a fuel efficiency rate of more than 90 %, for example, the ▸ **gas-fired CHP plant** in Kiel will significantly reduce primary fuel use.

Fuel volumes and the corresponding volumes of by-products such as ash and slag are primarily determined by weather conditions and market prices, as well as by fuel properties. The by-products incurred upon energy generation or at CHP plants are due to technological factors and can only be influenced by us to a very limited extent. In the 2015 calendar year, around 174,000 tonnes of fly ash resulted from coal incineration, while around 492,000 tonnes of ash and slag were attributable to waste incineration. As far as technically possible and economically viable, we put the by-products arising at our plants to cascade use, i.e. we prepare them in such a way that they can be returned to the economic cycle, for example as products for the construction industry. Non-recyclable residual volumes have to be sent for landfilling, a process we perform in accordance with the relevant legal requirements. Other by-products and toxic and hazardous substances, such as polychlorinated biphenyls (PBC), play no role in our business activities, or only to a subordinate extent. The treatment of such substances is governed and controlled by our safety management system.

Resource use outside the field of energy generation

The use of resources outside the field of energy generation, such as direct electricity consumption, the use of cooling water or the waste arising at our plants and buildings, is a relatively insignificant factor at the MVV Energie Group. The same applies for materials use, such as the use of office materials for administration activities. We do not deal with these topics in any greater detail in our reporting, but they nevertheless form part of our decentralised environmental management systems. We ensure that materials are put to efficient use and aim to reduce our consumption.

MVV Energie AG, Energieversorgung Offenbach AG and Stadtwerke Kiel AG are responsible for the supply of drinking water in their respective cities and regions. We safeguard our drinking water resources with a full range of measures to protect ground and surface waters. After all, ground water is the most important source for our production of drinking water. We ensure consistently high quality for our drinking water by performing analyses and regular checks of the entire water supply system.

EMPLOYEES

As of 30 September 2016, the ▸ **MVV Energie Group** had a total of 6,174 employees, and thus 866 employees more than one year earlier. The main reason for this significant increase was the first-time full consolidation of the Juwi subgroup. Employees from a total of 49 countries are employed at our group of companies and we see this diversity as representing an opportunity. The fact that employees with different origins, cultural backgrounds and skill sets work together creates competitive advantages for our Group.

The fundamental transformation in the German energy supply presents an enormous challenge to companies operating in the industry – which has itself already changed significantly. Alongside this, demographic change is also an increasingly important factor in Germany. We depend on highly qualified specialists and expect to see a decline in the number of suitable applications in the decades ahead.

To ensure our long-term success as a business, it is crucial that we should find excellent employees, promote their flexibility and powers of innovation and retain them at our company on a long-term basis. In view of this, we are positioning ourselves in the labour market as an attractive employer and attach great value to offering further training to our employees and doing our utmost to boost their satisfaction, motivation and safety. Irrespective of their gender or origin, we offer most of our new employees permanent contracts. In Germany, 74 % of our employees work at companies bound by collective labour agreements.

G4-11

Employee key figures

	FY 2016	FY 2015
Number of employees	**6,174**	**5,308**
of which		
Women	1,845	1,474
Men	4,329	3,834
of which trainees[1]		
Women	104	99
Men	239	260
Total	**343**	**359**
of which part-time employees (%)		
Women	10	8
Men	3	3
Total	**13**	**11**
of which in permanent employment (number)		
Women	1,599	1,261
Men	3,836	3,393
Total	**5,435**	**4,654**
Average age (years)		
Women	41.1	41.7
Men	43.8	44.0
Total	**43.0**	**43.4**
Average length of service (years)		
Women	11.6	12.9
Men	13.9	15.1
Total	**13.2**	**14.5**
Number of parents on childcare leave[2]		
Women	79	71
Men	67	68
Total	**146**	**139**
Staff turnover rate[2]		
Range in %	4.7–8.3	6.8–9.3
Employees with severe disabilities[3]		
Range in %	5.6–8.3	4.3–7.3

1 Including students at Baden-Württemberg Cooperative State University (DHBW)
2 Locations: Mannheim, Offenbach, Kiel
3 MVV Energie AG, Energieversorgung Offenbach AG, Stadtwerke Kiel AG

G4-10

Non-Financial Performance Indicators Page 75

We do not have any data about the employment relationships or contracts of employees at companies and service providers we commission or of freelance staff. **G4-10+EU** **G4-11+EU**

MVV Energie's personnel strategy

Our personnel strategy is the superordinate framework we refer to in order to tackle the challenges outlined above. In our personnel activities, we pursue five strategic objectives:

- Increasing the company's attractiveness as an employer
- Increasing performance capacity
- Securing and enhancing key competencies
- Improving management quality
- Ensuring competitive personnel expense structures

In the year under report we took further steps to reach these objectives:

Supplement to Annual Report Pages 30-33

We introduced a corporate culture project in the previous year already, with shared values being identified by all staff from the Executive Board to managers to individual employees.

We support the upcoming generation of staff from the very outset. With our wide range of vocational training and our programmes for university graduates, we are able to develop the potential of our future specialist and management staff at the company. By working with a systematic process, we help to retain high-potential staff at our company and to accompany their careers at the company in a targeted manner.

We accord great value to continuously improving the quality of our management. To this end, we have performed bottom-up appraisals and surveys at our major locations in Germany. These give employees the opportunity to provide honest feedback.

To ensure that we are viewed as an attractive employer, we are committed among other topics to helping employees combine their family and work commitments and to supporting those employees who have to care for relatives.

Protecting the physical and mental wellbeing of our own employees and those who work on our behalf is important to us. We document our occupational health and safety measures in a safety management system.

We support employees across the company in staying fit by offering numerous health management measures. Good working conditions are important to us – they boost the health and motivation of our employees and increase their performance capacity. The services we offer go beyond minimum legal requirements. Among other features, we make training and relaxation appliances available to employees, offer preventive healthcare measures, sports opportunities and nutritional advice. We also offer training enabling employees to improve their soft skills. **G4 DMA**

"Lived energy" corporate culture project

If they are to make substantial contributions to the company's success, employees have to be highly motivated and committed. A corporate culture supported by all employees is a very important factor when it comes to boosting motivation levels and promoting a sense of belonging together. We launched our ▸ **corporate culture project** in Mannheim in the previous year already and identified four cultural values: Community, Appreciation, Responsibility and Courage. Based on these values, we formulated our "Lived Energy" motto. At various kick-off events, we injected life into "Lived Energy" and demonstrated our sense of community. Group actions already held and due to be held will continue to provide examples and suggestions as to how we can integrate these cultural values into our day-to-day work.

After all, we are convinced that our success is driven not by what we say, but above all by what we do – and how we do it.

Training and entry programmes

We cover our need for specialist and management staff wherever possible with internal candidates. This is one reason why we act early to promote the next generation of staff. To this end, we work on the one hand with our university graduate programmes. On the other hand, we also rely on our extensive range of vocational training programmes. To ensure we receive sufficient numbers of suitable applications for our training and entry programmes, we are working on permanently improving our attractiveness as an employer. By offering work placements and support for degree theses, we also cultivate our contacts with university graduates.

We address future trainees with numerous actions, such as internships for school pupils, events at schools and project weeks undertaken in cooperation with schools. At the "Training Night" held in many regions and cities across Germany, we open up our training facilities. Our trainees and trainers offer insights into the various training vocations on offer. We train more young people than we need for our business. Offering a high number of training positions is one of the ways in which we meet our responsibility towards society. A total of 343 young people, including students at the DHBW Baden-Württemberg Cooperative State University, were in training at the MVV Energie Group as of 30 September 2016. In Mannheim alone, we offer the next generation of employees training in 16 different commercial and technical vocations, as well as combined training and study programmes. Among others, these now for the first time include vocational training for warehousing specialists and the International Business joint training and study programme. MVV Energie AG has also joined the "Refugees in Training Initiative" organised by the Südwestmetall employers' association. We are already training two young people who came to Germany as refugees. We promote especially highly motivated trainees with various development options based on different methodologies and tailored to their personal needs. Not only that, they are also able to take part in Erasmus+, the EU programme aimed at increasing mobility for learning purposes and enhancing transnational cooperation.

Further training and personnel development

Ever greater requirements are placed in employees in their daily work, underlying conditions are changing rapidly and an ever wider range of technological opportunities is available. Against this backdrop, it is crucial for our employees to retain their performance capacity. In view of this, we encourage them to take part in internal and external further training measures. Among other instruments, we hold personnel development meetings to identify requirements. Within various programmes, our employees also have the opportunity to share their experience and further develop their skills. As well as in-class events, employees can also take part in knowledge platforms and use e-learning tools.

One core component of our strategic personnel development activities at our Mannheim location is the Management Review System developed in the 2015 financial year. In the year under report, we deployed this system and held in-depth meetings in order to systematically record the skills and further training requirements of our management staff. Our competency model serves as the basis for the meetings between managers and their staff and for determining further training requirements. By assessing employees' potential in a targeted manner, we are then able to compile succession and development plans. **G4-LA10**

Family-oriented personnel policies

We support our workforce in also meeting the obligations arising in day-to-day family life. After all, employees are only able to focus on their activities when they can successfully combine their family and work commitments on an ongoing basis.

We offer a variety of working hour models across the Group. Among others, these include teleworking, flexible working hours and locations and job sharing. By offering care facilities close to company locations in Mannheim, Offenbach and Wörrstadt, we make it easier for parents to return to work after maternity or paternity leave. Not only that, parent and child rooms are available in Mannheim, Kiel and Offenbach to enable parents to deal with any childcare difficulties arising at short notice. We also support employees who are caring for relatives by offering opportunities to take leave, holding information events and working together with cooperation partners. Over and above this, we also try to make their day-to-day lives easier on a basic level, for example by offering a laundry service.

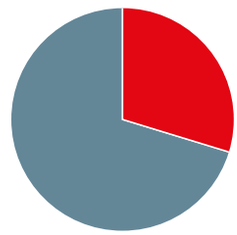
Implementing our family-oriented personnel policies across the board is a topic that is important to us, and that is why we draw on the services of the Hertie Foundation's berufundfamilie®. This audit is a strategic management instrument that supports companies in their efforts to improve the compatibility of their employees' work and family commitments. We have had our activities repeatedly audited and certified – at our Mannheim location since 2008 already, at Offenbach since 2009 and at Kiel since 2012. In the audits, the compilation of a catalogue of specific measures is agreed and their implementation is reviewed.

Promoting women

The Supervisory and Executive Boards of MVV Energie AG are pursuing the objective of increasing the share of women at the Group. The share of female employees at our group of companies is characteristic for the energy industry. As of 30 September 2016, the MVV Energie Group employed 1,845 women, corresponding to a 30 % share of the total workforce (previous year: 28 %). By 2022, we aim to increase women's share of the overall workforce to 35 %. Over the same period, we intend to raise the share of management positions held by women to 25 %, up from its current level of 19 %.

WOMEN AND MEN
Shares (%)

	FY 2016
Women	30
Men	70

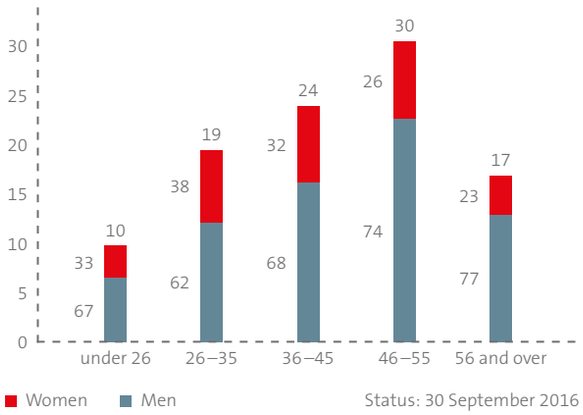


Status: 30 September 2016

We have observed that the share of applications received from women falls significantly short of the share received from men, and that for technical positions in particular. We therefore attach great value to promoting women in so-called "MINT" subjects, i.e. lines of work involving mathematics, information technology, natural sciences and engineering and technology. One of the key focuses here is on the renewable energies business. Our group of companies has accorded high priority to promoting women for many years now – on the one hand with our family-oriented personnel policies and on the other with specific promotional measures. One example here relates to our "X Company Mentoring" programmes. We aim to support our female employees even more closely in future. To achieve this, we are drawing among other measures on our personnel development instruments. Within the management review process, for example, we identify female employees with high potential.

The workforce age structure chart shows that the share of women in age groups up to the age of 45 is now higher than in age groups from 46 upwards. This is one of the reasons why we expect our personnel structure to change continually in the years ahead, enabling us to increase the overall share of female employees.

AGE STRUCTURE OF EMPLOYEES
(%)



Equal participation

In the table below, we present the share of women in the Executive Board of MVV Energie AG and state both the number of female managers in the first and second management tiers at MVV Energie AG and the targets for 30 June 2017 set by the Supervisory Board and the Executive Board in 2015. In the overview we also show the figures as of the balance sheet date on 30 September 2016 alongside the voluntary disclosures already made in the previous year. Compared with 30 June 2015, the number of positions occupied in the second management tier fell significantly. At the same time, however, the share of positions held by women rose to 29 %. This development was mainly due to the ▸ **reorganisation** of our sales units, grid operations and technical services and the generation business field.

Major Developments Page 65

The Executive Board of MVV Energie AG currently comprises only men. The share of female members in the Executive Board of MVV Energie AG also has to be viewed in connection with the terms of appointment of existing members.

Share of women in Executive Board and 1st and 2nd management tiers at MVV Energie AG

	Status at 30 June 2015		Status at 30 September 2016		Target by 30 June 2017
	No. of positions filled Total	Share of women %	No. of positions filled Total	Share of women %	Share of women %
Executive Board	4	0	4	0	0
1st management tier	17	12	17	12	20
2nd management tier	30	20	21	29	25

Occupational health and safety

We are consistently working on improving our achievements in terms of occupational health and safety, with a key focus on protecting the physical and mental wellbeing of our own employees and of those working on our behalf.

We work with an integrated safety management system to document the requirements and conditions applicable in organisational and technical terms. This way, we can systematically and efficiently account for internal and external requirements in terms of occupational health and safety, fire prevention and plant and environmental safety. We agree our occupational health and safety strategies and measures in close cooperation with employee representatives.

We offer suitable training and issue instructions to raise our employees' awareness of hazards. This way, we make sure that they understand the interrelationships involved and that a high level of specialist work safety expertise is in place. Competent involvement of the workforce is a key priority for us in this respect. We have appointed more than 50 safety officers at our Mannheim location alone. Alongside their work in their respective units, these also act as well-informed contact partners in matters relating to occupational health and safety. We provide our safety officers with regular training and inform them in detail at least twice a year about the latest safety requirements and prevention focuses. **G4-LA 5**

We regularly inspect our plants and operating divisions to identify weak points in any safety-related aspects. Alongside scheduled inspection tours, we also work with internal and external audits in order to permanently improve safety and health protection. We have our utilities businesses regularly audited on a cross-utility basis by external specialists. In this, we focus in particular on compliance with the requirements of the DVGW, AGFW and VDN specialist associations in the context of TSM certification measures. Individual subsidiaries and company departments have also established systems and certificates consistent with international norms in the fields of quality, environmental protection, energy management, and occupational health and safety management.

Despite all these efforts on the prevention front, it is not always possible to avoid accidents. We evaluate the accidents occurring within the MVV Energie Group to obtain any indications for potential additional prevention measures. This evaluation process is performed in accordance with data protection requirements and on an anonymous and gender-neutral basis.

www.mvv-energie.de/centralprocurement

Accident statistics

	2015[1]	2014[1]
Work-related accidents per 1,000 employees[2]	13.0	12.7
Lost time injury frequency rate (LTIF)[3]	7.6	7.5
Fatal accidents	0	0

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

G4-LA6

Occupational health and safety is not only an important matter for us with regard to our own workforce, but also in respect of the suppliers and subcontractors we commission to work on our behalf. A large portion of the upstream services we procure are, as is customary in our industry, fuels and commodities. Only a small share of upstream services is performed by companies we commission directly. Most of these companies are governed by German or European occupational health and safety standards. Our business relationships are also based on the codes of conduct, ethical standards and basic employee rights included in our procurement terms. Employees at companies that we commission directly are also governed by our ▸ **general additional work safety requirements**. These set out our safety and protection requirements, which include maintaining safety passes and notification duties for work-related accidents. We do not systematically collect data, neither do we inspect the occupational health and safety conditions at the companies we commission. **G4-LA6 + EU**

SOCIAL RESPONSIBILITY

As an energy supplier, our primary responsibility is to provide our customers with a reliable supply of electricity, heating energy, gas and water and to offer energy-related services – that is our core business. However, we also focus our attention on doing justice to the responsibility we have as part of society. As the energy turnaround has progressed, the underlying conditions for the energy industry in Germany have changed considerably. We are tackling the challenges this fundamental transformation presents for our business activities by way of our ▸**corporate strategy.** And we are succeeding: Our value added statement shows that we are a major economic player and a reliable partner to companies in our regions, which we boost with the investments we make and the orders we place. We pay taxes and duties to the national and local authorities and we secure jobs.

We are convinced that a large share of the requirements involved in the energy turnaround can only be met on the level of society as a whole. Numerous projects necessary for generating energy from renewable energies and for the associated infrastructure have to be planned and decided on location together with the people and groups affected. One of our tasks is to hold dialogues aimed at enhancing their acceptance of these projects – and to take decisions that convince local populations.

The responsibility we assume towards society is also reflected in our commitment to the regions in which we operate. In partnerships that have in some cases been in place for many years, MVV Energie AG, its subsidiaries and shareholdings provide support above all to local welfare, scientific, cultural and sports projects. This way, we ensure that the companies within the MVV Energie Group have positive images, and this in turn promotes the already high level of trust placed in our companies. **G4 DMA**

Our value contribution

The value added statement presents the contribution made by the MVV Energie Group to gross domestic product. The value added thereby generated acts as an indicator of our economic output and our monetary contribution to the country's prosperity. As our non-monetary output and the values we create are not included, the value added statement – similar to aggregate macroeconomic calculations on national level – does not offer a complete summary of all the benefits and value added we generate. The overview rather shows the commercially quantifiable value our economic activity generates for our stakeholders.

Corporate Strategy
Pages 50-52

Generation of value added

Euro million	**FY 2016**	FY 2015	% change
Company performance[1]	4,428	3,714	+19
Input costs[2]	−3,374	−2,792	+21
Depreciation	−212	−161	+32
Value added[3]	**842**	**761**	**+11**

1 Mainly sales
2 Cost of materials for energy and fuel procurement, other expenses, other taxes
3 Correction in previous year's figure

Utilisation of value added

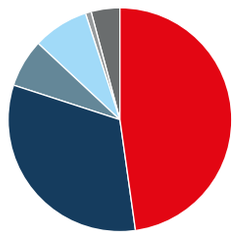
Euro million		**FY 2016**	FY 2015	% change
Recipient	**Utilisation**			
Employees	Wages, salaries and social security payments	404	352	+15
State authorities	Taxes on income, other taxes, concession duties and levies	271	283	−4
Shareholders	Dividend	59	59	0
Lenders[1]	Interest expenses	70	42	+68
Minority interests	Share of group earnings attributable to non-controlling interests	3	17	−82
MVV Energie Group[1]	Retention of earnings	35	8	>+100
		842	**761**	**+11**

1 Correction in previous year's figure

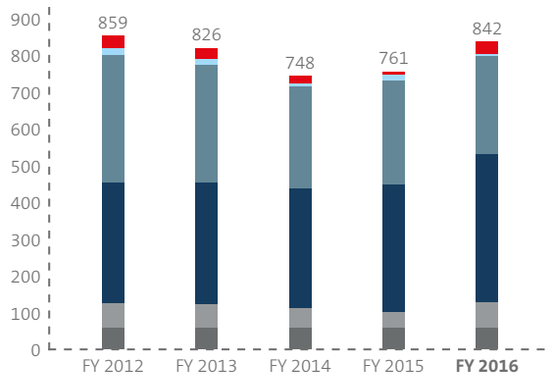
G4-EC1

ALLOCATION OF VALUE ADDED
Shares (%)

	FY 2016
Employees	48
State authorities	32
Shareholders	7
Lenders	8
Minority interests	< 1
MVV Energie Group	4



ALLOCATION OF VALUE ADDED
Euro million



- MVV Energie Group (retention of earnings)
- Minority interests (share of group earnings attributable to non-controlling interests)
- State authorities (current taxes on income, other taxes, concession duties and levies)
- Employees (wages, salaries and social security payments)
- Lenders (interest expenses)
- Shareholders (dividend)

G4-EC1

The figures presented in the value added statement also reflect underlying trends. As was partly the case in previous years, our 2016 financial year was characterised by substantially lower prices for commodities such as electricity, natural gas and oil. Despite this factor, we even managed to increase our value added and to offset developments in fuel prices with our diversified business portfolio. The substantial year-on-year increase is due above all to the full consolidation of the Juwi subgroup.

The chart presenting the allocation of our value added also shows we successfully maintained the level of utilisation for our shareholders at a stable level, and that despite the marked fall in general returns on capital, and thus also in ROCE at MVV Energie in previous years.

Acceptance of new generation plants

Given that the German energy supply system conversion particularly involves a further expansion in decentralised energy generation, the electricity grid also has to be expanded and converted. Building renewable energies plants and expanding infrastructure requires conservational, economic and social factors to be weighed up when selecting suitable locations. This process has to be conducted in liaison with local populations and politicians in the municipalities, regions and states involved.

What this specifically means when new generation plants are planned or existing plants are fully upgraded is that we on the one hand perform environmental compatibility reviews, for example in terms of emission loads and immission protection, in line with approval requirements. On the other hand, we look into the potential social implications of the projects for the surrounding countryside or for architectural and natural monuments. We then publish the findings of all investigations.

Alongside public sector representatives and project participants, within the approval process we also actively involve local communities, such as local residents, clubs and associations, and that on a voluntary basis. To step up our communications when informing the general public about planned projects, we draw on a range of press activities. In particular, we also hold citizens' information events and publish blogs. We do not collect any quantitative data on these measures, or on the evaluation of implications and subsidy programmes we have implemented. Our generation plants are regularly monitored. Should any interruption to operations arise, then we proactively and promptly inform the general public. **G4-SO1**

Commitment to society

Our sponsoring activities help us to boost MVV Energie's image and raise awareness of the company. Our group-wide focus here particularly involves promoting young people and upcoming talent. In most cases, the support we provide is of a financial nature. We have to date not collected any aggregate data.

MVV Energie AG

With its Sponsoring Fund, MVV Energie has supported outstanding projects in Mannheim and the Rhine-Neckar metropolitan region twice a year since 2005 already. Here, we provide assistance above all to clubs and organisations with a sustainable focus and which are primarily committed to promoting young people. A total of 94 interested parties submitted applications in what was now the 23rd sponsorship round. Of these, eleven applications convinced us and are now receiving financial support. The concepts are as diverse as the organisations themselves. The projects range from appropriate recycling for old mobile phones to courses for refugee children to occupational therapy for disabled children. The Sponsoring Fund has a widespread impact and also enables us to position ourselves as a socially responsible partner with a sustainable approach. This is also true of the Emergency Fund, which provides financial assistance to retail customers who find themselves in situations of need and unable to pay their energy or water bills.

Energieversorgung Offenbach AG

Energieversorgung Offenbach AG (EVO) supports clubs, charitable organisations and cultural events in its region with good ideas and financial assistance. Among the ten winners of its "Heart and Soul for Your Project" sponsorship competition in 2016, for example, were the children's and young people's circus Chicana, the Theater am Main in Seligenstadt and Teachers on the Road Offenbach, an organisation offering German courses to refugees. Developments at the "Alte Schlosserei", the old fitters' hall at EVO's company premises, are also very pleasing. Since being converted into an event space, it has enriched the cultural landscape in Offenbach, with more than 60 events – ranging from concerts to book readings to film evenings – held in the first year alone.

The "Alte Schlosserei" is not only a magnet for culture enthusiasts. It is now also a popular event venue for clubs, companies and organisations.

Stadtwerke Kiel AG

In its commitment to society in the region, Stadtwerke Kiel AG (SWK) focuses above all on supporting children and young people and aims to help instil values such as self-confidence, team spirit and a willingness to get involved. Alongside this, the company also supports projects with an ecological and welfare focus. SWK has acted as a partner to the 24/7 Camp since 2002 already. This sailing camp enables more than 7,300 children and young people a year to gain their first experience of sailing. In September 2016, the sailing camp reached its well-earned winter break following its "Kiel Helps Refugees" initiative. At the invitation of SWK and the district sailing association, around 150 refugees were given the opportunity on six different tours to get to know more about sailing. Together with "musiculum", a learning and experimental workshop, in June 2016 SWK also launched "Kiel MusiX", a project aimed at promoting young people's musical development and self-confidence.

Juwi AG

Since 2004, Juwi has regularly supported "Feed the Hungry". This charity helps people worldwide who are suffering from the consequences of tsunamis, earthquakes, wars and other catastrophes. "Feed the Hungry" was founded in the USA in 1987 and now has nine offices worldwide. At present, the charity is supporting projects including an orphanage in Nepal aimed in particular at saving young girls from prostitution. The organisation also operates in Germany – at refugee shelters, "Feed the Hungry" is providing warm blankets and equipping playrooms for children and young people. After the tsunami in south-east Asia, in 2004 the charity launched its "Every Child – Every Day" campaign. The aim is to ensure that every child receives one meal, accommodation and schooling each day. The programme has expanded and now supports more than 100,000 children. **MVV Energie-5**

COMBINED MANAGEMENT REPORT
ABOUT US

CORPORATE STRATEGY

With our strategy, we realigned our company towards the energy system of the future in 2009 already. Since then, we have not only consistently implemented this strategy, but have also continually developed it further.

We are making targeted investments in the sustainable and profitable growth of our group of companies.

OUR PATH TO THE ENERGY SYSTEM OF THE FUTURE

2009	**DISTRICT HEATING**	After the groundbreaking for the district heating pipeline from Mannheim to Speyer, the district heating expansion gains momentum. The aim is to increase the share of this environmentally-friendly heating energy supply at all locations.
	GKM BLOCK 9	Construction work begins on Block 9 at the large power plant in Mannheim (Grosskraftwerk – GKM). This highly efficient plant will replace existing Blocks 3 and 4.
	MOMA	The "Model City Mannheim" pilot project creates a smart grid for 1,000 households – a project later continued with our "Electricity Bank" and "Living Lab Walldorf".
2010	**WIND POWER**	Eight wind turbines acquired in Plauerhagen: Marks the first step in our proprietary wind power portfolio that will grow to 196 MW by 2016.
	ENERGY EFFICIENCY	Assumption of operations and start of energy-saving conversion in CHP plant at Tübingen University Hospital from oil and gas to wood chips in the context of a contracting agreement.
	OPTIMA	Launch of "OptiMA" project: The replacment of two steam turbines with highly efficient aggregates significantly raises utilisation levels at the waste-fired CHP plant in Mannheim.
2011	**CZECH REPUBLIC**	Our Czech subsidiary takes over the CHP plant in Liberec, one of a total of three energy from waste plants in the Czech Republic.
2012	**PLYMOUTH**	Work begins on the energy from waste plant in Plymouth.
	DISTRICT HEATING STORAGE FACILITY	Construction work beings on the district heating storage facility at the GKM site. From winter 2013/14, this will enhance supply reliability in the Rhine-Neckar metropolitan region and increase flexibility at the power plant.
	BIOMETHANE PLANT	Operations begin at our first biomethane plant in the Magdeburger Börde region. Four years later, we will have four biomethane plants in Saxony-Anhalt.
2013	**SALES**	With "SpotLight", our new energy fund project, we offer corporate customers with proprietary electricity generation the possibility to manage their energy portfolios themselves. Our sales department develops a continuous stream of innovative products and solutions.

Investments in sustainable growth

Alongside our ongoing efforts to enhance efficiency and save costs, one core component of our strategy still involves an ambitious investment programme.

We aim to uphold our high pace of investment in future as well. As announced at the beginning of the 2016 financial year, we will be investing a further Euro 3 billion in the forward-looking growth of our group of companies and in modernising and enhancing the efficiency of our plants and grids.

RIDHAM DOCK	Construction work begins at the biomass power plant with CHP capability at the British industrial port location of Ridham Dock.	**2013**
TRADING	We extend our energy trading with two-shift operations at MVV Trading – we now trade around the clock.	
LUMINATIS	The investment made by MVV Enamic in the LED specialist Luminatis marks our entry into the market for energy-efficient lighting.	**2014**
ENVIRONMENTAL ENERGY	The TREA Leuna energy from waste plant starts coupling out process steam, thus considerably increase the plant's energy efficiency.	
BEEGY	Together with Baywa, Glen Dimplex and GreenCom Networks we found Beegy, a cross-sector joint venture for decentralised energy management.	
ELECTRICITY BANK	Practical trials begin with the decentralised storage of proprietary electricity generated from photovoltaics systems and cogeneration plants; the district storage facility later becomes part of the "Living Lab Walldorf" project.	
JUWI/ WINDWÄRTS	By investing in Juwi AG and taking over Windwärts Energie GmbH we boost our renewable energies project development business.	
MOBIHEAT	The investment made by Energieversorgung Offenbach in Mobiheat marks our entry into the nationwide market for mobile heating centres in Germany.	**2015**
EVOLUTION	Launch of "EVOlution" modernisation project at energy from waste plant in Offenbach: The installation of a new flue gas cleaning system and a highly efficient steam turbine minimises the plant's own energy requirements, generates additional heating energy and more than doubles the annual electricity yield.	
LAUNCH OF OPERATIONS	Operations begin at our largest investment projects in recent years: Block 9 at the GKM plant in Mannheim and the two new generation plants in the UK.	
LIVING LAB WALLDORF	Preparations begin in Walldorf for a three-year set of practical trials investigating how a decentralised supply of electricity from renewable energies can be combined with smart technology in practice.	
ENERIX	We agree a strategic partnership in the field of decentralised energy supply with the energy franchise system Enerix.	**2016**

Convinced customers

We align our products and services to our customers' individual needs and expectations. By offering excellent service and innovative solutions, we aim to convince our cherished customers and inspire them.

Mature competence

Drawing on our employees' longstanding experience and expertise, we are actively shaping the energy system transformation. As a learning organisation, we unite our competencies with excellent processes and high-capacity performance and work to enhance these factors with a view to the future.

New energy

The energy system of the future will be created by smartly combining renewable and conventional energies. MVV Energie is one of the pioneers of this transformation. We are combining this approach with our innovative strength and our focus on sustainability

The ongoing transformation in the energy supply system is changing the economic and competitive climate in which the energy industry operates. In view of this, we are continually working on further developing our corporate strategy.

In line with our motto of **ENERGISING MY FUTURE** we will be focusing on our customers. Here, we will be

- Generating profitable growth in our renewable energies business and connecting highly efficient conventional and renewable energies as key pillars of the energy system of the future
- Boosting energy efficiency and combined heat and power generation in conjunction with further expansion in environmentally-friendly district heating
- Guaranteeing energy supply reliability with smart, high-performance grids
- Generating profitable growth with our decentralised energy generation from waste and biomass and by providing energy-related services
- Offering innovative sales business models and professional services in our trading business
- Ensuring competent cross-divisional units and high-performance shared services at our Soluvia companies.

This way, we are creating a basis to remain a pioneer of the energy system transformation and to secure and extend our competitive position. At the same time, this enables us to offer our customers attractive, forward-looking products and services, to provide employees at our group of companies with secure and attractive jobs in future as well, and to offer interesting prospects for our shareholders.

GROUP STRUCTURE

Legal structure

MVV Energie AG has its legal domicile in Mannheim and is the parent company of the MVV Energie Group. **G4-3 G4-5** It directly or indirectly owns the shares in those companies forming part of the Group and also has its own operations. As a stock corporation under German law, the company has three governing bodies – the Annual General Meeting, Supervisory Board and Executive Board. **G4-7** The decision-making powers of the three bodies are strictly delineated. The Annual General Meeting takes decisions of fundamental significance to the company and decides whether to approve the actions of its Supervisory and Executive Boards. The Supervisory Board advises and monitors the Executive Board in its management of the business and is involved in all decisions of material significance. The Executive Board manages the company under its own responsibility and determines the strategic alignment. Information about the responsibilities and modes of operation of the Executive and Supervisory Boards of MVV Energie AG can be found in the ▸ **Corporate Governance Report.** **G4-34**

Organisational structure

We manage the MVV Energie Group in five segments on which we also base our external reporting. The units are grouped in such a way that the pooling of suitable specialist competence under one roof forms the basis for strict portfolio management at the Group. Business fields oriented towards energy industry value chain stages are allocated to the ▸ **Reporting segments.**

Reporting Segments
Pages 54-56

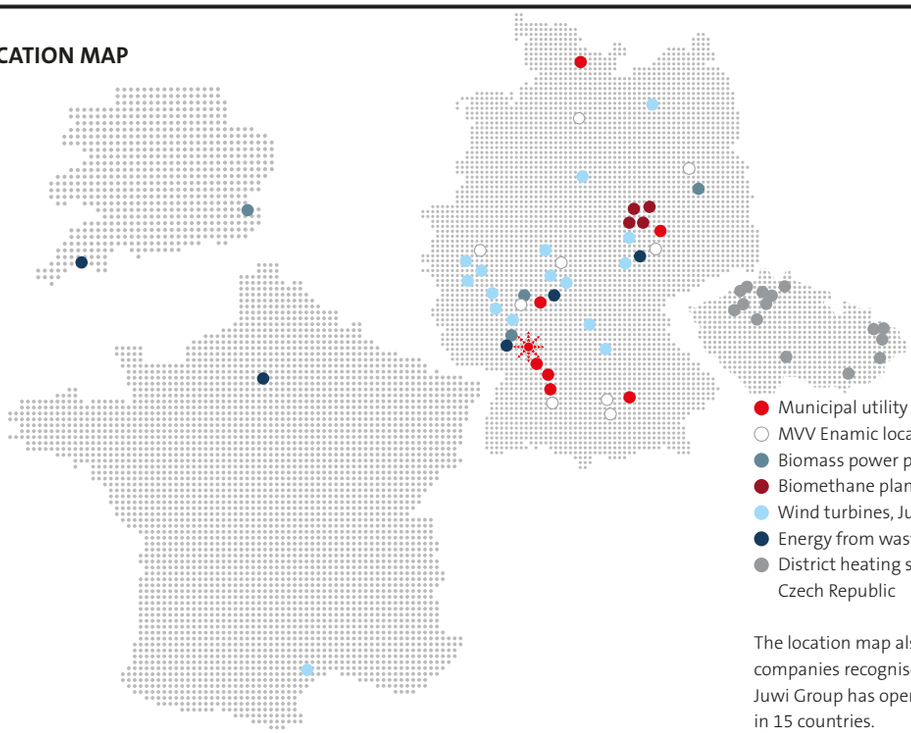
Company structure and shareholdings

Including MVV Energie AG, the ▸ **consolidated financial statements** include 165 fully consolidated companies. We also include 34 companies using the equity method. The largest locations are in Mannheim, Kiel, Offenbach and Wörrstadt. Our group of companies is represented in 26 countries. The number of fully consolidated companies has risen significantly since the previous year due to the first-time full consolidation of Juwi AG, as has the number of countries in which we operate. **G4-9**

Notes to Consolidated Financial Statements
Page 119

www.mvv-energie.de/corporate-governance-engl

LOCATION MAP

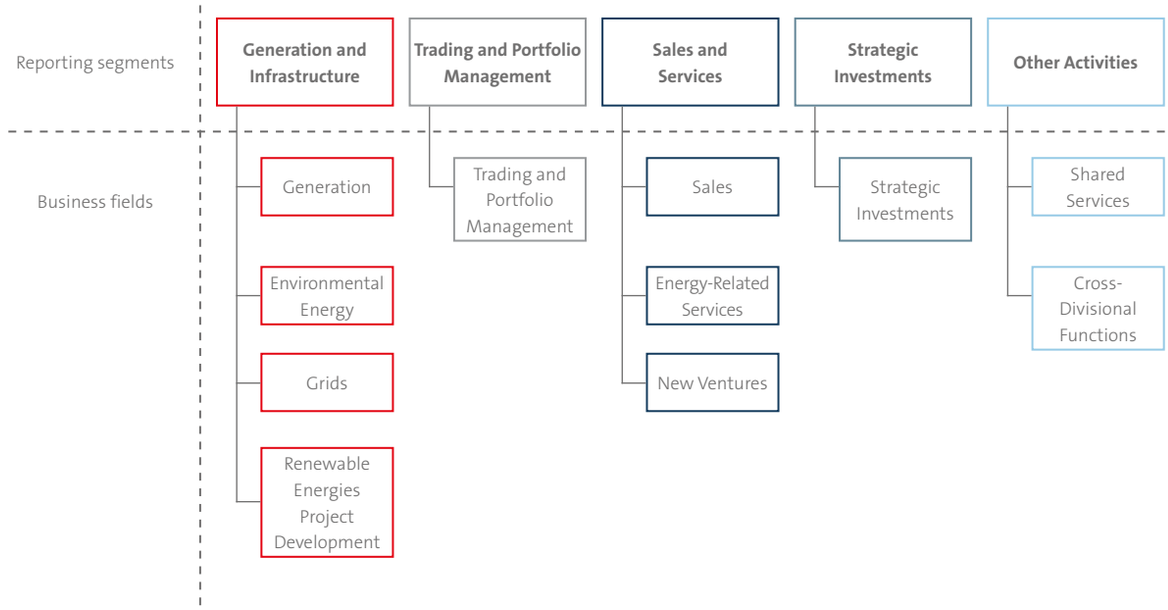


The location map also includes the locations of companies recognised at equity. Furthermore, the Juwi Group has operations worldwide and offices in 15 countries.
G4-6

Status: 30 September 2016

REPORTING SEGMENTS

REPORTING SEGMENTS AND BUSINESS FIELDS



Generation and Infrastructure reporting segment

The Generation and Infrastructure reporting segment is the strongest growth driver at the MVV Energie Group. It comprises the generation portfolio with conventional and renewable energies at the Mannheim, Stadtwerke Kiel, Energieversorgung Offenbach and MVV Umwelt subgroups. Furthermore, it includes the grid business and the renewable energies project development business field.

Generation and environmental energy business fields

Our generation plants on the one hand include conventional combined heat and power (CHP) plants in Mannheim, Kiel and Offenbach and on the other hand the plants fired by waste and biomass in Mannheim, Offenbach, Leuna, Königs Wusterhausen, Flörsheim-Wicker, Plymouth and Ridham Dock. One key focus at our plants involves using highly efficient combined heat and power (CHP) generation. These plants are supplemented by our growing portfolio of renewable energies plants. Here, we focus above all on onshore wind turbines and also draw on a wide range of biomass to generate electricity, heating energy and biomethane.

Grids business field

Overall, the MVV Energie Group has electricity, district heating, gas and water grids with a total length of around 18,700 kilometres. High-performance grids are crucial when it comes to providing the people and companies in the regions in which we operate with a reliable supply of electricity, heating energy, gas and water. In view of this, we are continually investing in maintaining and expanding our grid infrastructure – not least as technical grid operations are becoming ever more sophisticated. The volume of electricity fed in from renewable energies, which fluctuates in line with weather conditions and the time of day, is increasing, as is the number of small, decentralised generation plants.

Renewable energies project development business field

By investing in Juwi AG and acquiring the assets of Windwärts Energie GmbH in 2014, we significantly boosted our expertise in the field of renewable energies project development and expanded our operations management competence for windfarms and solar parks. When it comes to construction and operations management, Juwi offers a full range of services both for all-round project development and in other additional areas. The company is currently focusing on onshore wind turbines in its German business, while the main focus in its international business is on photovoltaics power plants. The core business at Windwärts also involves project development and operations management for onshore wind turbines, with a key focus on northern Germany. Alongside this, the company also operates in France.

Trading and Portfolio Management reporting segment

Our MVV Trading GmbH subsidiary manages and optimises the energy procurement and generation portfolio within the group of companies. Both on the exchange and in over-the-counter (OTC) trading, this company procures and markets all customary trading commodities, such as electricity and natural gas, emission and green electricity rights and financial coal and oil products. MVV Trading's core tasks also include hedging. Here, the company secures the MVV Energie Group's generation and sales positions for the long term, thus enabling risks to be managed and minimised on a centralised basis. Furthermore, the company markets the electricity volumes acquired by MVV Energie AG in its direct marketing business.

Sales and Services reporting segment

The following businesses are pooled at the Sales and Services reporting segment: the retail and secondary distribution business for electricity, heating energy, gas and water at MVV Energie AG, Stadtwerke Kiel AG and Energieversorgung Offenbach AG and the energy-related services business at MVV Enamic GmbH and Energieversorgung Offenbach AG. Furthermore, we also allocate new ventures, the business field which includes our shareholdings in Beegy GmbH and the Luxembourg-based lighting specialist Luminatis S.à.r.l., to this segment.

Sales business field

We view each of our customers as a partner. We are therefore putting our private and commercial customers at the centre of our sales activities to an even greater extent than before. We have founded several customer initiatives dealing specifically with our customers' experiences, interests and wishes. This way, we find out more about their individual needs and are able to tailor our innovative product and business models precisely in line with their wishes. The in-depth information and advice they receive about their energy supply and about energy-related services offer advantages to our customers. They also benefit from the added value created by bespoke services and products. We are therefore aligning our business to the energy system of the future in terms of our sales activities as well.

With a volume of 4,600 MW, MVV Energie AG is one of Germany's three largest direct marketers and is the market leader for photovoltaics in Germany. The virtual power plant at MVV Energie AG, one of the largest in Germany, comprises both renewable energies plants and more than 1,000 MW of controllable conventional flexibilities.

One key forward-looking topic is digitisation in the private and commercial customer segment. As well as successfully launching the new direct electricity and gas products MVV Direkt Strom and MVV Direkt Gas at inexpensive online rates, we have also boosted MVV Energie's overall online sales activities by developing a new sales platform.

Energy-related services business field

The fundamental transformation in the energy industry driven by factors including new technologies and the trend towards decentralisation and digitisation mean that energy efficiency services are an ever more important focus of our activities. This in turn, has led us to extend the range of services on offer.

With its MVV EnergySolutions and MVV ImmoSolutions subsidiaries, MVV Enamic offers numerous sector-specific products and services for business customers. In this, it focuses on all-round smart efficiency solutions aimed at limiting the growing complexity of energy as a topic for customers. The portfolio of services ranges from electricity and gas supplies, decentralised generation of useful energy via databased energy management services through to innovative combined products aimed at enhancing energy efficiency at customers' plants. MVV EnergySolutions concentrates on offering solutions for industrial, commercial and medium-sized customers, while MVV ImmoSolutions acts as a partner to the housing and real estate industry. MVV Enamic's range of services also includes supplying energy and operating the technical infrastructure at self-contained industrial parks.

Consistent with our claim as one of Germany's leading providers of energy-related services, we are developing new business models in the fields of decentralised energy supply, energy efficiency and mobility. Our new Smart Efficiency Control product, a real-time energy efficiency controlling tool, enables production, facility and process data at the respective customer to be continually recorded, analysed and integrated into the customer's live company reporting systems. Within the associated efficiency partnership, we analyse key efficiency figures, show the customer potential optimisation measures and implement these.

In the rapidly growing market for e-mobility, we supply innovative solutions to business customers enabling them to provide their customers and employees with uncomplicated access to charging opportunities for their electric vehicles. Together with our customers, we thus aim to actively promote the forthcoming process of change in the transport sector.

New ventures business field

Beegy, a cross-sector joint venture, offers services and products for smart, decentralised energy management from a single source. It addresses these to industrial, retail, commercial and housing customers, as well as to private customers. Via our shareholding in the lighting specialist Luminatis, we are also active in the market for energy-efficient lighting. Together with Luminatis, we enable our customers to modernise their lighting systems, for example by way of savings contracting with our Smart Light Efficiency product.

Strategic Investments reporting segment

Our strategic investments mainly include Köthen Energie GmbH and MVV Energie CZ, as well as the at-equity result of Stadtwerke Ingolstadt.

Other Activities reporting segment

Our shared service companies are allocated to the Other Activities reporting segment, as are all cross-divisional functions.

Our shared service companies – Soluvia Billing GmbH, Soluvia IT-Services GmbH and Soluvia Metering GmbH – perform services in the areas of billing and customer support, information processing and metering, and that on behalf of MVV Energie AG and Energieversorgung Offenbach AG, as well as for Stadtwerke Kiel AG. By pooling these companies and the associated services at Soluvia GmbH , we can ensure uniform management, generate necessary benefits of scale and guarantee high process quality. With their operating services, especially for the grid companies and our sales units, our shared service companies make an important contribution to our competitiveness.

G4-4

STRUCTURE OF SHAREHOLDINGS

MATERIAL DIRECT AND INDIRECT SHAREHOLDINGS OF MVV ENERGIE AG

SUPERORDINATE SHAREHOLDINGS
Stadtwerke Kiel Aktiengesellschaft (51 %)
Energieversorgung Offenbach Aktiengesellschaft (48.42 %)[1]
MVV RHE GmbH, Mannheim (100 %)

GENERATION AND INFRASTRUCTURE
MVV Umwelt GmbH (100 %)
Juwi AG (63.12 %)
Windwärts Energie GmbH (100 %)
MVV Windenergie GmbH (100 %)
Cerventus Naturenergie GmbH (50 %)[2]
Biomethananlage Klein Wanzleben GmbH (100 %)
Biomethananlage Kroppenstedt GmbH (100 %)
Biomethananlage Barby GmbH (74.9 %)
Biomethananlage Staßfurt GmbH (74.9 %)
Grosskraftwerk Mannheim AG (28 %)
Stadtwerke Sinsheim Versorgungsgesellschaft mbH & Co. KG (30 %)
Netrion GmbH, Mannheim (100 %)
SWKiel Netz GmbH, Kiel (100 %)[3]
Energienetze Offenbach GmbH, Offenbach (100 %)[4]

TRADING AND PORTFOLIO MANAGEMENT
MVV Trading GmbH, Mannheim[5]

SALES AND SERVICES
MVV Enamic GmbH (100 %)
MVV Regioplan GmbH (100 %)
Beegy GmbH (34.8 %)

STRATEGIC INVESTMENTS
MVV Energie CZ a.s., Czech Republic (100 %)
Stadtwerke Ingolstadt Beteiligungen GmbH (48.4 %)
Köthen Energie GmbH (100 %)
Stadtwerke Buchen GmbH & Co. KG (25.1 %)

OTHER ACTIVITIES
Stadtwerke Walldorf GmbH & Co. KG (25.1 %)
Stadtwerke Schwetzingen GmbH & Co. KG (10 %)
Soluvia GmbH, Mannheim[6]

1 Majority of voting rights
2 Energieversorgung Offenbach AG (50 %)
3 Stadtwerke Kiel AG (100 %)
4 Energieversorgung Offenbach AG (100 %)
5 MVV Energie AG (59.9 %), Stadtwerke Kiel AG (25.1 %), Energieversorgung Offenbach AG (12.5 %), Stadtwerke Ingolstadt Energie GmbH (2.5 %)
6 MVV Energie AG (51 %), Stadtwerke Kiel AG (24.5 %), Energieversorgung Offenbach AG (24.5 %)

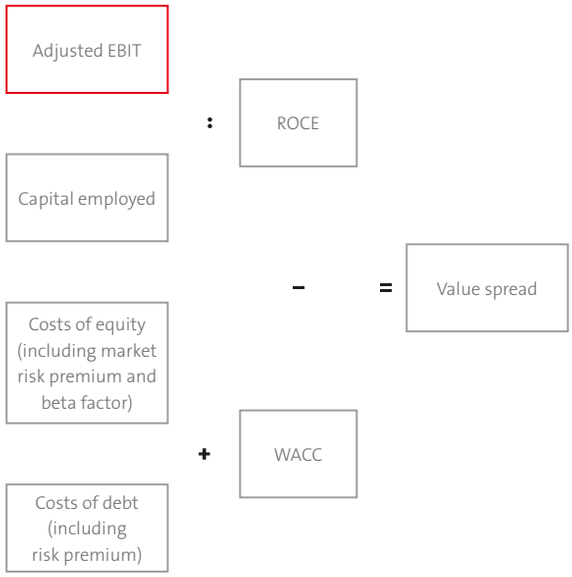
Status: 30 September 2016

CORPORATE MANAGEMENT

Our internal management system is structured in such a way as to sustainably increase the value of the MVV Energie Group by consistently implementing our strategy. The most important key management figure referred to for this is adjusted operating earnings before interest and taxes (adjusted EBIT).

Increasing the company value requires the generation of value spread. A positive value spread is achieved when the return on average capital employed (ROCE) is higher than the costs of capital (WACC).

CALCULATION OF VALUE SPREAD
(simplified presentation)



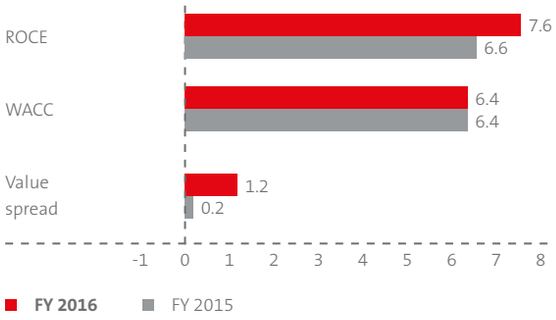
We reviewed the individual parameters used to calculate the WACC figure for the MVV Energie Group in the year under report. No changes were made compared with the previous year

WACC parameters

	FY 2016	FY 2015
Risk-free base rate	1.25 %	1.25 %
Market risk premium	6.0 %	6.0 %
Beta factor	0.96	0.96
Tax rate	30 %	30 %
Risk premium	1.49 %	1.49 %
Borrowing interest (risk-free base rate + risk premium)	2.7 %	2.7 %
Equity/debt capital share at market values	50 %	50 %
WACC before taxes	6.4 %	6.4 %

As in the previous year, we based the calculation of the risk-free base rate on the long-term yield curve at the German Bundesbank with a remaining term of up to 30 years. Alongside our own market studies, the market risk premium is based on the recommendations of the Specialist Committee for Company Valuation and Business Administration at the Institute of Public Auditors in Germany (IDW). The beta factor has been calculated by reference to a peer group of comparable European energy companies.

KEY VALUE MANAGEMENT FIGURES
(%)



The ROCE for the 2016 financial year came to 7.6 %, compared with 6.6 % in the previous year. The higher ROCE figure was due to the marked increase in adjusted EBIT. The average volume of capital employed was only slightly higher than in the previous year.

Calculated by subtracting the WACC before taxes of 6.4 % (previous year: 6.4 %) from the ROCE of 7.6 % (previous year: 6.6 %), the value spread for the year under report amounted to 1.2 % (previous year: 0.2 %).

From an operating perspective, we expect to generate slightly higher adjusted EBIT in the 2017 financial year and therefore expect to see a correspondingly positive development in the value spread.

TECHNOLOGY AND INNOVATION

The conversion in the German energy system represents both a challenge and an opportunity for our industry. Together with rapid technological progress, this process has triggered enormous change in the energy industry. How is MVV Energie doing justice to these ever higher requirements? Among other ways, it is meeting them with new business models and with services and products based on customers' requirements. That is why we test innovative technology with the aim of developing this into marketable products and services. Two examples of this approach are the ▸ **RealValue innovation project** and the ▸ **Living Lab Walldorf pilot project.** In the following section we report on further projects performed in the 2016 financial year.

Supplement to Annual Report Pages 24–25

MVV Energie designs energy model for conversion space in Mannheim

A site formerly used by the armed forces with a total surface area of 510 hectares provides the City of Mannheim with superb prospects for using the conversion space to establish a major business, technology and mobility location. On one 144 hectare section of the site, for example, an attractive district is to be created for 8,000 people, with more than 2,000 residential units on the location formerly occupied by the US barracks Benjamin Franklin Village (BFV). Within the exemplary energy and mobility concept for the district, MVV Energie will be involved in smart grids and "green district heating". An isolated grid covering the entire area will enable us to provide district heating in an even more efficient and environmentally-friendly way by drawing on innovative low temperature technology and integrating renewable energies. MVV Energie's expertise is in particularly great demand for solutions involving energy generation and efficiency, smart grids and integrated mobility.

MVV Energie's all-round concept will guarantee a sustainable energy supply. How is that actually achieved? It is done by smartly synchronising energy generation, consumption and storage, as well as the respective grids. It requires innovative technologies to interact with the process of digitisation in the energy industry. And this in turn is an aspect covered by the "Smart Energy Showcases – Digital Agenda for the Energy Transition" (SINTEG) subsidy programme introduced by the Federal Ministry for Economic Affairs and Technology (BMWi). Five select showcase regions in Germany will be promoted with a total of Euro 230 million over four years. At the BFV site, MVV Energie is participating in the C/sells showcase.

C/sells cellular energy system

C/sells is intended to give rise to an energy system with a cellular structure (cells) aimed at developing energy management systems for electricity, heating energy, water and electro-mobility within a framework of decentralised supply units. To this end, regional cells acting autonomously are connected with each other in a transregional network. The way and extent to which this approach can actually work is now to be demonstrated in exemplary fashion by MVV Energie at the Benjamin Franklin Village (BFV) conversion surface in Mannheim. For this, photovoltaics systems, batteries, heat pumps and heating energy storage systems will be combined. This way, "green heating energy" can be generated and fed into the heating energy grid of the BFV district.

A fully integrated metering concept makes it possible to smartly monitor and manage all resources, such as energy and water, in real time. Public and private charging stations for electric vehicles in individual buildings or whole districts will also be integrated. Taken in combination with its innovative services, MVV Energie is thus creating a basis for the showcase process of turning a modern Mannheim district into a cutting-edge energy community.

Smart meters in use on conversion space

MVV Energie's C/sells energy concept also involves installing smart meters at the BFV conversion space in Mannheim. In the new buildings, customers with annual consumption of 6,000 kWh will be provided with a smart meter system.

In general, the entry into force of the "Energy Turnaround Digitisation Act" means that the installation of smart meters will become mandatory in Germany from 2017. In the first stage, customers with annual consumption of more than 10,000 kWh will be converted to smart meters. From 2020, these will be followed by customers with consumption of more than 6,000 kWh a year. In metering, the smart meter gateway serves as the central communications unit and acts as the interface to the customer.

As a service provider for metering operations and services, Soluvia Metering GmbH has since 2012 been preparing in detail for the use of the new technology. The core task here involves taking over smart meter gateway administration. After all, smart metering systems have to meet high standards in terms of data protection and data security. In summer 2016, Soluvia Metering successfully completed an initial practical trial in the course of which around 60 smart metering systems were installed in the three grid regions of the MVV Energie Group (Mannheim, Kiel and Offenbach). Further tests are due to follow in autumn 2016 before the rollout begins in 2017.

Trying out "Smart Grid Integration" in practice

Putting the theory into practice: From 2017, the results of the "Smart Grid Integration (SGI)" model cluster project will be integrated into the C/sells project and tested as one of MVV Energie's fields of action at the Benjamin Franklin Village conversion area. Together with five project partners, MVV Energie worked from 2013 to early 2016 to investigate how electric vehicles can be integrated into distribution grids. MVV Energie is a member of the "Electromobility South West" model cluster promoted by the Federal Ministry of Education and Research.

For MVV Energie, the key focus was on the following questions: How can large numbers of electric cars be reliably and conveniently charged without causing any bottlenecks in the distribution grid? How must these charging processes be coordinated and managed in such a way that grid stability can be guaranteed even when electricity generation volumes fluctuate sharply? How must the charging processes be structured so that users can charge their vehicles conveniently and easily? We identified various answers and possible solutions. One of these is a "grid traffic light" that manages charging processes at times of high distribution grid capacity utilisation. One conceivable approach involves mandatory quotas under which available capacity is distributed. On the other hand, grids could also be managed via a new market for flexibilities, thus avoiding any bottlenecks. At the staff vehicle charging park at our Mannheim location, we have already put into practice the control solution working with the assistance of a grid traffic light.

From practical trials to the market: house fuel cells

Fuel cell heating appliances are very effective. Thanks to their very high efficiency levels, these mini power plants provide homes with an efficient, decentralised and clean supply of energy. The "Callux" project, promoted by the Federal Ministry of Transport and Digital Infrastructure, was completed after more than eight years in June 2016, making it the nation's largest set of practical trials with home fuel cells. MVV Energie, which took part and operated 27 fuel cell heating appliances at private customers in the Rhine/Neckar metropolitan region, can report outstanding results. Acquisition costs for the appliances decreased by up to 60 %, with the cost of replacement parts even falling by up to 90 %. Not only that, the efficiency levels of the appliance generations thereby tested rose consistently, while the CO_2 emissions of the buildings thereby supplied were reduced by up to 30 %.

With the assistance of the Callux Box, a control unit developed within the project, MVV Energie was able to control electricity production at the fuels cells in select households. Overall, the "Callux – Practical Trials for House Fuel Cell" project played a significant role in bringing house fuel cells to market maturity. Within the efficiency initiative launched by the Federal Ministry for Economic Affairs, fuel cell heating systems powered by natural gas and operated in Germany have been provided with financial support since 1 August 2016.

COMBINED MANAGEMENT REPORT OUR 2016 FINANCIAL YEAR

Group Business Performance

- Sales growth of 19 % to Euro 4.1 billion
- Adjusted EBIT rises from Euro 175 million to Euro 213 million
- Renewable energies generation capacity expanded
- First-time full consolidation of Juwi subgroup

MAJOR DEVELOPMENTS AND EXECUTIVE BOARD SUMMARY

Full consolidation of Juwi AG

Having already acquired 50.1 % of the shares in Juwi AG in December 2014, in the late summer of 2015 we stocked up this shareholding to 63.1 % in the context of a capital increase. The Federal Cartel Office approved the acquisition of control, as a result of which the change of governance and associated full consolidation of the Juwi subgroup were executed as of 17 December 2015. The corresponding sales and earnings contributions are presented in the Generation and Infrastructure reporting segment.

Reporting Segments
Page 55

By investing in Juwi AG and in Windwärts Energie GmbH, which we already took over as of 1 October 2014, we have significantly boosted our expertise in ▸ **renewable energies project development** and expanded our operations management competence for windfarms and solar parks.

New renewable energies generation plants

Our two new UK generation plants – the energy from waste plant in Plymouth and the biomass power plant at Ridham Dock – made their first full-year contribution to our sales and earnings performance in the year under report. Commercial operations have been underway at both plants since the end of the 2015 financial year.

We launched operations with one wind turbine at Klosterwald Windfarm in Creglingen in October 2015 and with seven new wind turbines at our windfarm in Freudenberg in September 2016. Our Energieversorgung Offenbach AG subsidiary also boosted its wind power portfolio in the year under report, with the eleventh wind turbine at the windfarm on Hungerberg being connected to the grid at the end of November 2015. Overall, at the end of the 2016 financial year the onshore wind turbines of the MVV Energie Group had an installed capacity of 196 MW_e compared with 174 MW_e one year earlier.

The second biomethane plant of MVV Energie and Baywa r.e. commenced operations in Barby in the Magdeburger Börde region at the beginning of November 2015. For MVV Energie, this is already the fourth biomethane plant in Saxony-Anhalt.

Substantial sales and earnings growth

The first-time full consolidation of the Juwi subgroup and the launch of operations at our new generation plants in particular led to strong sales growth and to an increase in our operating earnings. Compared with the previous year, our sales thus grew by 19 % to Euro 4,066 million. We improved the adjusted EBIT of the MVV Energie Group year-on-year by 22 % to Euro 213 million.

Earnings before taxes (adjusted EBT) came to Euro 139 million, equivalent to growth of 5 %. At Euro 95 million, adjusted annual net income after minority interests was Euro 20 million higher than in the previous year. This resulted in adjusted earnings per share of Euro 1.45, as against Euro 1.14 in the previous year.

Further efforts to enhance efficiency and sustainable investments in the future

Consistent with the fundamental changes in the business framework, we are continually reviewing our processes and organisational structures.

As of 1 October 2015, we placed the sales units at MVV Energie, MVV Enamic and MVV Trading on a new strategic and organisational footing. As part of this realignment, we offer our customers a fixed contact partner at the Group and reduce the complexity of the energy business for them. In parallel to this, in summer 2016 we launched a project to further enhance business customer sales and trading with the aim of structuring the sales process chain even more efficiently in future.

To ensure we are optimally aligned with the regulatory framework, in the year under report we pooled grid operations and technical services at the locations in Mannheim and Offenbach into two large grid companies – Netrion GmbH and Energienetze Offenbach GmbH.

We have also merged the Group's competencies in the field of generation. Since 1 April 2016, we have brought the management of our shareholding in the large power plant in Mannheim (Grosskraftwerk Mannheim – GKM), generation activities at our energy from waste plants in Germany and the UK, renewable energies generation activities and biomethane generation activities under one roof at MVV Umwelt. We are thus optimally positioned for the key strategic aspect of linking highly efficient conventional generation plants with renewable energies plants.

Furthermore, we are consistently investing in our future business capacity and thus in our company's sustainable and profitable growth. ▸ **Total investments** at the MVV Energie Group came to Euro 236 million in the 2016 financial year, of which Euro 121 million was channelled into growth investments. With an adjusted equity ratio of 33.0 % and our solid financing structure, we will be able to maintain a high pace of investment in future as well.

Executive Board summary of business performance and economic position

The MVV Energie Group can report a successful financial year in what remains a challenging climate for the energy industry, one characterised by a further reduction in electricity prices on wholesale markets and low generation margins. This positive business performance was driven above all by the renewable energies project development business, which we have recently expanded significantly by acquiring a shareholding in the Wörrstadt-based company Juwi AG and taking over the Hanover-based company Windwärts Energie GmbH, as well as by the launch of operations at our new generation plants. By generating cost savings and implementing efficiency enhancements, we managed to offset the charges on earnings resulting from low wholesale electricity prices and the clean dark spread.

We achieved our targets for the 2016 financial year. At the beginning of the year under report, we expected our adjusted EBIT to rise by 15 % compared with the figure of Euro 175 million reported for the previous year. Following the positive business performance in the first nine months of the 2016 financial year, we raised our forecast and predicted adjusted EBIT of between Euro 210 million to Euro 215 million. With adjusted EBIT of Euro 213 million, we met our earnings target. We also reached our sales target. Sales grew to Euro 4.1 billion, thus meeting our forecast of generating sales of more than Euro 4.0 billion.

Our operating performance in the past financial year shows that we have the right strategy. With our focus on expanding renewable energies and boosting energy efficiency, we have become a pioneer in implementing the German energy turnaround and also overcome the dip in earnings seen in recent years.

Investments
Pages 84-85

Comparison of actual and expected business performance and outlook for 2017

	Forecast FY 2016	Results FY 2016	Outlook FY 2017
Sales performance	Strong sales growth to more than Euro 4.0 billion	Sales of Euro 4.1 billion (previous year: Euro 3.4 billion)	Slight growth
Adjusted EBIT	Forecast raised after first nine months of 2016: Adjusted EBIT in a range of Euro 210 million to Euro 215 million	Adjusted EBIT of Euro 213 million (previous year: Euro 175 million)	Slight growth depending on weather conditions, electricity and waste prices and the CDS. Due to the expansion in the renewable energies project development business adjusted EBIT is also subject to significant volatility
Adjusted equity ratio	Target ratio > 30 %	Adjusted equity ratio of 33.0 % (previous year: 33.8 %)	High share of debt-financed growth programme continues to impact on equity ratio: Target ratio > 30 %
ROCE	Improvement on 2015 financial year	Increase in ROCE to 7.6 % (previous year: 6.6 %)	Improvement on 2016 financial year
Investments	Forecast adjusted after first nine months of 2016: Total planned investments of around Euro 250 million	Total investments of Euro 236 million (previous year: Euro 470 million)	Total planned investments of around Euro 300 million
Employees	Reduction in personnel totals due to ongoing implementation of group programmes in existing business Opposing item: Rising staff totals in growth fields	Increase in personnel totals to 6,174 employees as of 30 September 2016 (previous year: 5,308)	Rising staff totals in growth fields; ongoing implementation of group programmes in existing business

G4-9

BUSINESS FRAMEWORK

Energy Policy Changes

Key energy policy factors

The energy turnaround was one of the most important political topics in Germany once again in the year under report. The Federal Government on the one hand addressed the restructuring of the subsidy system for renewable energies while on the other hand according priority to guaranteeing supply reliability. In parallel, the regulatory framework was adjusted to optimise the cost efficiency of grid expansion measures.

The following energy policy developments and regulatory framework issues in particular are of great relevance for the future business performance of the MVV Energie Group:

- The German Electricity Market Act, which particularly addresses supply reliability
- The restructuring of the German Renewable Energies Act (EEG), in which subsidies for renewable energies are now organised on the basis of competitive tenders
- The Amendment to the German Combined Heat and Power Generation Act (KWKG)
- The revision to the German Incentive Regulation Ordinance.

New electricity market design

The Federal Parliament adopted the German Electricity Market Act on 23 June 2016. For this legislation to take effect as planned in autumn 2016, state aid approval is required from the EU Commission. On 30 August 2016, the Federal Ministry for Economic Affairs (BMWi) declared that the legislation was compatible with state aid law and that agreement had been reached to this effect with the EU Commission. Formal approval by the Commission is nevertheless still outstanding. With the German Electricity Market Act, the Federal Government is establishing more effective market mechanisms in the electricity market. Not only that, it aims to guarantee supply reliability with a range of measures including the creation of a capacity reserve.

However, several detailed regulations of importance to MVV Energie will only be determined further down the line – in ordinances issued by the Federal Ministry for Economic Affairs (BMWi) and in regulations issued by the Federal Network Agency and the Federal Cartel Office. These relate, for example, to companies' disclosure obligations towards the authorities. Another example involves the specific structuring of compensation for redispatch, i.e. adjustments to electricity feed-in volumes from power plants by the transmission grid operators.

Renewable energies legislation converted to competitive tenders

The Amendment to the German Renewable Energies Act (EEG) was adopted by the Federal Parliament and the Federal Council on 8 July 2016 and takes effect as of 1 January 2017. The notification of the legislation by the European Commission was executed following a marginal adjustment to the EEG Act in autumn 2016. This adjustment relates to charges on self-supply at existing plants, which now have to pay 20 % of the EEG levy if they are substantially modernised.

One fundamentally new aspect of the EEG legislation relates to the subsidy system, which is being converted from fixed feed-in compensation to competitive tenders. Technology-specific capacity addition volumes have been stipulated for each year. In the run-up to the legislative amendment, we participated closely in the various consultation processes and stakeholder workshops at the Federal Ministry for Economic Affairs (BMWi) and spoke out in favour of raising the renewable energies expansion target to 55 % in 2025. This way, the current dynamic rate of expansion could be maintained in the years ahead as well. Not only that, in a study commissioned by MVV Energie we documented that ambitious targets would not lead to any significant increase in the total monetary charge on end customers. The targets, which were ultimately set within the political process, will at least ensure that the target share does not fall short of 40 % to 45 % in 2025 and can even be expected to exceed this level.

The tender volume for onshore wind turbines is set at 2,800 MW per annum for the period from 2017 to 2019 and at 2,900 MW per annum from 2020 onwards. These figures already include the repowering of older turbines. Due to grid bottlenecks, fewer onshore wind turbines are to be built in the medium term in northern Germany. The addition of new capacities there is limited to a mere 58 % of the average capacities added in the years from 2013 to 2015. The exact region affected by this requirement still has to be determined by the Federal Network Agency.

The offshore wind power expansion targets contained in the 2014 EEG amendment have been retained without amendment, with new annual capacities of 6 GW and 15 GW targeted by the years 2020 and 2030 respectively. Corresponding tenders will be held from 2021 onwards.

For photovoltaics systems with electricity capacities of more than 750 kW, annual tender volumes will amount to 600 MW. Systems with lower capacities will continue to be subsidised under the 2014 EEG legislation.

An annual tender volume, here 150 MW to 200 MW, is also foreseen for biomass plants with electricity capacities of more than 150 kW. Existing biomass plants may also participate in tender processes to receive ten-year follow-up subsidies. However, existing plants that use waste timber or waste pulp production liquors as fuels are excluded from participating in these tender processes.

Amendment to KWKG legislation complete

The German Combined Heat and Power Generation Act (KWKG), which already took formal effect as of 1 January 2016, was also granted state aid approval by the EU Commission on 24 October 2016. CHP grants for plants of less than 1 MW and more than 50 MW may thus be implemented in accordance with the requirements of the KWKG 2016 legislation. The subsidies for heating energy storage facilities and heating energy grids, which had been suspended since 1 January 2016, are thus also effective once again.

Due to the requirements of the EU Commission, however, it will also be necessary to make adjustments to the KWKG legislation and these are due to be brought to the Federal Parliament in autumn 2016. The adjustments relate in particular to the tender to be newly introduced for CHP plants with electrical capacity of 1 MW to 50 MW. The Amendment to the KWKG legislation is expected to enter force as of 1 January 2017, while the structuring of the tenders will be dealt with further down the line in a statutory ordinance to be issued by the Federal Ministry for Economic Affairs (BMWi).

2050 Climate Protection Plan

The Federal Ministry of the Environment published the 2050 Climate Protection Plan at the beginning of September 2016 and this was adopted in November 2016. The plan includes key points showing how the Federal Government's ambitious climate protection targets can be met across all sectors for the years 2030 and 2050 in particular. Accordingly, energy generation should be almost completely CO_2-neutral by 2050 at the latest. The plan nevertheless does not set out any specific measures as to how greenhouse gas emissions are to be reduced in the electricity and heating energy sectors.

Amendment to German Energy and Tax Act initiated

On 26 April 2016, the Federal Ministry of Finance published a consultation draft concerning an amendment to the German Energy and Electricity Tax Act. The Federal Ministry for Economic Affairs rejected this draft in May and efforts are currently being made to reach a compromise. The draft contained several proposals that would have had negative implications for the operation of energy industry generation plants.

It is currently unclear which specific requirements will be amended in future. The draft legislation is due to be decided by the Federal Cabinet and submitted to the Federal Parliament in autumn 2016.

International climate protection

The UN Climate Conference held in Paris at the end of 2015 adopted an international climate protection agreement, the Paris Agreement, to succeed the Kyoto Protocol. This agreement provides for limiting global warming to significantly less than 2 degrees Celsius, and if possible 1.5 degrees Celsius, compared with pre-industrial levels. Moreover, an increased flow of funds was decided to support financially weaker states in converting their energy supplies and in dealing with climate-related damages. To this end, an amount of US$ 100 billion a year is to be made available from 2020 onwards, an agreement wich initially applies until 2025. The Paris Agreement had been ratified by 72 countries by October 2016 and took effect on 4 November 2016. It is binding under international law, but no penalties will be imposed if the contractually agreed points are disregarded. That is one of its weaknesses. Another relates to the decision to omit mandatory CO_2 emission targets.

For MVV Energie, no direct implications of the agreement are currently apparent. We nevertheless expect efforts to cut CO_2 emissions to be stepped up in the EU and Germany in order to comply with the target now newly formulated. Against this backdrop as well, the investments MVV Energie has made in renewable energies are an important step in the right direction. We also believe it is necessary for the proposals made by the EU Commission concerning reforms to the emissions trading system (ETS) to be implemented.

Federal Council approves German Energy Turnaround Digitisation Act

The German Energy Turnaround Digitisation Act came into effect on 2 September 2016. This legislation chiefly stipulates technical and data protection requirements for smart metering systems. These are set to play a major role in the expansion of renewable energies and enable energy consumers to participate in the energy market. The new requirements distinguish between several rollout groups and grant companies discretion to determine their own individual company rollout strategies. The legislation also sets annual price caps for the installation of smart meters. The level of fixed price cap per rollout group is based on the respective annual consumption volume. Ignoring the request submitted by distribution grid operators, the legislation provides for aggregated individual data to be transferred from the smart metering systems to transmission grid operators. Distribution gird operators will nevertheless receive the data they need to perform their tasks.

Federal Council approves Amendment to German Incentive Regulation Ordinance

The German Incentive Regulation Ordinance (ARegV) came into effect on 17 September 2016. The Federal Council had approved the amendment in July on the condition that significant changes are made. The ordinance still requires grid operators to reduce inefficiencies over the five-year term of a regulation period. Ignoring the request made by the industry however, the transition regulation governing base effects has not been extended beyond the third regulation period. The amendment provides for the introduction of a capital cost comparison. Investments should be refinanced immediately via grid utilisation fees, with the respective costs being compared annually rather than over the regulation period. Here, we welcome the fact that future investments will no longer involve any time lag and that the so-called best-of-four approach has been retained in the efficiency comparison.

Federal Network Agency sets yield rates for third regulation period

In October 2016, the Federal Network Agency published the resolutions setting the equity yield rate for the third regulation period. For new plants, this amounts to 6.91 % before taxes, compared with the currently applicable rate of 9.05 %. The new rates apply from the year 2019 for electricity grid operators and from the year 2018 for gas grid operators. This stipulation reflects the currently low level of interest rates on the capital markets. The equity yield rate largely determines the return companies are able to generate. Grid operators expect that the future return will not take appropriate account of the entrepreneurial risk associated with grid operations.

Financial market regulation

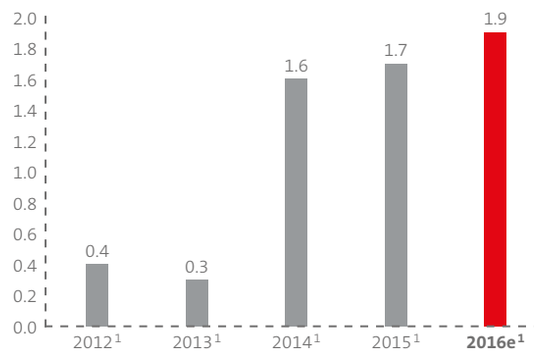
In the 2016 financial year we suitably complied with the stricter requirements in connection with REMIT legislation (Regulation on wholesale Energy Market Integrity and Transparency – December 2011). The companies thereby affected within the MVV Energie Group have put the necessary structures in place and ensured that the mandatory disclosures on standard and non-standard contracts to the Agency for the Cooperation of Energy Regulators (ACER) were made in good time.

Market Climate and Competition

Solid growth in German economy

German gross domestic product (GDP) grew by 1.7 % in the 2015 calendar year. Positive momentum chiefly came from the domestic economy and was driven by consumer spending and investments. In their autumn survey, experts at Germany's leading economic research institutes forecast GDP growth of 1.9 % for 2016. Once again, this growth will primarily be attributable to the domestic economy.

GDP GROWTH IN GERMANY
(%)



1 Calendar year

Sources: Federal Statistical Office and forecast in autumn survey of leading German economic research institutes (2016)

Electricity generation in Germany at previous year's level

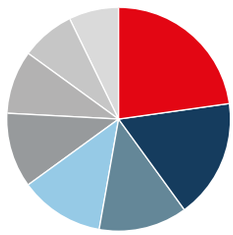
Based on estimates compiled by the Association of the German Energy and Water Industries (BDEW) in October 2016, gross electricity generation in Germany came to 477.8 billion kWh in the first nine months of the year and was thus at more or less the same level as in the previous year (477.4 billion kWh).

Renewable energies account for 30 % of German electricity generation

According to BDEW estimates, the share of electricity generation attributable to renewable energies amounted to 30 % in the first nine months of 2016, up from 29 % in the previous year's period. Overall, electricity generation volumes at wind turbines grow by 3 %, with onshore wind turbines reporting a reduction of 5 % and offshore wind turbines an increase of 90 %. Generation volumes at photovoltaic systems were at the previous year's level. The volume of electricity produced from biomass and from biogenic municipal waste grew by 3 %.

ELECTRICITY GENERATION IN GERMANY
Shares (%)

	2016[1]
Lignite	23
Hard coal	17
Nuclear energy	13
Natural gas	12
Wind power	11
Other	9
Biomass, including biogenic municipal waste	8
Photovoltaics	7



1 January to September 2016

Onshore wind power expansion progresses

According to figures released by the German Wind Energy Association (BWE), onshore wind capacity of 3,730 MW was newly added in Germany in the 2015 calendar year. Total installed wind power capacity thus amounted to 41,651 MW. In terms of onshore wind power, net new capacity of 1,892 MW was added in Germany in the first half of 2016, equivalent to year-on-year growth of 73 %. Including the capacities of 161 MW added due to the repowering of turbines in the first half of the year, gross new capacity amounted to 2,053 MW.

Positive market expectations for our growth fields

Prices for battery storage facilities and photovoltaics systems have fallen sharply over the past decade and are set to decrease further. For companies, this change in underlying conditions is creating substantial potential that has been analysed in numerous studies. In April 2016, for example, the auditing and consulting company Ernst & Young published the findings of "Wirtschaft unter Strom", its study of how companies use electricity. According to this study, the expansion in the decentralised energy supply is set to gain significant further momentum. After all, the savings potential harboured by efficiency measures and proprietary generation for German industrial, commercial, service and retail companies is expected to amount to US$ 17.1 billion in 2020. This is set to grow further in subsequent years as prices for storage facilities and photovoltaics systems continue to fall. We are benefiting from these developments in our growth fields – generating energy from renewables, supplying heating energy and local heating on a decentralised basis, providing energy advice to prosumers, planning, building and managing operations at decentralised generation plants, direct marketing and portfolio management.

Decline in wholesale prices for fuel and electricity

Energy prices fell in the course of the year under report, with a decline in fuel and electricity wholesale prices, as well as in prices on the emissions market.

Listed prices for **Brent crude oil** for supply in the following month (front-month) ranged between US$ 27.88 and US$ 53.05 per barrel in the 2016 financial year. At US$ 43.56, the average price per barrel in the year under report was US$ 18.20 down on the previous year's figure of US$ 61.76. As OPEC was unable to reach agreement in December 2015 concerning an adjustment in production quotas, by February 2016 the market was showing clear signs of oversupply, as a result of which the front-month barrel price plummeted below the US$ 30 mark in that month. Discussions between OPEC members and non-OPEC countries (especially Russia) about coordinated, joint production cuts enabled the price to stabilise in the spring, even if no agreement was actually reached. The oil market nevertheless recovered due to an increase in demand and simultaneous fall in US production volumes. Renewed discussions between oil producers at the end of the 2016 financial year led to an agreement to limit production in order to support prices.

Natural gas prices for the front-year product in the Net-Connect Germany (NCG) market region were listed at an average of Euro 15.85/MWh in the year under report, and thus Euro 5.92/MWh lower than in the previous year. Price movements here often reflect developments in the oil market. In conjunction with a strong supply situation, the mild winter created pressure on day-ahead prices in March and April and subsequently also on prices for the front-year product. From May onwards, the recovery in the oil price and the announcement of further production cuts at Groningen, the largest Dutch gas field, offered some support. In the summer, the market was influenced by the announcement of the partial loss of Rough, the largest gas storage facility in the UK, for the coming winter. This news was nevertheless relativized towards the end of the financial year. In conjunction with very high storage levels in continental Europe, the front-year price fell once again.

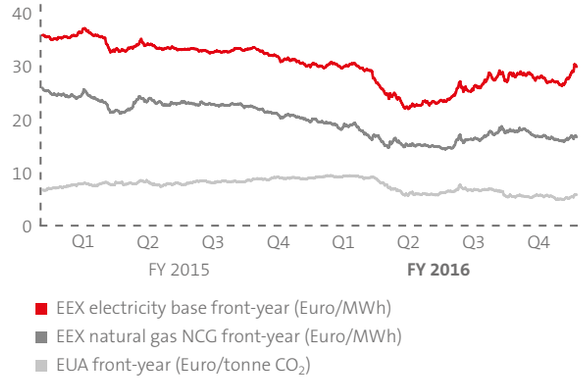
The downward trend seen in **coal prices** on the European coal market since 2011 continued, especially in the first half of the year under report. Front-year prices per tonne for hard coal in the ARA region (Amsterdam, Rotterdam, Antwerp) fell year-on-year by US$ 12.03 to an average of US$ 48.63. Due to individual production cuts and increased demand on the global market, prices showed a consistent recovery in the second half of the financial year.

Prices for **base load electricity** for supply in the following year tracked the losses on fuel markets, and especially the coal market. The front-year price fell by Euro 6.47/MWh in the year under report and averaged Euro 25.89/MWh. Following a sharp drop in the first half of the 2016 financial year, prices were able to stabilise at a higher level in the second half. Prices for products due to be supplied more than one year in the future were listed below the current front-year price.

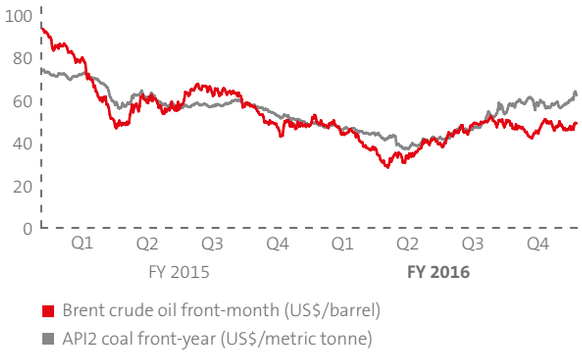
Emission right prices per tonne of CO_2 for supply in the following year averaged Euro 6.09 in the 2016 financial year and were thus Euro 1.19 lower than in the previous year. Despite a positive political climate and an accompanying upward trend in prices at the beginning of the year under report, January 2016 witnessed a massive sell-off on the markets driven by reduced power plant demand and simultaneous industrial and speculative sales.

The margin achieved from generating electricity from hard coal, the clean dark spread, fell in the 2016 financial year and continued to be listed at a very low level. Even accounting only for short-term variable cost components, very few hard coal power plants in Germany can currently be operated on a profitable basis.

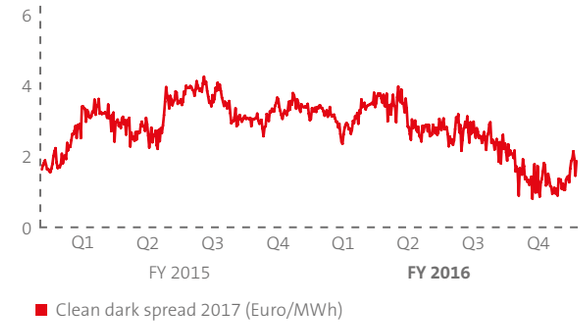
DEVELOPMENT IN WHOLESALE MARKET PRICES FOR ELECTRICITY, GAS AND CO_2 RIGHTS



DEVELOPMENT IN WHOLESALE PRICES FOR OIL AND COAL



DEVELOPMENT IN CLEAN DARK SPREAD FOR 2017



Market positions of the MVV Energie Group

- In Germany, the MVV Energie Group produced 62 % of its total **electricity generation volumes from renewable energies** in the 2016 financial year. By comparison, the German national share of electricity generation volumes attributable to renewable energies amounts to 30 %.

- With Juwi AG and Windwärts Energie GmbH, we are one of Germany's leading **renewable energies project developers.**

- We offer **direct marketing of electricity from renewable energies** within the market premium model. At the end of the year under report, MVV Energie had generation plants based on renewable energy sources with a total capacity of 4,600 MW under contract in Germany. This makes it one of the country's top three direct marketers. With around 1,600 MW, we are the market leader in the direct marketing of photovoltaics systems.

- We are also one of the German market leaders when it comes to **generating energy from biomass.** We operate 17 biomass and biogas plants in Germany, at which we produced a total of 284 million kWh of electricity and 226 million kWh of heating energy in the 2016 financial year. Furthermore, we generated 259 million kWh of biomethane at four biomethane plants.

- Our fully consolidated grid companies have district heating grids in Germany with a total length of 1,134 km. In the year under report, we posted district heating turnover of 6.0 billion kWh. This makes our group of companies the second-largest **district heating provider** in Germany.

- We are one of Germany's three largest operators of **energy from waste and biomass plants.** A total of 1.8 million tonnes of waste and refuse-derived fuels were delivered for combustion at our locations in Germany in the 2016 financial year.

- Our MVV Energie CZ a.s. subgroup operates at 15 locations in the Czech Republic and is a market leader in the **Czech heating energy market.**

Impact of weather conditions

Mild winter 2015/16

Weather conditions, especially in the heating period (October to April), are a highly significant factor for the MVV Energie Group's business performance. Degree day figures are an indicator of temperature-based heating energy use. Low outdoor temperatures, which are accompanied by higher heating energy requirements at our customers, lead to higher degree day figures.

As the winter was once again mild, the MVV Energie Group's degree day figures for the 2016 financial year were 4.4% down on the low comparative figure for the previous year.

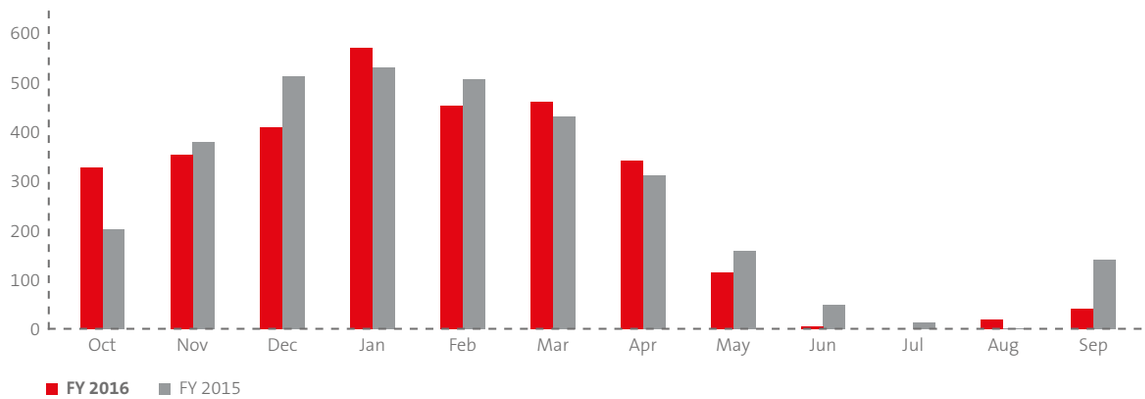
In the summer months, high temperatures and low volumes of precipitation benefit our water turnover. However, this factor is of subordinate significance for our group earnings.

Wind volumes up on previous year

Electricity generation volumes at our onshore wind turbines depend to a significant extent on wind volumes at our locations.

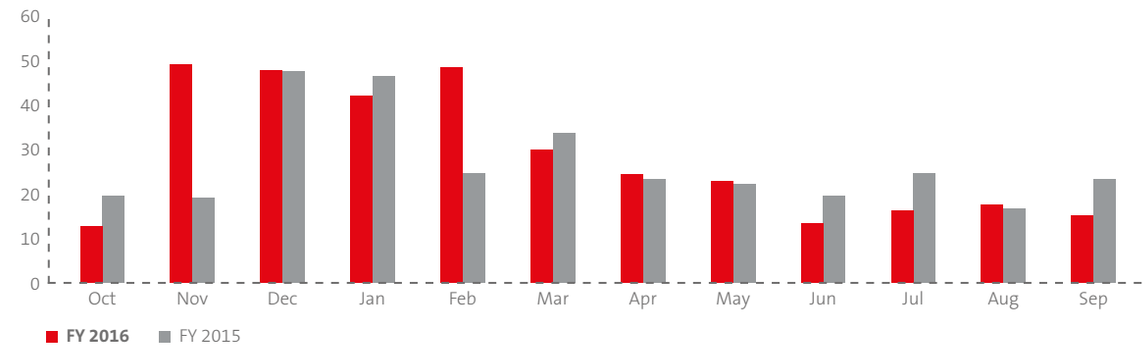
At 337 million kWh, electricity feed-in volumes at our wind turbines were around 6% higher than in the previous year (318 million kWh). Of this increase, around 4 percentage points were due to the addition of Klosterwald Windfarm in Creglingen and the eleventh turbine at the windfarm on Hungerberg. Around 2 percentage points resulted from higher wind volumes, with particularly windy conditions in November 2015 and February 2016. By contrast, wind volumes in the months from June to September 2016 were in some cases significantly lower than in the previous year.

DEGREE DAY FIGURES



ELECTRICITY GENERATION AT WIND TURBINES

kWh million



NON-FINANCIAL PERFORMANCE INDICATORS

The success of a company is reflected not only in its key financials. Non-financial performance indicators also play a major role in the development of our company.

The following comments refer to the MVV Energie Group, i.e. to all ▸ **fully consolidated companies.** In the combined management report for the previous year, the information provided in this section on the installed capacity for renewable energies and the biogenic share of waste/refuse-derived fuels (RDF) and on our generation volumes, fuel used and CO_2 emissions referred exclusively to Germany and also included our at-equity shareholdings. We aim to maintain an ongoing high level of transparency. In view of this, we have reported this information also including companies recognised at equity in the chapter on ▸ **sustainability**.

Significant growth in workforce

The MVV Energie Group had a total of ▸ 6,174 **employees** as of 30 September 2016, and thus 866 more than at the previous year's balance sheet date. This increase was mainly due to the first-time full consolidation of the Juwi subgroup.

Personnel figures (head count) at the balance sheet date

	30 Sep 2016	30 Sep 2015	% change
MVV Energie Group[1]	6,174	5,308	+16
of which Germany	5,328	4,676	+14
of which abroad	846	632	+34

1 Including 343 trainees (previous year: 359)

In Germany, a total of 5,328 people worked for us as of 30 September 2016. In other countries, we employed 846 people, of which 530 at the Czech subgroup, 235 at the foreign subsidiaries of Juwi AG and 67 at the British subsidiary of our environmental energy (Umwelt) subgroup. One subsidiary of Windwärts Energie GmbH had 14 employees in France.

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Adjusted employee benefit expenses rose year-on-year by Euro 52 million to Euro 404 million. The main reason for this development was the first-time full consolidation of the Juwi subgroup.

Electricity generation from renewables up on previous year

The electricity generation capacity (installed capacity) of our plants powered by renewable energies including the biogenic share of waste/refuse-derived fuels (RDF) amounted to 418 MW_e as of 30 September 2016. The increase of 23 MW_e compared with the previous year was chiefly due to the launch of operations at our new wind turbines.

Sustainability Pages 16-47

Employees Pages 39-44

Installed capacity for renewable energies and biogenic waste share of waste/EDF

MW_e	**FY 2016**	FY 2015	% change
Biomass and biogas plants	73	72	+1
Biogenic share of waste/RDF	146	146	0
Wind power	196	174	+13
Hydroelectricity	2	2	0
Photovoltaics	1	1	0
Total	**418**	**395**	**+6**

Our electricity generation volumes from renewable energies including the biogenic share of waste/refuse-derived fuels (RDF) grew year-on-year by 213 million kWh to 1,035 million kWh.

Electricity generation from renewable energies and biogenic share of waste/RDF

kWh million	FY 2016	FY 2015	% change
Biomass and biogas plants	410	328	+25
Biogenic share of waste/RDF	281	171	+64
Wind power	337	317	+6
Hydroelectricity	6	5	+20
Photovoltaics	1	1	0
Total	**1,035**	**822**	**+26**

The increase in electricity generation volumes at our biomass power plants was mainly attributable to our biomass power plant in the UK, which launched operations at the end of the 2015 financial year and thus contributed its first full year of electricity.

The primary reason for the increase in electricity generation volumes from the incineration of waste and refuse-derived fuels (biogenic share) is the new waste-fired CHP plant in the UK. Operations here also began at the end of the 2015 financial year, as a result of which the plant made its first full-year contribution to our electricity generation volumes in the year under report.

The increase in electricity generation volumes at our wind turbines resulted from the launch of operations with new turbines in the year under report, namely with one wind turbine at the windfarm at Creglingen and one wind turbine on Hungerberg. Seven further wind turbines at the windfarm in Freudenberg were connected to the grid in September 2016. Due to the late point in time at which operations were launched, however, these did not yet contribute to our electricity generation volumes in the year under report.

Increase in electricity generation volumes

Our electricity generation volumes rose year-on-year by 312 million kWh to a total of 1,797 million kWh.

Electricity generation volumes

kWh million	FY 2016	FY 2015	% change
Electricity from renewable energies and biogenic share of waste/RDF	1,035	822	+26
Electricity from CHP	470	445	+6
Other electricity generation	292	218	+34
Total	**1,797**	**1,485**	**+21**

Year-on-year, the electricity volumes generated using combined heat and power (CHP) grew by 25 million kWh. This increase was due in particular to the higher volume of CHP electricity generation at the Kiel subgroup.

Among other factors, other electricity generation includes the condensation electricity at our new waste-fired CHP plant in Plymouth. As operations here only began at the end of the 2015 financial year, the respective volumes rose year-on-year by 74 million kWh.

Heating energy and steam generation at previous year's level

The heating energy and steam generation capacity (net bottleneck capacity) at our plants decreased to 2,695 MW_t in the year under report.

Heating energy and steam generation capacity

MW_t	FY 2016	FY 2015	% change
Biomass and biogas plants	134	134	0
Biogenic share of waste/RDF	682	682	0
Heating energy generation capacity from renewable energies	**816**	**816**	**0**
Other plants	1,879	1,897	−1
Total	**2,695**	**2,713**	**−1**

At 4,136 million kWh, heating energy and steam generation volumes were at the previous year's level. The slight reduction by 45 million kWh in heating energy and steam generation volumes from the incineration of waste and refuse-derived fuels (biogenic share) chiefly resulted from scheduled inspection work at our energy from waste plant in Mannheim and from a higher volume of electricity coupled out (at the expense of process steam volumes) at our non-recyclable waste incineration and energy generation plant in Leuna (Trea Leuna).

Heating energy and steam generation volumes

kWh million	**FY 2016**	FY 2015	% change
Biomass and biogas plants	267	268	0
Biogenic share of waste/ RDF	1,836	1,881	–2
Heating energy generation from renewable energies	**2,103**	**2,149**	**–2**
Other plants	2,033	2,000	+2
Total	**4,136**	**4,149**	**0**

Further expansion in biomethane generation

We launched operations at two new biomethane plants in Saxony-Anhalt in May 2015 and November 2015 respectively. As a result, biomethane generation volumes grew year-on-year by 115 million kWh to 259 million kWh. Capacity totalled 29.6 MW_{hs} at the end of the 2016 financial year (previous year: 22.2 MW_{hs}).

Biomethane generation volumes

kWh million	**FY 2016**	FY 2015	% change
Biomethane plants	259	144	+80

Protecting fossil resources

Alongside fossil fuels, we see the use of waste and biomass in particular for energy generation purposes as a key pillar of modern, resource-efficient energy generation.

Fuels used at power plants

	FY 2016	FY 2015	% change
Biomass (tonnes 000s)	518	473	+10
Biogenic share of waste/ RDF (tonnes 000s)	1,820	1,616	+13
Natural gas (kWh million)	2,167	2,083	+4
Heating oil extra light (HEL) (kWh million)	99	119	–17
Hard coal (tonnes 000s)	85	88	–4

The year-on-year increase in biomass and in the biogenic share of waste and refuse-derived fuels was attributable to the launch of operations at our two new UK generation plants – the biomass power plant and the waste-fired CHP plant – at the end of the 2015 financial year.

CO_2 emissions

Our generation plants emitted a total of 1,056,000 tonnes of CO_2 in the year under report (previous year: 1,045,000 tonnes of CO_2). The year-on-year increase was mainly due to our waste-fired CHP plant in Plymouth, which only began operating at the end of the 2015 financial year.

Expenses for emission rights fell year-on-year by Euro 6 million to Euro 0.5 million. This item was opposed by income from emission rights amounting to Euro 18 million (previous year: Euro 15 million). **G4-EU5**

PRESENTATION OF EARNINGS PERFORMANCE

The period under report is the 2016 financial year – from 1 October 2015 to 30 September 2016.

In December 2014, we acquired a 50.1 % shareholding in Juwi AG by way of a capital increase. In August 2015, we raised our shareholding to 63.1 %. Following approval of the acquisition by the Federal Cartel Office, the change in governance was implemented and the Juwi subgroup was fully consolidated from 17 December 2015. Prior to this, Juwi was consolidated as a joint venture using the equity method.

MVV Energie Group

MVV Energie Group

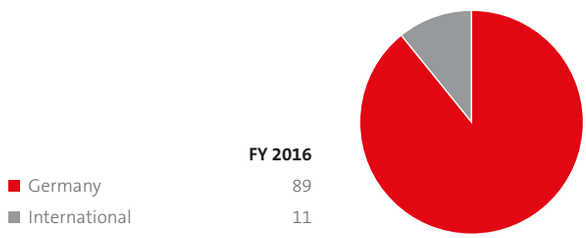
Euro million	FY 2016	FY 2015	+/- change	% change
Development in turnover				
Electricity (kWh million)	21,797	20,823	+974	+5
Heating energy (kWh million)	6,716	6,995	−279	−4
Gas (kWh million)[1]	28,270	27,410	+860	+3
Water (m³ million)	41.1	46.3	−5.2	−11
Combustible waste delivered (tonnes 000s)	2,306	2,041	+265	+13
Sales excluding energy taxes	4,066	3,422	+644	+19
of which electricity sales	1,962	1,919	+43	+2
of which heating energy sales	359	393	−34	−9
of which gas sales	715	698	+17	+2
of which water sales	88	98	−10	−10
Adjusted EBIT	213	175	+38	+22

1 Previous year's figure adjusted

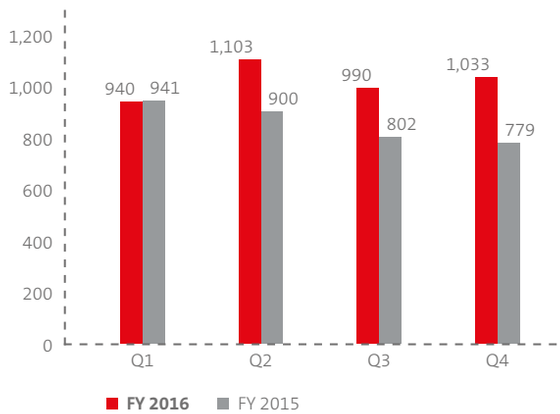
The business performance of the MVV Energie Group in the 2016 financial year was mainly influenced by the first-time full consolidation of the Juwi subgroup. This factor was supplemented by sales and earnings contributions from our two new UK generation plants – the energy from waste plant in Plymouth and biomass power plant at Ridham Dock – and from the expansion in renewable energies generation.

Of consolidated sales in the 2016 financial year, 89 % were attributable to the domestic business (previous year: 97 %) and 11 % to the international business (previous year: 3 %). The marked year-on-year increase in the international share of sales was due above all to the international business at the Juwi subgroup.

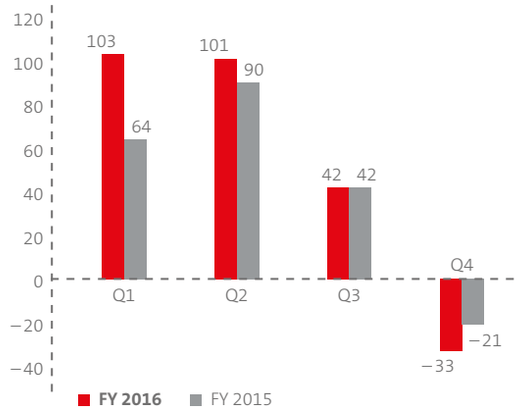
SALES EXCLUDING ENERGY TAXES BY REGION
Shares (%)



SALES EXCLUDING ENERGY TAXES BY QUARTER
Euro million



ADJUSTED EBIT BY QUARTER
Euro million

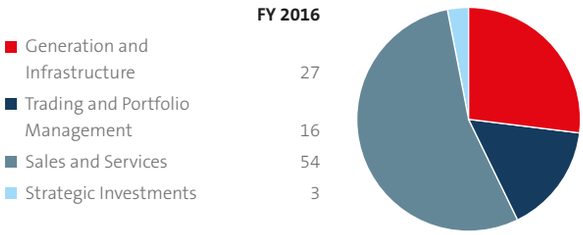


Generation and Infrastructure reporting segment

Generation and Infrastructure

	FY 2016	FY 2015	+/− change	% change
Development in turnover				
Electricity (kWh million)	465	351	+114	+32
Heating energy (kWh million)	1,069	1,188	−119	−10
Gas (kWh million)	259	144	+115	+80
Combustible waste delivered (tonnes 000s)	1,942	1,696	+246	+15
Sales excluding energy taxes	1,110	454	+656	>+100
Adjusted EBIT	161	133	+28	+21

SALES EXCLUDING ENERGY TAXES BY REPORTING SEGMENT
Shares (%)



The sales and earnings contributions from the Juwi subgroup and from our new generation plants are included in the Generation and Infrastructure reporting segment. Year-on-year, this resulted in substantial sales growth and a sharp rise in adjusted EBIT. Alongside this factor, segment earnings were also positively influenced by the development in waste and biomass prices.

In our Generation and Infrastructure reporting segment we also present the electricity generation volumes at MVV Umwelt GmbH and the share of electricity generation volumes at our wind turbines that is marketed to third parties. The increase in electricity turnover was driven above all by our new UK generation plants, where operations were only launched at the end of the 2015 financial year. Furthermore, electricity generation volumes at our wind turbines were ahead of the previous year's figures. Overall, scheduled inspection work at our energy from waste plant in Mannheim and a higher volume of electricity coupled out at the expense of process steam at our non-recyclable waste incineration and energy generation plant in Leuna (Trea Leuna) led to a reduction in heating energy turnover. The year-on-year increase in gas turnover was due to the fact that two of our four biomethane plants only launched operations in May 2015 and November 2015 respectively and were thus only partly included in the figures for the 2015 financial year. The increased volume of combustible waste delivered was predominantly due to our new UK plants.

Trading and Portfolio Management reporting segment

Trading and Portfolio Management

	FY 2016	FY 2015	+/– change	% change
Development in turnover				
Electricity (kWh million)	9,982	10,342	–360	–3
Gas (kWh million)[1]	21,467	20,556	+911	+4
Sales excluding energy taxes	645	733	–88	–12
Adjusted EBIT	–31	–29	–2	–7

1 Previous year's figure adjusted

Electricity trading volumes decreased compared with the previous year, with this reduction being due among other factors to shifts towards short-term trading, i.e. our customers' procurement periods have shifted from the futures market to shorter-term trading periods. By contrast, we reported slightly higher gas trading volumes. This increase was driven by our activities in the third-party customer business and to weather-related sellbacks on the market.

The reduction in sales in the year under report was chiefly due to the decline in wholesale market prices. This factor could only be partly offset by higher gas trading volumes.

The reduction in adjusted EBIT was mainly due to the low clean dark spread (CDS) and low water levels on the Rhine, which increased coal transport costs in the 1st quarter of the 2016 financial year.

Sales and Services reporting segment

Sales and Services

	FY 2016	FY 2015	+/– change	% change
Development in turnover				
Electricity (kWh million)	11,093	9,891	+1,202	+12
Heating energy (kWh million)	4,909	5,065	–156	–3
Gas (kWh million)	6,377	6,563	–186	–3
Water (m³ million)	40.3	45.4	–5.1	–11
Combustible waste delivered (tonnes 000s)	240	226	+14	+6
Sales excluding energy taxes	2,210	2,133	+77	+4
Adjusted EBIT	29	42	–13	–31

The increase in electricity turnover in the Sales and Services reporting segment was primarily due to the nationwide sales business and to higher volumes in the direct marketing business. The reduction in heating energy and gas turnover was due above all to weather conditions, while the lower volume of water turnover resulted from the takeover of the water supply for which Energieversorgung Offenbach AG (EVO) was previously responsible by a special purpose association as of 1 January 2016.

The sales growth was driven by customer acquisitions in the nationwide sales business. This was countered by a weather-related reduction in turnover volumes in the gas and district heating businesses. Furthermore, the lower volume of water turnover at EVO led to a decline in sales.

Overall, the high degree of competition, organisational realignment of sales units and mild weather conditions left their mark on earnings in the Sales and Services reporting segment, and led as expected to a marked reduction in adjusted EBIT.

Strategic Investments reporting segment

Strategic Investments

	FY 2016	FY 2015	+/– change	% change
Development in turnover				
Electricity (kWh million)	257	239	+18	+8
Heating energy (kWh million)	738	742	–4	–1
Gas (kWh million)	168	147	+21	+14
Water (m³ million)	0.9	0.9	0	0
Combustible waste delivered (tonnes 000s)	124	119	+5	+4
Sales excluding energy taxes	99	99	0	0
Adjusted EBIT	24	21	+3	+14

The increase in electricity turnover in the Strategic Investments reporting segment was attributable to Köthen Energie GmbH, while the reduction in district heating turnover was due to weather conditions. Within the Energy Fund, Köthen Energie was able to acquire new customers, leading to higher gas volumes.

The rise in adjusted EBIT was due to a year-on-year increase in the at equity result of a joint venture.

Other Activities

Other Activities

	FY 2016	FY 2015	+/– change	% change
Sales excluding energy taxes	2	3	–1	–33
Adjusted EBIT	30	8	+22	>+100

The earnings performance of the Other Activities reporting segment in the 2016 financial year was influenced in particular by the sale of ZVO Energie GmbH and of a piece of land at Energieversorgung Offenbach AG.

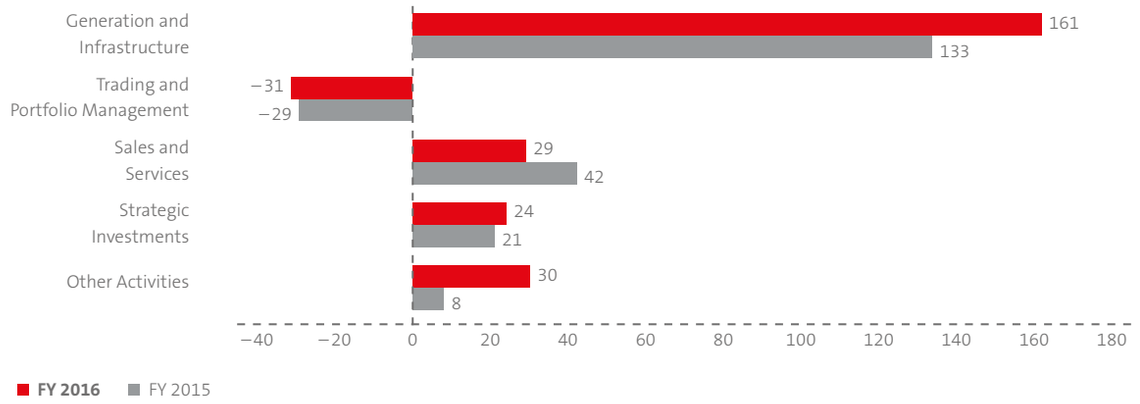
Reconciliation with adjusted EBIT

In the following table, we show how we reconcile the EBIT reported in the income statement for the 2016 financial year with the adjusted EBIT figure relevant for group management purposes.

Reconciliation of EBIT (income statement) to adjusted EBIT from 1 October to 30 September

Euro million	FY 2016	FY 2015	+/– change
EBIT as reported in income statement	225	162	+63
Financial derivatives measurement item	–24	+7	–31
Structural adjustment for part-time early retirement	+2	+3	–1
Restructuring expenses	+7	–	+7
Interest income from finance leases	+3	+3	0
Adjusted EBIT	**213**	**175**	**+38**

ADJUSTED EBIT BY REPORTING SEGMENT
Euro million



Notes to Income Statement (Note 5) Page 128

Income Statement Page 112

Development in key income statement items

The ▸ **cost of materials** rose to Euro 3,208 million, up Euro 531 million on the previous year. This development was chiefly due to the first-time consolidation of the Juwi subgroup and the resultant increase in purchased services for windfarm and solar park project development, as well as to higher expenses for third-party services and third-party personnel.

At Euro 404 million, **adjusted employee benefit expenses** were Euro 52 million higher than in the previous year. This increase was mainly driven by the first-time full consolidation of the Juwi subgroup and the associated growth in ▸ **employee totals**.

Non-Financial Performance Indicators Page 75

Year-on-year, ▸ **other operating income** excluding IAS 39 measurement items grew by Euro 24 million to Euro 113 million. This increase was driven in particular by the reversal of provisions and the inclusion of the Juwi subgroup.

Notes to Income Statement (Note 4) Page 127

Excluding IAS 39 measurement items, ▸ **other operating expenses** rose year-on-year by Euro 44 million to Euro 217 million in the 2016 financial year. This increase was also due above all to the full consolidation of the Juwi subgroup.

Notes to Income Statement (Note 7) Page 128

In the ▸ **income statement**, IAS 39 measurement items are included under other operating income and other operating expenses. Their net balance resulted in a positive item of Euro 24 million in the 2016 financial year, thus contrasting with a negative measurement item of Euro −7 million in the previous year. IAS 39 items reflect the development in market prices on the commodities and energy markets. IAS 39 measurement has no impact on payments, neither does it affect our operating business or dividend.

Notes to Income Statement (Note 10) Page 129

▸ **Depreciation** rose year-on-year by Euro 51 million to Euro 212 million. This increase was due above all to the launch of operations at our new generation plants in the course of the previous year and the year under report, as well as to impairment losses.

The **adjusted financial result** presents the net balance of financing income and financing expenses. Year-on-year, this figure deteriorated by Euro 32 million to Euro −75 million. This development was largely driven by increased interest expenses. This is because the relevant borrowing costs may no longer be capitalised following completion of the new UK generation plants. Expenses were also increased by the inclusion of the Juwi subgroup.

Net of the adjusted financial result, **adjusted EBT** for the 2016 financial year came to Euro 139 million (previous year: Euro 132 million).

Adjusted taxes on income totalled Euro 40 million (previous year: Euro 39 million). Deducting these taxes resulted in **adjusted annual net income** of Euro 98 million for the year under report (previous year: Euro 92 million).

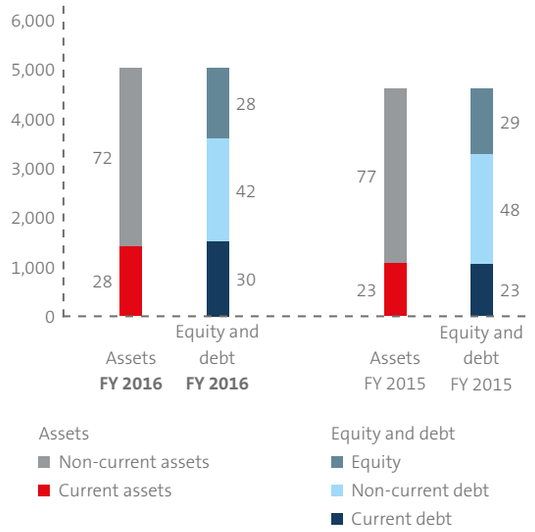
Compared with the previous year (Euro 17 million), adjusted minority interests fell to Euro 3 million. This reduction was due to lower earnings at the Kiel and Offenbach subgroups and the first-time full consolidation of the Juwi subgroup. The MVV Energie Group reported **adjusted annual net income after minority interests** of Euro 95 million for the 2016 financial year (previous year: Euro 75 million). Calculated on this basis, adjusted earnings per share came to Euro 1.45 (previous year: Euro 1.14). At 65.9 million, the number of shares did not change compared with the previous year.

PRESENTATION OF NET ASSET POSITION

Balance sheet structure

Euro 000s	**30 Sep 2016**	30 Sep 2015	% change
Assets			
Non-current assets	3,586,299	3,513,089	+2
Current assets	1,417,327	1,070,891	+32
Total assets	**5,003,626**	**4,583,980**	**+9**
Equity and debt			
Equity	1,426,355	1,314,326	+9
Non-current debt	2,079,926	2,211,089	−6
Current debt	1,497,345	1,058,565	+41
Total equity and debt	**5,003,626**	**4,583,980**	**+9**

BALANCE SHEET STRUCTURE
Euro million, Shares (%)



Balance sheet development

The increase in the ▸ **total assets** of the MVV Energie Group was chiefly due to the first-time full consolidation of the Juwi subgroup.

Non-current assets rose to Euro 3,586 million, up Euro 73 million compared with 30 September 2015. Within this item, ▸ **intangible assets** increased by Euro 124 million to Euro 351 million, a development mainly attributable to the first-time full consolidation of the Juwi subgroup. Due above all to the first-time inclusion of the Juwi subgroup, ▸ **interests in companies recognised at equity** decreased by Euro 157 million to Euro 190 million. The expansion in trading activities and resultant rise in the fair values of energy trading transactions recognised under IAS 39 led ▸ **non-current other receivables and assets** to increase by Euro 70 million to Euro 396 million.

Balance Sheet
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Notes to Balance Sheet
(Notes 18 and 19)
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Notes to Balance Sheet (Note 24) Pages 144-145

Notes to Balance Sheet (Note 26) Page 145

Notes to Balance Sheet (Note 31) Page 151

Notes to Balance Sheet (Notes 29 and 30) Pages 146-150

Notes to Balance Sheet (Note 31) Page 151

Notes to Balance Sheet (Note 32) Pages 152-153

Current assets increased to Euro 1,417 million, up Euro 346 million compared with 30 September 2015. ▸ **Inventories** rose by Euro 222 million to Euro 296 million, a development also due above all to the first-time consolidation of the Juwi subgroup. At Euro 458 million, ▸ **trade receivables** were Euro 91 million higher at the balance sheet date than one year earlier. This increase was mainly caused by the inclusion of the Juwi subgroup. ▸ **Cash and cash equivalents** grew by Euro 70 million to Euro 333 million, with this increase also being largely due to the full consolidation of the Juwi subgroup.

The **equity** of the MVV Energie Group including non-controlling interests rose to Euro 1,426 million, up Euro 112 million compared with the previous year's balance sheet date.

For Group management purposes, we adjust our consolidated balance sheet to eliminate cumulative IAS 39 measurement items. On the asset side, we eliminate the positive fair values of derivatives and allocable deferred taxes. As of 30 September 2016, these amounted to Euro 602 million (30 September 2015: Euro 511 million). On the equity and liabilities side, we eliminate negative fair values and allocable deferred taxes from liabilities. As of 30 September 2016, these came to Euro 628 million (30 September 2015: Euro 572 million). Under equity, we then eliminate the resultant net balance, which totalled Euro – 26 million as of 30 September 2016 (30 September 2015: Euro – 61 million). Calculated on this adjusted basis, adjusted equity amounted to Euro 1,452 million as of 30 September 2016 (30 September 2015: Euro 1,376 million). As a percentage of the adjusted total assets of Euro 4,401 million (30 September 2015: Euro 4,073 million), the adjusted equity ratio came to 33.0 % as of 30 September 2016, as against 33.8 % as of 30 September 2015.

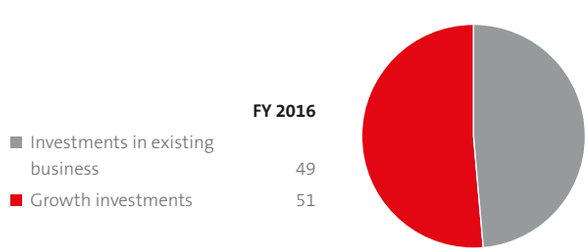
Non-current debt decreased to Euro 2,080 million, down Euro 131 million compared with 30 September 2015. The reduction in ▸ **non-current financial debt** by Euro 207 million to Euro 1,176 million was due above all to the reclassification to current financial debt of loans and promissory note loans due to mature in the 2017 financial year. ▸ **Non-current provisions** rose by Euro 38 million to Euro 209 million. On the one hand, this increase was due to higher pensions and similar obligations as a result of the reduction in the discount rate from 2.4 % to 1.4 %. On the other hand, non-current provisions for warranties rose on account of the first-time consolidation of the Juwi subgroup.

Current debt rose to Euro 1,497 million, up Euro 439 million compared with the previous year's balance sheet date. Alongside the reclassification of former non-current financial debt, the increase in ▸ **current financial debt** by Euro 220 million to Euro 440 million was due to the full consolidation of the Juwi subgroup. The first-time inclusion of the Juwi subgroup was also responsible for the increase in ▸ **current other liabilities** by Euro 128 million to Euro 450 million, as well as for the increase in current provisions for warranties and for miscellaneous contingencies.

Investments

The MVV Energie Group invested a total of Euro 236 million in the 2016 financial year (previous year: Euro 470 million).

INVESTMENTS
Shares (%)



Investments

Euro million	**FY 2016**	FY 2015	+/– change	% change
Generation and Infrastructure	196	417	–221	–53
Trading and Portfolio Management	0	12	–12	–100
Sales and Services	20	22	–2	– 9
Strategic Investments	5	5	0	0
Other Activities	15	14	+1	+7
Total	**236**	**470**	**–234**	**–50**
of which growth investments	121	336	–215	–64
of which investments in existing business	115	134	–19	–14

Definition of investments in ▸ **glossary**.

Our largest investment projects in the 2016 financial year included:

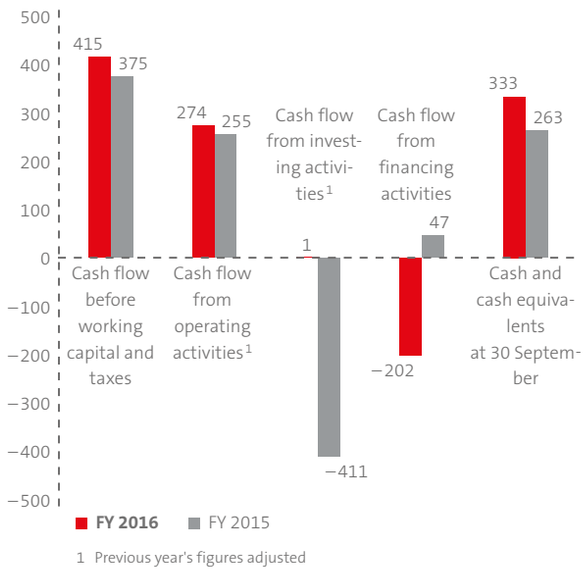
- The construction of the windfarm in Freudenberg and the additional wind turbine on Hungerberg
- The construction of our biomethane plant in Barby
- The modernisation measures at our energy from waste plant in Offenbach
- The maintenance and renewal of our distribution grids
- Measures to expand and increase the density of our district heating grids.

PRESENTATION OF FINANCIAL POSITION

Current and non-current financial debt rose by Euro 1,616 million, up Euro 13 million compared with 30 September 2015. Net financial debt (current and non-current financial debt less cash and cash equivalents) decreased to Euro 1,283 million as of 30 September 2016, down Euro 58 million compared with the previous year's balance sheet date.

Cash flow statement

CASH FLOW STATEMENT
Euro million



1 Previous year's figures adjusted

Glossary Page 198

Year-on-year, the **cash flow before working capital and taxes** rose by Euro 40 million to Euro 415 million. This development was due on the one hand to the increase in annual earnings before taxes on income. This effect was boosted by the higher volume of depreciation and amortisation eliminated on account of the launch of operations at our new generation plants in the previous year and during the 2016 financial year, as well as a higher volume of impairment losses compared with the previous year. Furthermore, the elimination of the financial result had a significantly more positive impact on the cash flow before working capital than in the previous year, as a markedly higher volume of borrowing costs was capitalised in the comparative period. By contrast, the elimination of other non-cash income and expenses had a negative impact, and here especially the elimination of IAS 39 items and at equity valuations, which were included at a significantly lower volume in the year under report. The income from the disposal of non-current assets, largely relating to the sale of ZVO Energie GmbH, also reduced this figure.

Despite the outflow of cash for working capital, the **cash flow from operating activities** increased year-on-year by Euro 19 million to Euro 274 million.

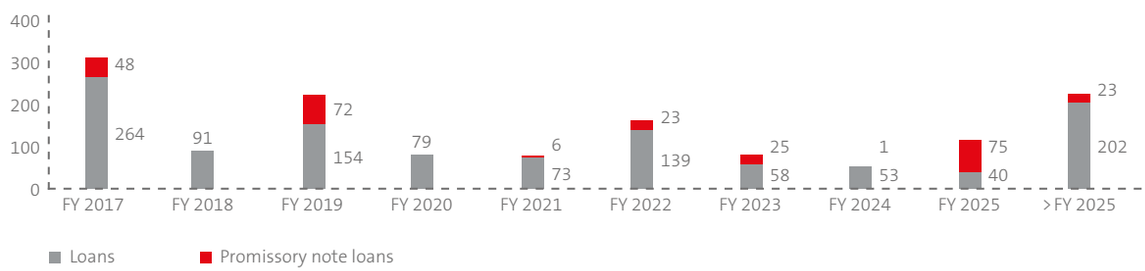
The **cash flow from investing activities** improved by Euro 412 million compared with the previous year. The year-on-year reduction in the volume of payments for other financial assets was due to the fact that the previous year's figure included the investment in Juwi AG. By contrast, payments for the acquisition of fully consolidated companies and other business units changed due to the first-time consolidation of the Juwi subgroup in the year under report. Proceeds from the sale of other financial assets rose as a result of the sale of ZVO Energie GmbH.

The **cash flow from financing activities** fell significantly compared with the 2015 financial year, a development mainly due to a lower volume of new borrowing.

Professional financial management

Given its good access to the capital markets, the MVV Energie Group has no difficulty in covering its liquidity requirements. In this, we benefit from our strong creditworthiness, our diversified business portfolio and our corporate strategy focused on sustainable and profitable growth. In view of our strong liquidity resources, in the year under report we concluded and drew down only a small number of new financing agreements. With the exception of refinancing requirements for loans and promissory note loans maturing in the 2017 financial year, our future repayment profile does not show any significant peaks and our investment financing has been secured with favourable interest terms and on a long-term basis. Furthermore, MVV Energie AG and the other companies within our Group also have bilateral credit lines.

REPAYMENT PROFILE
Euro million



MVV Energie AG manages a cash pool for itself and 31 other companies within our Group. In this capacity, it procures and safeguards both its own liquidity and the financial funds of the companies included in the cash pool. The capital required for investments is made available via shareholder loans. On account of our new UK generation plants, the development in the euro/sterling exchange rate is an increasingly significant factor for our group earnings.

Rating

The MVV Energie Group is not rated by any external rating agency. Based on the feedback we receive in the regular rating talks held with our core banks, however, we understand that the MVV Energie Group continues to be stably classified at investment grade level.

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 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 expenses 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, the consolidated financial statements of the MVV Energie Group and the combined management report for the 2016 financial year are published in the Federal Gazette (Bundesanzeiger). The complete 2016 annual financial statements of MVV Energie AG can be downloaded from our ▸ **website**.

Presentation of earnings performance of MVV Energie AG

Income statement of MVV Energie AG

Euro 000s	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015
Sales	1,976,142	1,929,419
less electricity and natural gas taxes	–122,011	–123,873
Sales less electricity and natural gas taxes	**1,854,131**	**1,805,546**
Increase or reduction in finished and unfinished products	1,959	–1,410
Other own work capitalised	1,896	7,208
Other operating income	187,378	166,928
Cost of materials	1,797,626	1,687,983
Employee benefit expenses	83,925	113,457
Depreciation and amortisation	22,033	23,254
Other operating expenses	90,234	99,349
Financial result	49,026	52,958
Result from ordinary business operations	**100,572**	**107,187**
Taxes	25,341	27,267
Annual net income	**75,231**	**79,920**
Profit carried forward from previous year	784	20,140
Allocation to other revenue reserves	16,699	39,960
Unappropriated net profit	**59,316**	**60,100**

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Sales excluding energy taxes at MVV Energie AG grew by Euro 48 million to Euro 1,854 million in the 2016 financial year. These sales were generated exclusively in Germany. This growth was driven above all by increased electricity turnover and higher gas trading volumes. With a 79% share of total sales, the electricity business was the largest division in terms of sales at MVV Energie AG. At Euro 1,798 million, cost of materials was Euro 110 million higher than in the previous year. Alongside higher electricity procurement volumes, this increase was also due among other factors to the higher apportionment under the German Renewable Energies Act (EEG), a levy which has to be paid to transmission grid operators.

Other operating income rose year-on-year by Euro 20 million. This increase resulted above all from the transfer of technical services business activities from MVV Energie AG to Netrion GmbH and from the ▸ **realignment of sales units.**

Major Developments Page 65

Year-on-year, employee benefit expenses decreased by Euro 29 million to Euro 84 million, a reduction mainly due to the restructuring of grid operations and technical services. As of 1 February 2016, employees moved from the technical service department to the grid company Netrion GmbH. As a result, the number of employees at MVV Energie AG also showed a year-on-year reduction, falling as an annual average by 311 to 1,076 employees. As of 30 September 2016, MVV Energie AG had 937 employees, 463 fewer than at 30 September 2015.

Depreciation and amortisation decreased year-on-year by Euro 1 million to Euro 22 million. No impairment losses were recognised on non-current assets in the year under report or the previous year.

The reduction in other operating expenses by Euro 9 million to Euro 90 million in the year under report was caused in particular by lower concession duties and lower expenses for IT services.

The financial result dropped year-on-year by Euro 4 million to Euro 49 million. Within this item, higher expenses for the assumption of losses, write-downs of financial assets and higher interest and similar expenses and lower income from loans of financial assets were countered by higher income from profit and loss transfer agreements and shareholdings and from other interest and similar income.

The result from ordinary business operations fell year-on-year by Euro 6 million to Euro 101 million in the 2016 financial year.

Net of taxes, MVV Energie AG generated annual net income of Euro 75 million (previous year: Euro 80 million). Based on the profit utilisation resolution adopted by the Annual General Meeting on 4 March 2016, we distributed Euro 59.3 million to shareholders and carried forward the unappropriated net profit of Euro 0.8 million for 2015. Consistent with § 58 (2) AktG, an amount of Euro 16.7 million was allocated from the annual net income for the year under report to revenue reserves.

As of 30 September 2016, MVV Energie AG reported unappropriated net profit of Euro 59 million.

The Annual General Meeting will be held on 10 March 2017 and will decide on the dividend proposal adopted by the Executive and Supervisory Boards on 7 December 2016. The dividend for the 2015 financial year amounted to Euro 0.90 per share.

Presentation of net asset and financial position of MVV Energie AG

Balance sheet of MVV Energie AG

Euro 000s	**30 Sep 2016**	30 Sep 2015
Assets		
Non-current assets		
Intangible assets	700	767
Property, plant and equipment	343,314	352,756
Financial assets	1,500,533	1,562,387
	1,844,547	**1,915,910**
Current assets		
Inventories	13,317	20,245
Receivables and other assets	259,289	288,643
Cash and cash equivalents	189,044	132,355
	461,650	**441,243**
Deferred expenses and accrued income	1,174	577
	2,307,371	**2,357,730**
Equity and liabilities		
Equity		
Share capital	168,721	168,721
Capital reserve	458,946	458,946
Revenue reserves	347,622	330,923
Unappropriated net profit	59,316	60,100
	1,034,605	**1,018,690**
Income grants received	43,795	41,670
Provisions	108,498	109,375
Liabilities	1,120,473	1,187,885
Deferred income and accrued expenses	0	110
	2,307,371	**2,357,730**

Year-on-year, total assets fell by Euro 50 million to Euro 2,307 million. The asset side of the balance sheet is largely shaped by financial assets. As of 30 September 2016, these amounted to Euro 1,501 million (previous year: Euro 1,562 million), equivalent to a 65 % share of total assets (previous year: 66 %). The reduction in financial assets was due above all to the repayment of loans, especially to associates. By contrast, there was an increase in the amounts added to the capital reserves in associates.

Property, plant and equipment fell year-on-year by Euro 9 million. Here, retirements of property, plant and equipment due to contributions to Netrion GmbH were opposed by investments.

Current assets grew to Euro 462 million, up Euro 20 million on the previous year's balance sheet date. Inventories reported for the 2016 financial year were Euro 7 million lower than the previous year's figure, a development mainly due to a reduction in orders not yet billed to customers. Unlike in the previous year, this item was reported at Netrion GmbH rather than at MVV Energie AG in the 2016 financial year. By contrast, unfinished services rose on account of the construction of new wind turbines. The reduction in receivables and other assets by Euro 29 million was chiefly due to lower receivables due from associates. This factor was countered by higher interest receivables. Year-on-year, cash and cash equivalents rose by Euro 57 million, an increase due to the positive cash flow of Euro 115 million from operating activities. This was opposed by the negative cash flow from financing activities, which was due in particular to the dividend paid and to interest payments.

Equity grew to Euro 1,035 million, up Euro 16 million compared with the previous year. While provisions hardly changed compared with the previous year, liabilities fell by Euro 67 million to Euro 1,120 million. This reduction especially resulted from lower liabilities to banks and to associates. On the other hand, there was an increase in advance payments received for orders in particular. The equity ratio came to 45 % as of the balance sheet date (previous year: 43 %) and thus reflects the solid equity resources available at MVV Energie AG.

MVV Energie AG performs a financing function for the fully consolidated companies within the MVV Energie Group. In this capacity, it secures the operating liquidity of numerous companies and supplies these with the long-term capital necessary for investments in the form of shareholder loans. Among others, these companies include the major subsidiaries in the generation business field and the MVV Umwelt and MVV Enamic subgroups. An adequate volume of committed credit lines is available to secure liquidity.

Activity statements for 2016

With its 2016 activity statements, MVV Energie AG has met its reporting obligations pursuant to § 6b of the German Electricity and Gas Supply Act (German Energy Industry Act – EnWG). Consistent with § 6b of this act, in our internal financial reporting we maintain separate accounts for the activities of electricity and gas distribution, 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 activities. In the year under report the technical service department at MVV Energie AG was contributed to Netrion GmbH, a wholly-owned subsidiary of MVV Energie AG. This restructuring also involved transferring employees to Netrion GmbH. As a result of this measure, the disclosures in the annual financial statements as of 30 September 2016 are only comparable to a limited extent with the disclosures made in the previous year's financial statements.

Electricity distribution

The electricity distribution activity field reported sales of Euro 11.3 million in the year under report (previous year: Euro 27.2 million). Measured in terms of total electricity sector sales of Euro 1.5 billion (previous year: Euro 1.3 billion), sales in the electricity distribution activity field are of subordinate significance. Alongside income from the leasing of its electricity grids to Netrion GmbH, earnings in the electricity distribution activity field at MVV Energie AG also include income from concession duties. Netrion 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 Netrion GmbH through to 30 September 2016 was opposed by corresponding other operating expenses. Electricity distribution generated annual net income of Euro –1.3 million in the 2016 financial year (previous year: Euro 6.0 million).

Total assets in the electricity distribution activity field amounted to Euro 119 million at the balance sheet on 30 September 2016 (previous year: Euro 114 million). This corresponds to a 40 % share of total assets in the electricity sector at MVV Energie AG (previous year: 38 %). Property, plant and equipment relating to electricity distribution showed a slight reduction compared with the previous year's balance sheet date. At Euro 105 million (previous year: Euro 107 million), this item accounted for 88 % of total electricity distribution assets (previous year: 94 %). On the equity and liabilities side, electricity distribution liabilities rose from Euro 32 million to Euro 50 million.

Gas distribution

With sales of Euro 1.6 million (previous year: Euro 13.5 million), the gas distribution activity field is of subordinate significance when compared with total gas sector sales of Euro 204.9 million (previous year: Euro 236.6 million). By analogy with electricity distribution, alongside income from the leasing of its grids to Netrion GmbH earnings in the gas distribution activity field also include income from concession duties. Other operating income from charging on the concession duty to Netrion GmbH through to 30 September 2016 was countered by corresponding other operating expenses. In the year under report, the gas distribution activity field generated annual net income of Euro 11.1 million (previous year: Euro 6.8 million).

Total assets in the gas distribution activity field came to Euro 90 million at the balance sheet date on 30 September 2016 (previous year: Euro 89 million) and thus accounted for around 72 % of total assets in the gas sector at MVV Energie AG (previous year: 70 %). At Euro 82 million, property, plant and equipment in gas distribution was slightly lower than in the previous year and corresponded to a 91 % share of total assets in this activity field (previous year: 93 %). On the equity and liabilities side, gas distribution liabilities decreased from Euro 11 million to Euro 10 million.

Corporate Governance Declaration (§ 289a HGB)

Publicly listed companies are obliged under § 289a 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 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.

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We published the Corporate Governance Declaration together with the Declaration of Conformity on our website on 4 November 2016 as a component of the ▸ **Corporate Governance Report.**

Declaration pursuant to § 312 AktG

The Executive Board has compiled a report on relationships with its associates for the 2016 financial year ("dependent company report") pursuant to § 312 AktG. In this report it declares that: "MVV Energie AG received commensurate compensation for each of the transactions listed in its report on its 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."

Events After Balance Sheet Date

Other than the matter presented below, no events of material significance for the business performance of the MVV Energie Group occurred between the balance sheet date on 30 September 2016 and the preparation of the 2016 consolidated financial statements.

At its meeting on 11 November 2016, the Supervisory Board of Stadtwerke Kiel AG approved the construction of the ▸ **gas-fired CHP plant** in Kiel. Located at Kieler Förde, Küstenkraftwerk K.I.E.L. is due to be connected to the grid in two years' time. From autumn 2018 onwards, it will generate electricity and heating energy with 20 highly efficient gas engines. It will replace the coal-fired joint power plant (Gemeinschaftskraftwerk Kiel – GKK) in operation since 1970. The construction of the new gas-fired CHP plant involves a total investment volume of around Euro 290 million, making it the largest investment project ever at Stadtwerke Kiel.

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Corporate Governance

High-quality corporate governance involves managing and supervising companies in such a way that they act responsibly, focus on long-term value creation and are transparent. This forms the basis for sustainable business success. We also view good corporate governance as an indispensable factor in upholding the stable level of trust placed in us by our shareholders, customers, business partners, employees and the general public.

Pursuant to Point 3.10 of the German Corporate Governance Code, we published the joint ▸ **Corporate Governance Report of the Executive and Supervisory Boards** on the internet on 4 November 2016 and thus made it permanently available to the general public. This report was published in conjunction with the Corporate Governance Declaration pursuant to § 289a of the German Commercial Code (HGB). As well as the annual Declaration of Conformity, this also includes information about our corporate governance practices. In the Declaration of Conformity, the Executive and Supervisory Boards of MVV Energie AG confirm that the company complied with all of the recommendations made by the German Corporate Governance Code Government Commission in the latest version of the Code.

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Compensation Report

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Compensation system

The compensation system and the level of compensation paid to individual Executive Board members are determined and regularly reviewed by the Supervisory Board, with the relevant resolutions being prepared by the Personnel Committee. Executive Board compensation is structured in such a way as to provide an incentive for the sustainable long-term development in the company's value and its economic success. This compensation therefore comprises non-performance-related and performance-related components.

Should a member of the Executive Board terminate his or her activity prematurely, then a cap on compensation is contractually stipulated. Payments to retiring members of the Executive Board may not exceed the value of two annual compensation packages. Furthermore, compensation may not be granted for periods exceeding the remaining term of the employment contract. No transitional allowances are granted upon the premature termination or non-extension of the employment contract.

No further payments were either committed or made to Executive Board members by third parties.

Non-performance-related compensation

Non-performance-related components comprise fixed compensation, fringe benefits and pension commitments.

The fixed compensation for Executive Board members is paid in twelve monthly instalments. Furthermore, Executive Board members received fringe benefits that they tax individually in accordance with applicable requirements. These mainly comprise 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. The accounts are credited with annual pension contributions and bear annual interest. Furthermore, the commitment also includes benefits to cover any permanent inability to work and provision for surviving dependants.

Performance-related compensation

The one-year variable compensation paid to Executive Board members comprises two components. On the one hand, it consists of the annual bonus based on the adjusted EBIT generated by the MVV Energie Group in the past financial year. On the other hand, it includes a sustainability bonus with a long-term focus. This latter bonus is based on the average ROCE (Return on Capital Employed) before IAS 39 items of the MVV Energie Group for the past financial year and the two preceding financial years and thus reflects the increase in the company's return. Both components include suitable minimum thresholds and caps.

In the 2016 financial year, the sustainability bonus accounted for the overwhelming share of variable compensation when compared with the annual bonus. No multiyear variable compensation, such as stock option programmes, is in place.

Total compensation of Executive Board

The Executive Board of MVV Energie AG received total compensation of Euro 3,495 thousand in the year under report (previous year: Euro 2,446 thousand). This total includes the settlement payments made upon the departure of Mr. Bekker from the Executive Board as of 30 September 2016.

The following tables show the benefits granted and actual incomes paid in the year under report in accordance with the recommendations and suggestions made by the German Corporate Governance Code and 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.

Benefits granted and incomes paid

	Dr. Georg Müller CEO				Udo Bekker Personnel Director (until 30 September 2016)			
Euro 000s	**FY 2016**	Min FY 2016	Max FY 2016	FY 2015	**FY 2016[5]**	Min FY 2016	Max FY 2016	FY 2015
Fixed compensation[1]	482	482	482	482	313	313	313	313
Fringe benefits[2]	29	29	29	33	30	30	30	27
Other compensation[3]	17	17	17	17	9	9	9	9
Total	**528**	**528**	**528**	**532**	**352**	**352**	**352**	**349**
Variable compensation	388	0	964	283	259	0	626	189
Total pay	**916**	**528**	**1,492**	**815**	**611**	**352**	**978**	**538**
Pension expenses[4]	227	227	227	228	138	138	138	129
Total compensation	**1,143**	**755**	**1,719**	**1,043**	**749**	**490**	**1,116**	**667**

	Ralf Klöpfer Sales Director				Dr. Hansjörg Roll Technology Director			
Euro 000s	**FY 2016**	Min FY 2016	Max FY 2016	FY 2015	**FY 2016**	Min FY 2016	Max FY 2016	FY 2015[6]
Fixed compensation[1]	288	288	288	288	288	288	288	216
Fringe benefits[2]	70	70	70	69	57	57	57	40
Other activities[3]	10	10	10	9	12	12	12	8
Total	**368**	**368**	**368**	**366**	**357**	**357**	**357**	**264**
Variable compensation	259	0	576	189	259	0	576	142
Total pay	**627**	**368**	**944**	**555**	**616**	**357**	**933**	**406**
Pension expenses[4]	141	141	141	134	200	200	200	144
Total compensation	**768**	**509**	**1,085**	**689**	**816**	**557**	**1,133**	**550**

1 Annual fixed compensation including CEO allowance of Euro 194 thousand for Dr. Georg Müller
2 Contributions to voluntary pension insurance, health insurance, nursing care insurance, voluntary contributions to employers' mutual insurance association, non-cash benefits/benefits in kind
3 Compensation for board activities at subsidiaries and shareholdings (entitlement in financial year)
4 Service cost from commitments of pensions and other benefits pursuant to IAS 19
5 Provisions of Euro 928 thousand recognised for settlement and pension expenses upon the termination of Executive Board activity as of 30 September 2016.
6 Since 1 January 2015

Pension obligations

	Development in virtual pension accounts			Pension provision	Allocation to pension provision	
Euro 000s	**Balance at 1 Oct 2015**	**Pension contribution**	**Balance at 30 Sep 2016[1]**	**Balance at 30 Sep 2016[2]**	**Service cost**	**Interest expenses**
Dr. Georg Müller	1,810	153	2,048	3,808	227	66
Udo Bekker (until 30 September 2016)	320	115	448	954	138	12
Ralf Klöpfer	230	115	354	717	141	10
Dr. Hansjörg Roll	98	131	233	435	200	3
Total	**2,458**	**514**	**3,083**	**5,914**	**706**	**91**

1 Including interest
2 Equivalent to present value of vested claims

Former members of the Executive Board received benefits of Euro 475 thousand in the year under report. Provisions totalling Euro 18,666 thousand have been stated for pension obligations towards former members of the Executive Board. A total of Euro 385 thousand was allocated to this item in the year under report.

Compensation of related parties

Pursuant to IAS 24, related parties also include management staff performing key functions. Alongside the Executive Board members, this group of persons at the MVV Energie AG Group also includes the active heads of division and authorised company representatives of MVV Energie AG. This group of persons receives its compensation exclusively from MVV Energie AG. The corresponding compensation amounted to Euro 2,993 thousand in the year under report, with Euro 2,860 thousand of this total involving payments with current maturities.

Unless they are insured via municipal supplementary pension companies (ZVK), management staff performing key functions receive a defined contribution company pension of up to 8.6 % of their fixed compensation. They can determine which biometric risks they would like to cover. The expenses incurred for this amounted to Euro 133 thousand in the 2016 financial year.

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Compensation of Supervisory Board members

Total compensation of the ▸ **Supervisory Board** amounted to Euro 438 thousand in the year under report. Our Supervisory Board members therefore receive compensation that is commensurate to their responsibilities and to the scope of their duties.

Each Supervisory Board member received annual compensation of Euro 10 thousand in the 2016 financial year, with the Chairman receiving twice and his deputy one and a half times this figure. Prorated compensation was paid to members joining or leaving the Supervisory Board during the financial year. Furthermore, the Chairman of the Audit Committee received annual compensation of Euro 5 thousand and other members of this committee were each paid Euro 2.5 thousand. For each meeting of the full Supervisory Board or committee meeting attended, each Supervisory Board member received Euro 1 thousand. The Supervisory Board Chairman and Audit Committee Chairmen were each paid twice this amount for each meeting of the Supervisory Board and Audit Committee respectively. The compensation for the employee representatives in the Supervisory Board (excluding Supervisory Board compensation) amounted to Euro 1,070 thousand in the year under report.

Supervisory Board compensation FY 2016

Euro	Supervisory Board compensation	Meeting allowances
Dr. Peter Kurz, Chairman	20,000	20,000
Johannes Böttcher	10,000	7,000
Timo Carstensen	10,000	6,000
Peter Dinges	17,500	16,000
Ralf Eisenhauer	10,000	11,000
Peter Erni	12,500	13,000
Detlef Falk	12,500	12,000
Reinhold Götz	4,278	3,000
Barbara Hoffmann	5,750	3,000
Prof. Dr. Egon Jüttner	4,278	4,000
Prof. Dr. Heidrun Kämper	5,750	3,000
Heike Kamradt	10,000	9,000
Brigitte Kemmer	5,750	3,000
Daniela Kirchner	4,278	4,000
Dr. Antje Mohr	10,000	7,000
Dr. Lorenz Näger	12,500	10,000
Wolfgang Raufelder	4,278	5,000
Bernhard Schumacher	5,750	3,000
Christian Specht	10,000	7,000
Dr. Dieter Steinkamp	10,000	6,000
Carsten Südmersen	12,500	16,000
Katja Udluft	10,000	7,000
Prof. Heinz-Werner Ufer	15,000	20,000
Jürgen Wiesner	10,000	10,000
Total	**232,612**	**205,000**

Takeover-Related Disclosures

The combined management report includes takeover-related disclosures pursuant to § 289 (4) and § 315 (4) HGB. The Executive Board has examined these disclosures and offers the following explanatory comments:

Composition of share capital

The company's share capital amounted to Euro 168,721,397.76 in total at the balance sheet date on 30 September 2016 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 in the Articles of Incorporation.

Restrictions on voting rights and transferability; shares with special rights

There are no restrictions on voting rights or on transferability. No corresponding agreements between shareholders are known to the Executive Board. 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 22.5 % and RheinEnergie AG, Cologne, directly held 16.3 % of the shares.

Control of voting rights

There is no control of voting rights as defined in § 289 (4) No. 5 and § 315 (4) No. 5 HGB.

Regulations for appointment and dismissal of Executive Board members and to amend Articles of Incorporation

The appointment and dismissal of Executive Board members is based on § 76 et seq. AktG, and especially on § 84 et seq. AktG and § 30 et seq. of the German Codetermination Act (MitbestG). In line with the company's Articles of Incorporation, the Executive Board of the company consists of at least two members. The Supervisory Board is responsible for determining the number of members, as well as for their appointment and dismissal. Members are appointed for a maximum period of five years, 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, corresponding to around Euro 16.9 million.

By resolution on 14 March 2014, the Annual General Meeting authorised the Executive Board until 13 March 2019, subject to approval by the Supervisory Board, to increase the share capital by a total of up to Euro 51.2 million by issuing up to 20 million 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 provisions in material agreements at MVV Energie AG governing any change of control due to a takeover bid (change of control clauses). The company has also not concluded any compensation agreements with members of the Executive Board or employees for the event of a takeover bid.

Outlook, Opportunity and Risk Report

- Further changes in energy industry framework
- Slight sales and earnings growth expected
- High level of investments
- Well-balanced opportunity/risk profile

OUTLOOK

Macroeconomic framework

In their autumn survey published in October 2016, Germany's leading economic research institutes predicted that the German economy will grow by 1.9 % in 2016 and by 1.4 % in 2017. The weaker development forecast for 2017 is due to calendar-related factors, with an above-average number of bank holidays scheduled during the working week in 2017.

Business Framework
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Energy policy framework

Forthcoming ▸ **energy policy decisions** – and above all the detailed regulations still to be determined for the electricity market legislation – are a factor of great relevance for the business performance of the MVV Energie Group.

Energy sector developments

Due to the decline in prices on wholesale electricity markets, conventional electricity generation has become significantly less viable in economic terms in recent years. We currently see no indications that electricity prices and especially the margin achieved from generating electricity from hard coal – the clean dark spread – will show any significant change.

Experts at VDMA Power Systems expect net wind power capacity of 4,000 MW to 4,400 MW to be newly added in the 2016 calendar year. For 2017, they expect net capacity of 4,000 MW to 4,600 MW to be added.

Various studies back up the positive market expectations we have for our growth business fields. The findings of the "Decentralised energy industry: opportunity or threat to energy companies?" study performed by KPMG confirm the significant role set to be played in future by a decentralised energy supply as a result of political and economic decisions. KPMG expects the share of gross electricity generation attributable to the decentralised energy industry to rise from around 15 % in 2010 to around 26 % to 35 % by 2030.

Executive Board summary of expected business performance

The energy policy and energy industry framework will remain challenging once again in 2017. On the one hand, the conversion in the German energy system may continue to adversely affect the MVV Energie Group's earnings. On the other hand, we are countering this factor by making targeted investments in growth and with a range of measures to enhance efficiency and cut costs.

Due to the launch of operations at our new UK generation plants and our new biomethane plants and wind turbines over the past two years, and above all to the first-time full consolidation of the Juwi subgroup, we were able to report substantial year-on-year sales and earnings growth in the 2016 financial year. Based on our strategic alignment, which we are consistently developing further, we expect our group of companies to generate profitable growth in the 2017 financial year as well – even if not with the same dynamic momentum seen in the year under report.

Expected sales performance

We expect sales in the **Generation and Infrastructure reporting segment** to show moderate growth compared with the previous year. On the one hand, the full consolidation of the Juwi subgroup will have its first full-year impact. On the other hand, we will benefit from sales at our new wind turbines at which operations were launched during or only at the end of the 2016 financial year.

Sales in the **Trading and Portfolio Management** and **Sales and Services reporting segments** are expected to match the previous year's figures.

From a current perspective and assuming normal weather conditions, we expect the sales (excluding energy taxes) of the **MVV Energie Group** in the 2017 financial year to show slight growth compared with the previous year (Euro 4.1 billion).

Expected earnings performance

The expected earnings performance in the **Generation and Infrastructure reporting segment** in the 2017 financial year will benefit from the positive development in waste and biomass prices. Earnings will also be boosted by contributions resulting from the expansion in our renewable energies generation capacities. Overall, we expect to see a slight increase in adjusted EBIT in this segment. Due to the full consolidation of the Juwi subgroup in the previous year, the overall earnings performance of this segment has in general become more volatile. This is because the renewable energies project development business may witness delays in project implementation or earnings realisation.

Earnings in the **Trading and Portfolio Management reporting segment** are influenced above all by the development in wholesale electricity prices and the clean dark spread (CDS). Although there are currently no indications that the CDS is set to recover from its low level, we expect to generate substantial earnings growth in the 2017 financial year. In the previous year, segment earnings were adversely affected by low water levels on the Rhine, a factor which increased the cost of coal transport.

Due to the ongoing high intensity of competition and the non-recurrence of positive one-off factors in the previous year, we expect the **Sales and Services reporting segment** to post a significant reduction in adjusted EBIT.

Overall, from an operating perspective we expect the adjusted EBIT of the **MVV Energie Group** in the 2017 financial year to slightly exceed the previous year's figure (Euro 213 million). The earnings performance is chiefly dependent on weather conditions, electricity and waste prices and the CDS. Moreover, our adjusted EBIT is also subject to increased volatility due to the expansion in our activities in the renewable energies project development business.

Expected performance of MVV Energie AG in separate financial statements (HGB)

In the separate financial statements of MVV Energie AG prepared in accordance with the German Commercial Code (HGB), we expect sales excluding energy taxes in the 2017 financial year to more or less match the previous year's figure (Euro 1.9 billion). Sales and sales volumes in the district heating and gas businesses will be significantly influenced by weather conditions, especially during the heating period. Operating earnings at MVV Energie AG are mainly determined by the grid business, sales activities and income from the interests held in group shareholdings. Overall, we expect annual net income after taxes for the 2017 financial year to be at the same level as in the previous year (Euro 75 million).

Stable dividend

With our continuity-based dividend policy, we aim to offer a solid return for our shareholders. In view of this, the Executive Board has planned a dividend of Euro 0.90 per share for the 2016 financial year, and thus unchanged on the previous year. The Executive and Supervisory Boards will decide in December 2016 on the dividend to be proposed to the 2017 Annual General Meeting.

Planned investments

Based on the information currently available, we will be investing around Euro 300 million in growth and in modernising and maintaining our plants and grids in the 2017 financial year.

Corporate Strategy
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In this, we will be structuring our key investment focuses in line with our ▸ **strategic alignment**. One major investment involves the construction of a gas-fired CHP plant in Kiel.

Capital resources and financing structure

Given its good access to the financial market, the MVV Energie Group has no difficulty in covering its liquidity needs. Our adjusted equity ratio of 33 % will enable us to maintain a high ongoing pace of investment. We finance investments in our existing business primarily from depreciation. For our growth projects, we draw on the operating cash flow and on optimised project-specific financing facilities. We pool structurally similar projects with comparable terms and take up the necessary funds on the capital markets or use our liquidity resources. We are monitoring other sources of financing, including the promissory note loan market, as alternatives to the bank market. We have defined key figures as guidelines for debt-financed growth and adhere to these. This way, we ensure an implicit rating on investment grade level for MVV Energie.

Forward-looking statements and forecasts

Our combined management report for the MVV Energie Group (IFRS) and MVV Energie AG (HGB) includes forward-looking statements based on current assumptions and estimates. Although the Executive Board is convinced that these assumptions and budgets are accurate, actual future developments and earnings may deviate from these forecasts due to the great uncertainty currently surrounding energy policy and numerous internal and other external factors.

OPPORTUNITY AND RISK REPORT

The energy industry has witnessed fundamental change for years now. The industry and MVV Energie remain exposed to numerous uncertainties that are inextricably linked to our business activities. Effectively countering these uncertainties represents one of the core tasks of our company management. With our internal control system (IKS) in respect of the financial reporting process, we ensure that our financial reporting is correct, reliable and uniform throughout the company. Our risk management system serves to detect future political and technological developments at the earliest possible stage and to identify and actively manage the resultant risks and opportunities. On this basis, we are able to safeguard and extend the MVV Energie Group's competitiveness.

Explanation of the internal control system (IKS)

Our internal control system (IKS) in respect of the financial reporting process is an integral component of our accounting and financial reporting process at all locations. It serves to monitor whether legal requirements and internal guidelines are complied with at the company. With our IKS, we also pursue the objective of avoiding any material misstatements that could arise in our financial reporting as a result of errors or fraud. We have identified those risks which could counter the objective of publishing the consolidated financial statements in line with the respective norms by analysing all necessary processes and interfaces. To minimise these risks we have trained the employees involved and laid down a detailed schedule for the preparation of the financial reports.

Our system covers the financial reporting for the entire MVV Energie Group and transparently presents all steps in the commercial processes that are important for the consolidated financial statements and the combined management report of the MVV Energie Group. In the system, we have laid down all those principles, procedures, regulations and measures with which we ensure that business transactions are completely, accurately and promptly recorded in accordance with legal requirements. These include the principles of proper accounting, the requirements of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG), as well as the supplementary requirements of the Articles of Incorporation.

Members of the Executive Board, managing directors of our subsidiaries and select division and group division heads at the MVV Energie Group are required to submit an internal balance sheet oath on a quarterly basis.

Basic principles and organisation of the IKS system

The consolidated financial statements of the MVV Energie Group are centrally compiled by the Group's commercial division in accordance with International Financial Reporting Standards (IFRS) as adopted by the EU and the supplementary requirements of commercial law set out in § 315a (1) HGB. Key accounting matters are dealt with by the accounting and tax department at the Group. The employees at this department are also available as contact partners to the subsidiaries. The consolidated financial statements are reviewed by the Audit Committee and Supervisory Board prior to adoption and publication.

The consolidated financial statements are prepared in a multistage process. Once the individual subsidiaries have prepared their financial statements, these are audited by the respective auditor. We subsequently combine the financial statements in the consolidated financial statements at MVV Energie AG using SAP consolidation software. Our company's general consolidation processes are laid down in writing and we monitor them when preparing the financial statements. All companies included in our consolidated financial statements are subject to uniform accounting and reporting guidelines applicable to annual and interim financial statements. In these guidelines, we have on the one hand laid down which accounting policies are applicable in accordance with IFRS and on the other hand presented accounting requirements typical for our company. The guidelines stipulate, for example, how our regulatory obligations have to be treated. Furthermore, within our financial statement preparation process we also collect further qualitative and quantitative information relevant to our accounting and the preparation of our financial statements. We regularly discuss this information with representatives of the various specialist departments in predetermined processes. We record this information within the framework of our quality assurance processes and thus ensure that all relevant data has been fully accounted for. We have subdivided our day-to-day accounting and the preparation of the annual financial statements into functional process steps and established automatic or manual checks for the various stages. Our IKS system is governed by the following principles in terms of both its structures and its processes: the dual control principle, the consistent implementation of the separation of functions, and the supporting of guidelines, process instructions and approval processes with an internal information and communications system. Checks are performed across all hierarchical levels.

Uniform standards across all locations

Within MVV Energie AG, the commercial division is responsible for the internal control system (IKS) in respect of the financial reporting process and for preparing the separate financial statements of MVV Energie AG and the consolidated financial statements. We deploy equivalent internal control systems with uniform standards across the entire MVV Energie Group and ensure that our IKS system is precisely documented and comprehensible in all of its stages. At the most important companies within the Group there are IKS managers who monitor on company level whether the IKS system is documented in line with a standardised process. These managers regularly report to IKS managers at MVV Energie AG, who prepare the internal audit reports and proprietary information in aggregated IKS reporting. The results serve as the basis for our IKS reporting.

We use special software to present all of the process structures in the departments involved in preparing the financial statements of MVV Energie AG and publish this information on the intranet. Within the process description, we have deposited additional information to provide more detailed descriptions of the relevant processes for individual cases. The financial statements are governed by a strict schedule which we consistently adhere to. We check whether information is received in good time and document the data. This standardised process is comprehensible in all of its stages.

Our accounting department works with an integrated Enterprise Resource Planning (ERP) system. To avoid system-based errors from the outset, we check the validity of the data with the assistance of the validations set up in the ERP system. Furthermore, the user authorisation concept in the ERP system serves to exclude any unauthorised access to data and systems, or to system settings, entry and reporting functions.

Regular reporting

Our group controlling department continuously monitors whether the targets set out in the business plan and approved by the Supervisory Board are actually met. Variances to the budget and the previous year's performance are documented. This information is included in the report provided to the Executive Board every quarter. This presents the business performance in detail, with comments on all business fields and subgroups. Based on the insights thereby gained, measures are proposed within the reporting framework. On the basis of this information, the Executive Board manages the MVV Energie Group's business.

Explanation of the risk management system (RMS)

By deliberately and systematically managing opportunities and risks, we help to protect the companies within our Group against any potential risks to their continued existence. We define a risk as involving a significant potential negative budget variance in company earnings. Significant potential positive budget variances are referred to as opportunities. One focus of our risk management activities involves reducing risks or passing them on to third parties. To this end, we develop suitable measures and monitor their implementation. A successful risk strategy may also involve deliberately assuming risks. To pursue this kind of strategy, two conditions have to be met: The risks have to be manageable and have to be offset by corresponding opportunities or other possibilities of compensation, for example by way of risk diversification.

RISK MANAGEMENT SYSTEM

We monitor and manage developments with our RMS. This involves identifying all opportunities and risks basically relevant to our business, evaluating them and aggregating them into an opportunity/risk profile. This profile accounts for countermeasures already taken (net analysis). Within our short and medium-term planning, we carefully assess opportunities and risks and account for these in our earnings forecast. Unexpected developments and events may nevertheless result in the actual adjusted EBIT exceeding or falling short of the value budgeted.

The Executive Board is responsible for laying down the company's risk policy. It determines all processes and responsibilities as well as the limits from which risk management applies. Our central risk controlling function monitors the group risk position and continually monitors risks and opportunities across the group. By contrast, operative risk management is located within the legal business units and business fields. Responsibility for operative risk management lies with the employees also responsible for operating earnings at the respective business units.

As managers liable for risks, they regularly review the current business situation, identify material opportunities and risks and assess their potential financial implications for budgeted adjusted EBIT. They regularly report their assessments in standardised form to the central risk controlling function. The managers liable for risks are also responsible for implementing measures enabling risks to be managed or reduced and opportunities to be exploited.

Our central risk controlling function aggregates the opportunities and risks thereby identified with probability calculation methods and separately lists the largest single risks. We combine the financial implications of the risks actually materialising with their probability of occurrence, evaluate the risk situation and allocate risks to one of our total of six risk categories. In the next step, we quantify the risk situation in the various risk categories by determining the potential impact on earnings of each risk category as a proportion of the Group's EBIT. In this, we distinguish between "low", "medium" and "high" risk classes.

The Executive and Supervisory Boards receive a quarterly risk report presenting the Group's opportunity/risk profile. In urgent cases, reports are submitted immediately to the Executive Board, which then in turn informs the Supervisory Board.

Supervision of IKS and RMS systems

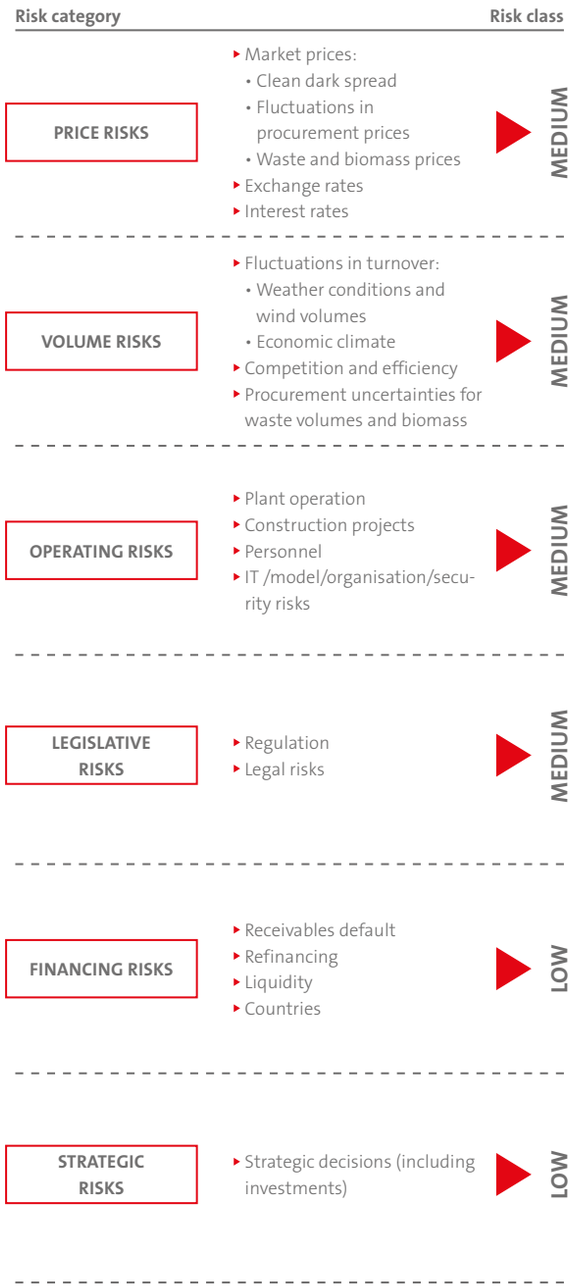
The Executive Board members and managing directors of consolidated subsidiaries are responsible for implementing, maintaining and supervising both the IKS and the RMS systems. Both systems are regularly audited by our group internal audit department within a risk-based audit planning framework. This also involves detecting any weaknesses and monitoring any improvements introduced.

The Supervisory Board and/or the Audit Committee of MVV Energie AG check each year whether the structure and functionality of the two systems is appropriate, as do the supervisory boards of consolidated shareholdings.

Presentation of expected risk situation

In the following section, we present those risks that are material for the MVV Energie Group in aggregate form broken down by risk category. The risk classes for the respective risk categories, namely "low", "medium" and "high", refer to the level of expected impact on the Group's EBIT expressed as a percentage. We classify the risk situation in the price risk, volume risk, operating risk and legislative risk categories as "medium". We assess the risk situation in the other risk categories as "low". Compared with the previous year, legislative risks have changed from "low" to "medium". The classifications of the other risk categories have remained unchanged on the previous year.

EXPECTED RISK SITUATION IN FY 2017



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 risks and opportunities

In the price risks and opportunities category we aggregate 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 chiefly deploy ▸ **financial instruments.**

Notes to Balance Sheet Page 161

Fluctuations in the clean dark spread (CDS)

The clean dark spread (CDS) refers to the difference between electricity revenues on wholesale markets and the costs incurred to generate the electricity. Electricity generation costs mainly comprise coal costs (including transport costs and currency translation differences) and CO_2 emission rights. We monitor and record price fluctuations with a uniform systematic approach across the Group and manage the potential implications for our generation portfolio management with suitable measures.

The CDS remained persistently low in the 2016 financial year. This impacted negatively on adjusted EBIT in particular in Trading and Portfolio, the reporting segment to which the marketing of our power plant capacities is allocated.

Opportunities arise when market prices develop positively.

Fluctuations in market procurement prices

We procure most of the energy volumes required by our sales departments for customer supplies at the various locations on the energy trading market and cover our needs for up to three calendar years in advance. Our energy trading subsidiary MVV Trading GmbH concludes the corresponding futures transactions in line with our applicable hedging regulations. This way, we enhance our earnings consistency in the Trading and Portfolio Management and Sales and Services reporting segments and act early to reduce uncertainties for subsequent financial years. Our energy trading activities thus enable us to actively limit the volume of our risk position.

Fluctuations in waste and biomass prices

We monitor and evaluate the risk of fluctuating waste prices on the German and British markets and observe the development in biomass prices across Europe. This enables us to identify any risks in our Generation and Infrastructure reporting segment at an early stage and to introduce measures to mitigate these.

Changes in exchange rates

Exchange rate movements harbour opportunities and risks for us in connection with fuel procurement, our involvement in the Czech Republic, our generation plants in the UK and our international renewable energies project development business. We limit risks resulting from changes in exchange rates with natural hedges and futures transactions.

Changes in interest rates

Our finance department continually monitors interest rate risks. Where possible, investment projects are financed with fixed interest rates for congruent terms. When refinancing long-term projects, we are nevertheless exposed to risks in connection with a potential increase in interest rates, such as higher interest expenses. Not only that, demand for renewable energies projects may fall given that other forms of investment may become more attractive for investors if interest rates rise.

Volume risks and opportunities

Our operating earnings may be positively or negatively influenced by volume fluctuations on the generation, procurement and sales fronts.

Volume fluctuations due to weather conditions and wind volumes

Weather conditions are a key factor determining our business performance. On the one hand, they significantly influence our turnover with district heating and gas during the heating period (October to April). On the other hand, electricity generation volumes at our wind turbines are dependent on wind volumes. The opportunities for our business performance arise when the heating period is cooler than planned and/or when wind volumes exceed our expectations.

Volumes fluctuations due to changes in economic conditions

As a general rule, our Group 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. Conversely, there are also opportunities for higher sales volumes should our customers step up their production due to economic developments.

Volume fluctuations due to competition or efficiency measures

Competitive pressure remains high in the liberalised energy market. When customers decide to switch provider, this reduces our sales volumes. Efficiency measures at our customers, such as heat insulation, may also result in volume losses. We are making our customers the focus of our activities and are developing new, innovative and competitive products with substantial customer benefits. This way, we are seizing the opportunities arising in the liberalised market.

We traditionally maintain strong, partnership-driven relationships with municipal owners and thus create a basis for extending existing concessions and acquiring new concessions. Where expiring concession agreements are not extended, we make efforts to ensure that the grids are handed over on a mutually satisfactory basis.

Procurement of waste volumes and biomass

Earnings may be negatively or positively influenced by both the quantity and the quality of commercial waste/available biomass and in the medium term above all by macroeconomic factors and legal requirements. We minimise volume risks for our plants with our professional materials flow management, our substrate and substitute procurement strategy and a prorated share of long-term contracts. Having said this, even when capacity utilisation rates at our energy from waste plants are high earnings may fall short of our expectations, for example when poor fuel quality impacts negatively on earnings. Lower waste calorific values do not automatically lead to lower earnings, however, as it may be possible to incinerate higher volumes. As waste prices are based on weight, this would lead to rising waste revenues.

With regard to the UK's decision to leave the European Union ("Brexit"), we currently do not expect this to have any significant impact on the development in volumes, and thus in prices, for waste and waste timber in the UK market.

Operating risks and opportunities

For MVV Energie, operating risks and opportunities chiefly arise in connection with the construction and operation of energy generation plants. The further development in our business model – particularly with regard to the expansion in the renewable energies project development business – has also changed the risk and opportunity structure at the MVV Energie Group. Due to the additional risks and opportunities involved, the parameters within which we expect the MVV Energie Group's adjusted EBIT to range have also broadened.

Uncertainties resulting from plant operations

The operation of energy generation plants in the Generation and Infrastructure reporting segment involves substantial operating uncertainties for our Group. Any unscheduled downtime at plants might lead to a loss of production volumes or additional financial expenses. Further consequences may include repair expenses for the plant, substitute supplies to our customers and contractual penalties.

By performing regular maintenance and monitoring measures, we reduce the resultant risks of potential downtime at our plants. The possibility of downtime can nevertheless not be excluded. Within our maintenance strategy, we nevertheless attempt to optimise scheduled inspection periods, to use capacity at our plants over and above the planned hours of use and to increase efficiency rates. This way, we may be able to realize opportunities by achieving higher generation volumes.

We have also concluded insurance policies to limit the financial implications of any potential damages. Furthermore, we monitor potential clean-up projects on derelict land formerly occupied by plants from a risk and environmental protection perspective.

Risks resulting from progress with construction projects

One characteristic feature of energy-generating companies is the need to make high volumes of long-term investment. The planning and construction periods for large-scale generation plants are long. One current example is the construction of a new gas-fired CHP plant in Kiel. Our expected adjusted EBIT may be negatively affected should any delay arise in the completion of or launch of operations at our major projects, should expenses be incurred for substitute electricity and heating energy procurement or should the project expenses turn out higher than expected due to new developments. We therefore attach great importance to ensuring that projects are robustly designed and budgeted in the planning stage and evaluate material opportunities and risks at an early stage of developments. We also involve the relevant specialist departments in our reviews. We limit potential delays during the construction stage or potential supplementary claims by working with suitable project management methods.

Combining Family and Work Commitments
Pages 41-42

Uncertainties in the renewable energies project development business

By their very nature, projects in our renewable energies project development business involve shorter planning and construction stages than large-scale energy generation plants. These projects nevertheless involve uncertainties for earnings in our Generation and Infrastructure reporting segment. Building and operating permits may not be granted, or only after a delay, and this may give rise to range of associated issues. The domestic business is exposed to additional earnings uncertainties resulting from contracting market volumes in connection with the Amendment to the German Renewable Energies Act (EEG) in 2016. From 2017 onwards, the addition of new onshore wind turbines will be determined by new market mechanisms involving public tenders. Furthermore, the market volume will be limited by capacity caps and the number and structure of competitors is expected to change. The international business is mainly affected by dependency on local subsidy regimes, the intensity of competition especially in rapidly growing Asian markets, dependency on clients on location and uncertainties resulting from exchange rate movements. These risks are countered by the opportunities harboured by high-growth international markets.

Notes to Balance Sheet (Note 30)
Pages 148-150

Personnel developments

Our well-qualified and committed employees form the basis for our company's success. To attract the right employees and retain them in the long term we are implementing numerous measures. We are optimising our personnel development activities, for example, and offer employees various options to help them in better ▸ **combining family and work commitments**. Risks may nevertheless also arise with regard to our personnel. One cause of such risks is demographic change, which could lead to capacity risks and risks resulting from an ageing workforce at companies in the MVV Energie Group, with varying implications from location to location. We nevertheless expect our measures to be successful and to further improve our chances of attracting especially desirable specialists to our company. Furthermore, we are boosting our potential to fill key positions with internal candidates by offering our employees targeted further training.

In our pension surveys, we have accounted for those factors which could give rise to risks relating to ▸ **pension obligations** and have included these in our budgets.

IT risks

Secure data storage and information technology that functions without interruption are necessary for virtually all of our business processes. We reduce our IT risks by means of extensive technical and organisational measures. We have redundant copies of all key hardware components, permanently reflect data between production computers and geographically separate backup computers. We also have a backup computer centre. To detect and ward off any potential third-party attacks at an early stage, we accord high priority to ensuring the security of our IT infrastructure and IT systems.

Legislative risks

In this risk category we pool those uncertainties arising in connection with regulation and other legal topics.

Regulatory risks

Companies operating in the energy industry are basically exposed to the risk of interventions in price structures by the authorities, such as the Federal Network Agency (BNetzA) or cartel offices. In the past, that related for example to the grid fees determined by the BNetzA. New legislation and ordinances were adopted in the year under report. Some of the developments that will result from the ▸ **energy policy decisions** and that are of material relevance for MVV Energie are nevertheless still not foreseeable. Two examples here are the future level of financial subsidies for electricity generated from renewable energies, which will be determined by public tenders, or the structure of subsidies provided for CHP plants of between 1 MW and 50 MW. Here, the specific design of the public tenders to be newly introduced for CHP plants has still not been determined. These developments could influence our adjusted EBIT. We are countering these risks by actively participating in the political opinion-forming process and enriching the public discussion process, for example by contributing studies.

Legal risks

MVV Energie may be affected by legal risks in connection with court cases, product liability or onerous or unenforceable contracts. We limit such risks by means of our group legal department, which suitably drafts, negotiates and checks contracts. Moreover, the group-wide ▸ **compliance management system** also serves to avoid infringements of the law.

The business performance of MVV Energie is also exposed to risks resulting from legal pronouncements in respect of price adjustment clauses. For our company, this factor may result in uncertainties when it comes to structuring future contracts.

Financing risks and opportunities

The financing risks at the MVV Energie Group chiefly relate to receivables default and refinancing and liquidity risks.

Receivables default risks

There is the risk that customers or business partners will not settle our invoices, or only in part. This risk applies for example to our OTC trading activities or to our long-term supply relationships, such as contracting agreements. To limit these receivable default risks in all reporting segments, we select our business partners with due commercial prudence, check their creditworthiness at an early stage and additionally agree deposits of securities and guarantees. Furthermore, we are diversifying our portfolio and thus avoiding clusters of default risks.

Business Framework
Pages 67-70

Refinancing and liquidity risks

The possibility of necessary liquid funds being unavailable, or only available at increased cost, is referred to as a refinancing and liquidity risk. With our group-internal cash pooling we are able to reduce this risk and also positively influence our interest result. We cover our long-term capital requirements with instruments including promissory note bonds. MVV Energie's financing risks have risen compared with the previous year. This is due on the one hand to our increased activities in the renewable energies project development business field and on the other to the construction of the gas-fired CHP plant in Kiel. The UK's exit from the EU could also alter liquidity and refinancing terms.

In our ▸ **refinancing**, we also face opportunities due to the low level of interest rates.

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Notes to Balance Sheet
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Country risks

Country risks apply due to the potential inability or unwillingness of a state to meet its payments obligations and due to transfer risks. Given the international activities in our renewable energies project development business field, the implications of country risks are gaining in significance. We continually monitor the development in potential country risks in those countries where we have existing activities. However, we currently do not expect this factor to have any notable impact on earnings. We closely review any intended entry into new international markets in advance.

Strategic risks and opportunities

Long-term business success is based on the right strategic decisions. The dynamic process of transformation in which the energy industry currently finds itself harbours strategic risks, but also gives rise to opportunities. We therefore closely review which markets, technologies, companies and projects we invest in, as well as the timing and scope of such investments. In the energy industry, large volumes of capital are channelled into long-term energy generation and distribution assets. It is therefore all the more important to take decisions on a reliable basis of information.

With our strategic planning process we identify potential new markets and technologies. We take decisions on the basis of in-depth market and competitive analyses underpinned by thorough viability calculations and taking account of potential opportunities and risks. In close liaison with the Executive Board, our group strategy department continually monitors the Group's strategic alignment and adjusts this in line with any new circumstances.

One important component of our corporate strategy is our intention to channel Euro 3 billion into investments in the years ahead. We review our investment decisions in line with our internal guidelines and involve our specialist departments in this assessment. To achieve our budgeted level of adjusted EBIT, strategically important investments actually have to generate the expected earnings contributions. Despite the careful reviews we perform, any erroneous assessments in terms of planning processes, assumed future profitability, the necessary scope of financing and potential risks could result in downturns in our planned adjusted EBIT in future financial years.

Due to the ongoing transformation in the German energy system, the level of planning uncertainty facing our company remains high.

We are monitoring very closely to ascertain whether and how the decision taken by the UK to leave the European Union ("Brexit") will influence our UK business. A weaker British pound, for example, would reduce the MVV Energie Group's earnings denominated in euros. Implications for interest rates, commodities, demand levels and the regulatory framework are also possible, and precise developments will depend on the structure of the exit agreement reached with the EU.

Seizing opportunities

The fundamental transformation in the German energy supply system offers opportunities to generate profitable growth. We are optimally positioned to seize these opportunities – the companies within our Group have firm municipal and regional roots. Our broad-based business portfolio is aligned to the energy industry value chain and we are consistently implementing our ▸ **strategy**.

We see especially marked growth potential in the field of renewable energies, and in the project development business for onshore wind turbines in Germany and photovoltaics systems abroad in particular. In our renewable energies project development business field we have extensive project development expertise and great competence in terms of operations management. In the waste and biomass market, we expect to see further opportunities for our group of companies in the UK and France.

We are expanding our range of innovative solutions and our business model for decentralised energy management not least with the assistance of the joint venture Beegy GmbH, in which we hold a stake. We are drawing on growth opportunities, particularly at our locations in Mannheim and Offenbach, by further expanding district heating based on combined heat and power (CHP) generation.

Executive Board summary

For us – as a company operating in the energy industry – our opportunity/risk profile has not changed materially compared with the previous year and competitive pressure remains persistently high. Major energy policy decisions are still outstanding. Companies in the energy industry are therefore still subject to planning uncertainties, particularly when it comes to investments in electricity generation plants, including those powered by renewable energies. We expect our industry to be exposed to further far-reaching changes and an unstable underlying framework. Not only that, energy markets remain highly volatile. Despite our well-balanced opportunity/risk profile, our future business activity therefore remains subject to risks.

Corporate Strategy
Pages 50-52

We are closely observing whether and how the Brexit decision will influence our UK business. Developments here will depend on the structure of the exit agreement reached with the EU.

From the perspective of the Executive Board of the MVV Energie Group, there were and are no indications that any risks, whether individually or as an aggregate total, could have endangered the continued existence of the overall company or of any material subgroup in the period under report or could do so in future.

CONSOLIDATED FINANCIAL STATEMENTS

Income Statement

Income statement

Euro 000s	1 Oct 2015 to 30 Sep 2016	1 Oct 2014 to 30 Sep 2015	Notes
Sales	4,235,171	3,593,426	
less electricity and natural gas taxes	168,725	171,899	
Sales after electricity and natural gas taxes	**4,066,446**	**3,421,527**	1
Changes in inventories	–25,271	–6,310	2
Own work capitalised	19,026	17,908	3
Other operating income	315,575	389,457	4
Cost of materials	3,207,911	2,677,320	5
Employee benefit expenses	406,319	355,259	6
Other operating expenses	394,923	479,910	7
Income from companies recognised at equity	75,384	10,836	8
Other income from shareholdings	2,253	2,007	8
Restructuring expenses	7,419	–	9
EBITDA	**436,841**	**322,936**	
Depreciation	212,172	161,239	10
EBIT	**224.,669**	**161,697**	
of which result of IAS 39 derivative measurement	24,129	– 6,676	
of which EBIT before result of IAS 39 derivative measurement	200,540	168,373	
Financing income	12,662	11,572	11
Financing expenses	84,189	51,848	12
EBT	**153,142**	**121,421**	
Taxes on income	44,494	36,189	13
Annual net income	**108,648**	**85,232**	
of which non-controlling interests	2,208	13,325	
of which earnings attributable to MVV Energie AG shareholders (annual net income after minority interests)	**106,440**	**71,907**	14
Basic and diluted earnings per share (Euro)	**1.62**	**1.09**	

Statement of Comprehensive Income

Statement of income and expenses recognised in group equity

Euro 000s	1 Oct 2015 to 30 Sep 2016	1 Oct 2014 to 30 Sep 2015
Annual net income	**108,648**	**85,232**
Cash flow hedges	18,208	–6,615
Currency translation differences	17,862	–5,450
Reclassifiable share of companies recognised at equity	–60	1,990
Items that may subsequently be reclassified to profit or loss	**36,010**	**–10,075**
Actuarial gains and losses	–9,676	708
Non-reclassifiable share of companies recognised at equity	4,144	–22,006
Items that will not be reclassified to profit or loss	**–5,532**	**–21,298**
Total comprehensive income	**139,126**	**53,859**
Non-controlling interests	5,384	14,205
Total comprehensive income attributable to MVV Energie AG shareholders	**133,742**	**39,654**

Balance Sheet

Balance sheet

Euro 000s	30 September 2016	30 September 2015	Notes
Assets			
Non-current assets			
Intangible assets	351,181	226,885	15
Property, plant and equipment	2,539,308	2,531,407	16
Investment property	2,542	–	17
Interests in companies recognised at equity	189,934	346,667	18, 19
Other financial assets	56,980	62,108	21
Other receivables and assets	395,741	325,722	22
Deferred tax assets	50,613	20,300	34
	3,586,299	**3,513,089**	
Current assets			
Inventories	296,057	74,003	23
Trade receivables	457,961	367,406	24
Other receivables and assets	306,624	314,067	22
Tax receivables	15,958	13,315	25
Securities	32	601	
Cash and cash equivalents	333,041	262,710	26
Assets held for sale	7,654	38,789	27
	1,417,327	**1,070,891**	
	5,003,626	**4,583,980**	
Equity and liabilities			
Equity			28
Share capital	168,721	168,721	
Capital reserve	455,241	455,241	
Accumulated net income	640,654	593,776	
Accumulated other comprehensive income	–81,469	–106,849	
Capital of the MVV Energie Group	**1,183,147**	**1,110,889**	
Non-controlling interests	243,208	203,437	
	1,426,355	**1,314,326**	
Non-current debt			
Provisions	205,157	168,434	29, 30
Tax provisions	3,897	2,969	29
Financial debt	1,175,848	1,382,912	31
Other liabilities	550,247	536,008	32
Deferred tax liabilities	144,777	120,766	34
	2,079,926	**2,211,089**	
Current debt			
Other provisions	166,644	101,459	29, 30
Tax provisions	37,943	25,162	29
Financial debt	440,121	220,452	31
Trade payables	397,233	386,455	33
Other liabilities	449,927	321,435	32
Tax liabilities	5,477	303	34
Liabilities held for sale	–	3,299	27
	1,497,345	**1,058,565**	
	5,003,626	**4,583,980**	

Statement of Changes in Equity

Statement of changes in equity

Euro 000s	Equity contributed		Equity generated						
				Accumulated other comprehensive income					
	Share capital of MVV Energie AG	Capital reserve of MVV Energie AG	Accumulated net income	Currency translation differences	Fair value measurement of financial instruments	Actuarial gains and losses	**Capital of the MVV Energie Group**	Non-controlling interests	**Total capital**
Balance at 1 Oct 2014	**168,721**	**455,241**	**578,979**	**3,184**	**–39,796**	**–36,985**	**1,129,344**	**206,291**	**1,335,635**
Other income and expenses recognised in equity	–	–	–	–3,414	–7,192	–21,647	–32,253	880	–31,373
Result of business operations	–	–	71,907	–	–	–	71,907	13,325	85,232
Total comprehensive income	**–**	**–**	**71,907**	**–3,414**	**–7,192**	**–21,647**	**39,654**	**14,205**	**53,859**
Dividends paid	–	–	–59,316	–	–	–	–59,316	–15,346	–74,662
Capital increase/ reduction at subsidiaries	–	–	–	–	–	–	–	1,865	1,865
Change in scope of consolidation	–	–	2,206	–12	–987	–	1,207	–3,578	–2,371
Balance at 30 Sep 2015	**168,721**	**455,241**	**593,776**	**–242**	**–47,975**	**–58,632**	**1,110,889**	**203,437**	**1,314,326**
Balance at 1 Oct 2015	**168,721**	**455,241**	**593,776**	**–242**	**–47,975**	**–58,632**	**1,110,889**	**203,437**	**1,314,326**
Other income and expenses recognised in equity	–	–	–	17,063	13,274	–3,035	27,302	3,176	30,478
Result of business operations	–	–	106,440	–	–	–	106,440	2,208	108,648
Total comprehensive income	**–**	**–**	**106,440**	**17,063**	**13,274**	**–3,035**	**133,742**	**5,384**	**139,126**
Dividends paid	–	–	–59,316	–	–	–	–59,316	–18,699	–78,015
Capital increase/ reduction at subsidiaries	–	–	–	–	–	–	–	1,369	1,369
Change in scope of consolidation	–	–	–246	–2,041	111	8	–2,168	51,717	49,549
Balance at 30 Sep 2016	**168,721**	**455,241**	**640,654**	**14,780**	**–34,590**	**–61,659**	**1,183,147**	**243,208**	**1,426,355**

Cash Flow Statement

Cash flow statement [1]

Euro 000s	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015
Annual net income before taxes on income	153,142	121,421
Amortisation of intangible assets, depreciation of property, plant and equipment and investment property	212,172	161,239
Financial result	71,527	40,276
Interest received	7,113	5,414
Change in non-current provisions	25,394	21,192
Other non-cash income and expenses	−26,141	27,862
Result of disposal of non-current assets	−27,876	−2,204
Cash flow before working capital and taxes	**415,331**	**375,200**
Change in other assets [2]	−24,911	−638,759
Change in other liabilities	−61,390	570,018
Change in current provisions	−17,258	−15,329
Income taxes paid	−37,821	−36,606
Cash flow from operating activities	**273,951**	**254,524**
Payments for investments in intangible assets, property, plant and equipment and investment property	−225,643	−262,489
Proceeds from disposals of intangible assets, property, plant and equipment and investment property	50,049	28,481
Proceeds from subsidy payments	27,184	31,277
Proceeds from sale of fully consolidated companies [2]	4,874	−5,230
Proceeds from sale of other financial assets	55,592	5,062
Payments for acquisition of fully consolidated companies and other business units [2]	116,024	−30,276
Payments for other financial assets	−26,845	−177,907
Cash flow from investing activities	**1,235**	**−411,082**
Proceeds from taking up of loans	150,617	408,636
Payments for redemption of loans	−210,556	−229,196
Dividends paid	−59,316	−59,316
Dividends paid to non-controlling interests	−18,699	−15,346
Change due to changes in capital at minority interests	−76	−308
Interest paid	−63,966	−57,548
Cash flow from financing activities	**−201,996**	**46,922**
Cash-effective changes in cash and cash equivalents	73,190	−109,636
Change in cash and cash equivalents due to currency translation	−2,859	1,652
Cash and cash equivalents at 1 October 2015 (2014)	262,710	370,694
Cash and cash equivalents at 30 September 2016 (2015)	**333,041**	**262,710**
of which cash and cash equivalents at 30 September 2016 (2015) with restraints on disposal	1,360	1,228

1 Further information about cash flow statement in Note 38
2 Previous year's figures adjusted. Further details in Note 38

Cash flow – aggregate presentation

Euro 000s	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015
Cash and cash equivalents at 1 October 2015 (2014)	**262,710**	**370,694**
Cash flow from operating activities	273,951	254,524
Cash flow from investing activities	1,235	–411,082
Cash flow from financing activities	–201,996	46,922
Change in cash and cash equivalents due to currency translation	–2,859	1,652
Cash and cash equivalents at 30 September 2016 (2015)	**333,041**	**262,710**

Notes to 2016 Consolidated Financial Statements
of the MVV Energie Group

Information about the company

MVV Energie AG has its legal domicile in Mannheim, Germany. Its registered company headquarters is at Luisenring 49 in 68159 Mannheim. As the parent company of the MVV Energie Group, MVV Energie AG acts as an energy generator, distributor and service provider. Its business is managed in the reporting segments of Generation and Infrastructure, Trading and Portfolio Management, Sales and Services, Strategic Investments and Other Activities.

Basis of preparation

The consolidated financial statements of the MVV Energie Group have been prepared pursuant to § 315a (1) of the German Commercial Code (HGB) in accordance with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) and the interpretations (IFRIC) of the IFRS Interpretations Committee (IFRS IC). The consolidated financial statements fully conform with the IFRS and IFRIC published by the IASB and the IFRS IC to the extent that these had been adopted by the European Union by the end of the period under report and required mandatory application as of 30 September 2016.

The consolidated financial statements have been prepared as of the balance sheet date for the annual financial statements of MVV Energie AG and refer to the 2016 financial year (1 October 2015 to 30 September 2016). The consolidated financial statements are compiled in euros. Unless otherwise indicated, all amounts are stated in thousand euros (Euro 000s).

The income statement has been prepared using the total cost method. In the interests of clarity, individual items have been presented in summarised form in the income statement and balance sheet and listed and commented on separately in the notes.

The Executive Board of MVV Energie AG is responsible for the preparation, completeness and accuracy of the consolidated financial statements and the combined management report. The consolidated financial statements and combined management report were prepared by the Executive Board on 16 November 2016 and subsequently forwarded to the Supervisory Board for approval.

Changes in accounting policies

The International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRS IC) have revised or newly adopted some standards and interpretations which require mandatory application for the first time in the 2016 financial year. None of the standards and interpretations not listed in the table below has any (material) implications for the MVV Energie Group.

Amended standards and interpretations

	EU endorsement	Effective date [1]	Implications
Improvement Project 2010–12 and "Omnibus Standard Amending Various IFRSs"	17 Dec 2014	1 Feb 2015	Extended note disclosures

1 Applicable in financial years beginning on or after the date stated

As a result of the amendment to IFRS 8 in the context of the 2010-12 Improvement Project the note disclosures on segment reporting have been extended to include the assessment of the criteria referred to for business segmentation purposes.

The IASB and the IFRS IC have published the following standards and interpretations not yet requiring mandatory application in the 2016 financial year and of which no voluntary premature application has been made. All of the standards and interpretations not listed in the table below are not expected to have any (material) implications for the MVV Energie Group:

Amended standards and interpretations

		EU endorsement	Effective date[1]
IFRS 9	Financial Instruments: Classification and Measurement of Financial Assets	outstanding	1 Jan 2018
IFRS 15	Revenue from Contracts with Customers	22 Sep 2016	1 Jan 2018
IFRS 10, IAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture	outstanding	1 Jan 2016
IAS 1	Presentation of Financial Statements	18 Dec 2015	1 Jan 2016
IFRS 16	Leasing	outstanding	1 Jan 2019
IAS 12	Recognition of Deferred Tax Assets for Unrealised Losses	outstanding	1 Jan 2017
IAS 7	Disclosure Initiative	outstanding	1 Jan 2017
IFRS 15	Clarification to Revenue from Contracts with Customers	outstanding	1 Jan 2018

1 Applicable in financial years beginning on or after the date stated

IFRS 9 "Financial Instruments" sets out new requirements governing the classification and measurement of financial assets and liabilities. Furthermore, new requirements are introduced for the impairment of financial assets and hedge accounting.

IFRS 15 "Revenues from Contracts with Customers" prescribes when and at what amount IFRS reporters are required to recognise revenues. Furthermore, financial statement preparers are called on to offer financial statement users more informative and relevant disclosures than previously. For this, the standard offers a single, principle-based five-stage model applicable to all contracts with customers.

Due to the amendment to IFRS 10 and IAS 28, the entire gain or loss on a transaction should in future only be recognised when the assets sold or contributed constitute a business as defined in IFRS 3 and irrespective of whether the transaction is structured as a share or asset deal. Where the assets do not constitute a business, only a prorated share of the gain or loss may be recognised.

The amendments to IAS 1 "Presentation of Financial Statements" have introduced minor revisions and clarifications concerning the materiality of note disclosures, comments on the aggregation/disaggregation of items in the balance sheet and statement of comprehensive income, clarification as to how interests in the other comprehensive income of companies recognised at equity should be presented in the statement of comprehensive income and the deletion of a standard notes structure in favour of company-specific consideration of note disclosure relevance.

IFRS 16 "Leases" introduces new lease accounting requirements and, among other aspects, replaces IAS 17.

With its amendment to IAS 12, the IASB has clarified that in the case of debt instruments measured at fair value any write-downs to a lower market value due to changes in market interest rates should result in deductible temporary differences.

According to the amendments to IAS 7 "Disclosure Initiative", a company is required to make disclosures on changes in those financial liabilities for which the respective inflows and outflows are presented in the cash flow from financing activities in the cash flow statement.

IFRS 15 "Clarifications to Revenue from Contracts with Customers" offers new requirements for the recognition of revenue and, among other aspects, replaces IAS 18.

The implications of the first-time application of the standards listed but not yet requiring mandatory application for the consolidated financial statements of the MVV Energie Group are currently under review. The amendments will be applied at the latest as of the date of mandatory application.

Consolidation methods

The financial statements included in consolidation have been prepared on the basis of uniform accounting policies as of 30 September 2016.

Subsidiaries are fully consolidated upon acquisition, i.e. from the time at which the Group gains control. Their inclusion in the consolidated financial statements ends as soon as they are no longer controlled by the parent company. Capital consolidation is performed using the purchase method. Non-controlling interests represent the share of earnings and net assets not attributable to the Group. In the consolidated balance sheet, they are recognised within equity, separately from the equity attributable to shareholders in the parent company.

Interests in associates and joint ventures are consolidated using the equity method.

Shareholdings in companies not included by way of full consolidation or by application of the equity method have been accounted for pursuant to IAS 39.

Receivables and liabilities between consolidated companies have been offset against each other, as have income and expenses. Material intercompany results have also been eliminated.

Scope of consolidation and changes in scope of consolidation

In addition to MVV Energie AG, all material German and foreign subsidiaries in which MVV Energie AG directly or indirectly holds a majority of the voting rights have been included in the consolidated financial statements of the MVV Energie Group for the 2016 financial year.

Scope of consolidation

Number of companies	Companies fully consolidated	Companies recognised at equity
30 September 2015	89	19
Additions	89	20
Disposals	13	5
30 September 2016	**165**	**34**

The Juwi subgroup, in which MVV Alpha fünfzehn GmbH, Mannheim, a wholly-owned subsidiary of MVV Energie AG, Mannheim, holds a 63.12 % stake, was fully consolidated once the conditions precedent had been met in the course of the 1st quarter of 2016. The accounting presentation thus now underlines the strategic extension in our portfolio. As a result, the scope of consolidation of the MVV Energie Group increased in the 1st quarter of 2016 by 81 fully consolidated companies and by 12 companies consolidated using the equity method. The Juwi subgroup was previously consolidated as a joint venture using the equity method. Upon full consolidation, the prorated fair value of the Juwi subgroup, amounting to Euro 180,649 thousand, corresponded to the cost of acquisition.

The fair values of the assets and liabilities identifiable upon the full consolidation of the Juwi subgroup are presented in the following table. The goodwill is fully attributable to the MVV Energie Group. No share of goodwill attributable to minorities was identified.

Identifiable assets and liabilities

Euro 000s	Juwi subgroup, Wörrstadt Recognised upon acquisition
Intangible assets	29,940
Property, plant and equipment	62,285
Financial assets	21,816
Investment property	2,606
Inventories	238,935
Trade receivables	108,785
Other receivables	25,947
Cash and cash equivalents	116,024
Assets held for sale	2,338
Deferred tax assets	25,555
Provisions	83,849
Trade payables	68,479
Financial debt	139,637
Other liabilities	191,040
Liabilities held for sale	280
Deferred tax liabilities	21,035
Fair value of net assets	**129,911**
of which minority interests acquired	509
Acquired share of net assets	81,679
Goodwill	98,970

Since its full consolidation, the Juwi subgroup has contributed Euro 582,511 thousand to sales and Euro −23,774 thousand to earnings. If the date of full consolidation had been at the beginning of the financial year under report, then the subgroup would have contributed Euro 829,145 thousand to sales and Euro 1,804 thousand to earnings.

Currency translation

Transactions in foreign currencies at consolidated companies are recognised at the spot rate applicable at the time of the transaction. Monetary assets and liabilities stated in foreign currencies are translated at each balance sheet date at the rate valid on the balance sheet date. Currency translation differences have been recognised either within operating earnings or in the financial result in line with their respective allocation.

Annual financial statements of foreign group companies are translated into euros (the reporting currency of the Group) in accordance with the functional currency concept and using the modified reporting date method. The MVV Energie Group determines the functional currency for each company. Assets and liabilities are translated from their respective national currencies into euros at the mean exchange rate valid on the balance sheet date. Income and expense items are translated using annual average exchange rates. Currency differences resulting from the use of different exchange rates for the balance sheet and the income statement are recognised directly in equity under accumulated other comprehensive income (currency translation differences).

Currency translation has been based on the following main exchange rates:

Currency translation

	Reporting date rate		Average rate	
1 Euro	**30 Sep 2016**	30 Sep 2015	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015
Czech crown (CZK)	27.021	27.187	27.041	27.424
British pound (GBP)	0.861	0.738	0.783	0.743
US dollar (USD)	1.116	–	1.111	–
South African rand (ZAR)	15.524	–	16.399	–

Source: European Central Bank

Any upward or downward variance by 10 % in the value of the euro against the USD would have decreased/increased EBIT by Euro 1,678 thousand/Euro 2,010 thousand. Any upward or downward variance by 10 % in the value of the euro against the GBP would have decreased/increased EBIT by Euro 1,140 thousand/Euro 1,474 thousand. Any upward or downward variance by 10 % in the value of the euro against the remaining currencies would have decreased/increased EBIT by Euro 4 thousand/Euro 6 thousand.

Accounting policies

Assets and liabilities are measured at amortised cost in all cases with the exception of certain assets, liabilities and derivative financial instruments which IAS 39 and IFRS 13 require to be measured at fair value and where this can be reliably determined. Non-current receivables and debt are recognised at present value. Assets and liabilities are netted where the relevant requirements are met. Income and expenses derived from assets and liabilities are recognised under earnings from operations or in the financial result depending on the respective balance sheet item. Period deferrals are accounted for where necessary. Items are recognised directly in equity where International Accounting Standards so require and are presented separately in the statement of changes in equity.

The underlying principles of recognition and measurement applied when preparing the consolidated financial statements of the MVV Energie Group are set out below.

Intangible assets

Intangible assets were mainly acquired in return for payment and are carried at cost. They are subject to straight-line amortisation based on their pattern of consumption. With the exception of goodwill and one registered trademark, there are basically no intangible assets with useful lives classified as indefinite. CO_2 emission rights with holding periods longer than one year and requiring purchase by the MVV Energie Group are recognised as intangible assets at cost, while rights allocated free of charge are recognised at Euro 0. Where subsequent measurement is required, application is made of the floating average method.

Property, plant and equipment

Property, plant and equipment is stated at cost, less proportionate depreciation to account for the decline in value of the assets. In the case of internally generated property, plant and equipment, the costs of manufacture are based on allocable direct costs and a commensurate share of directly allocable overhead expenses. Borrowing costs are recognised as a component of costs when they can be directly attributed to the acquisition or manufacture of a qualifying asset. Such costs are recognised as soon as the asset in question requires a significant period of time to be prepared for its intended use or sale. During the commissioning phase, the net balance of income and expenses incurred is capitalised. Income in excess of the expenses incurred is recognised not as a reduction to cost of acquisition or manufacturing, but through profit or loss.

The costs of assets are reduced by public subsidies received (investment grants). Public subsidies are recognised when it is reasonably certain that the subsidies will be granted and the relevant conditions have been met. Investment grants relate exclusively to asset-based subsidies. These grants are reported separately from investments in the non-current asset schedule.

Items of property, plant and equipment have been subject to straight-line depreciation consistent with their pattern of consumption. Depreciation is undertaken pro rata temporis in the year of addition. Scheduled depreciation is based on the following useful lives:

Useful lives in years	
Buildings	2 – 100
Technical equipment and machinery	1 – 60
Transmission grids	1 – 50
Plant and office equipment	1 – 50

The MVV Energie Group leases specific items of property, plant and equipment (leased items). Lease contracts for items of property, plant and equipment in which the MVV Energie Group bears the principal risks and rewards resulting from ownership of the leased item are classified as finance leases. Assets in connection with finance leases are capitalised at the beginning of the leasing term at the lower of the fair value of the leased item and the present value of the minimum leasing payments, with equivalent leasing liabilities being recognised under non-current and current liabilities.

Each leasing instalment is divided into its respective interest and principal components in such a way that the leasing liabilities charge consistent interest. The interest component of the leasing instalment is recognised through profit or loss in the income statement. Items of property, plant and equipment governed by finance leases are depreciated over the shorter of their economic useful life or the term of the lease.

Investment properties

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

Impairments of intangible assets, property, plant and equipment and investment property

The carrying amounts of intangible assets, property, plant and equipment and investment property are assessed for impairment at each balance sheet date. An impairment test pursuant to IAS 36 is undertaken should there be any indication of impairment. Goodwill and intangible assets with indefinite useful lives are not subject to scheduled amortisation, but are rather tested for impairment at least once a year or when indications of impairment or changes in circumstances arise. Where the carrying amount of an asset is higher than its recoverable amount (the higher of its fair value less disposal costs or its value in use), the carrying amount is written down to the recoverable amount. The fair value represents the best estimate of the recoverable amount. The recoverable amount must be determined for each asset, unless the asset does not generate any largely independent cash flows. In this case, the amount should be stated for which an independent third party would acquire the cash generating unit at the balance sheet date. The fair value/value in use of the cash generating units are determined based on the cash flow forecasts approved by the management and supervisory bodies of MVV Energie AG. Such cash flow forecasts are based on experience and results in previous financial years, as well as on expectations as to future market developments. The cash flow forecasts refer to the expected development in key macroeconomic figures derived from economic and financial studies. Key assumptions used in the forecasts concern the development in the price of crude oil, natural gas and coal on the global markets, the price of electricity and gas on the wholesale and end consumer markets and the development in market shares and the relevant regulatory framework.

The cash flow forecasts cover a detailed budgeting period of three years. Figures for subsequent financial years are based on an extrapolation of the results of the final financial year in the detailed budget period. Reference is made to current estimates of growth rates. These growth rates correspond to the average long-term growth rates in the markets in which the companies operate and are consistent with external sources of information concerning market expectations. Impairment losses are recognised when the recoverable amount of the asset (value in use) falls short of its carrying amount. Where the recoverable amount exceeds the carrying amount in subsequent periods, the assets are written up to a maximum of amortised cost.

Goodwill is not written up. Should the carrying amount of a cash generating unit to which goodwill has been allocated exceed its recoverable amount, then the goodwill thereby allocated is written down first. Any further write-down requirement is then accounted for by means of a prorated reduction in the carrying amounts of the other assets at the cash generating unit. However, assets are not written down below their respective present values.

Receivables and other assets

Receivables and other assets include trade receivables, other receivables and assets and tax receivables. Apart from derivative financial instruments, these are measured at amortised cost. Initial measurement is undertaken as of the performance date. Any write-downs required are based on the expected level of default risk. The value of receivables is generally corrected by means of a write-down account.

Trade receivables include accruals/deferrals to cover energy and water sales not yet read or invoiced as of the balance sheet date. Part-payments made in the context of annual consumption invoicing are deducted from the receivables. Default risks existing at the balance sheet date are covered by adequate write-downs. Receivables are derecognised immediately upon becoming uncollectible. The carrying amounts reported are basically equivalent to their respective fair values.

CO_2 emission rights with remaining terms of less than one year and requiring purchase or exchange by the MVV Energie Group are recognised at cost as other assets, while rights allocated free of charge have been recognised at Euro 0.

Inventories

Inventories consist of raw materials and supplies, unfinished and finished products and services and project rights, advance payments made for such and commodity trading assets. They are measured at the lower of cost or net sale value. The commodity trading assets are measured at fair value less disposal costs. Cost of acquisition or manufacture for raw materials and supplies has been calculated using the average cost method. The manufacturing costs of unfinished and finished products and services and project rights include allocable direct costs and a commensurate share of the material and production overheads required based on normal capacity utilisation rates and thus include production-related full costs. Risks resulting from any impairment in utility are accounted for by way of suitable deductions.

Cash and cash equivalents

Cash and cash equivalents consist of cash on hand and credit balances at banks with original terms of less than three months.

Non-current assets and liabilities held for sale

Non-current assets which can be sold in their current state and whose sale is highly probable are recognised as non-current assets held for sale. Liabilities due to be dispensed with in a transaction together with assets are reported separately as liabilities held for sale.

Where the relevant specific standards do not require application, non-current assets held for sale are no longer subject to scheduled depreciation and amortisation, but are rather recognised at fair value less expected disposal costs, where this is lower than the carrying amount. Gains or losses resulting from the measurement of individual non-current assets held for sale or disposal groups are recognised under earnings from continuing operations until their ultimate disposal. Gains or losses resulting from the measurement of discontinued operations at fair value less disposal costs are recognised as earnings from discontinued operations.

Deferred taxes

Deferred taxes are stated for temporary differences between the tax balance sheets and IFRS balance sheets at individual companies arising from the measurement of assets and liabilities for tax purposes on the one hand and for external IFRS accounting on the other, as well as from consolidation processes impacting on earnings. Moreover, deferred tax assets have also been recognised for tax reduction claims resulting from the expected utilisation in subsequent years of existing losses carried forward. Such claims are capitalised if the utilisation of these losses carried forward is certain within a five-year forecast horizon based on existing business plans. Deferred taxes have been calculated based on the tax rates valid or expected at the individual organisational units upon realisation. Account is taken of the tax regulations valid or already adopted at the balance sheet date.

Provisions

Provisions are recognised for all legal or constructive obligations to third parties at the balance sheet date as a result of past events, when it is probable that a future outflow of resources will be required to settle the obligations and the amounts can be reliably estimated. Provisions are recognised at their expected performance amounts and are not netted with refund claims. Provisions based on a large number of events of the same nature are recognised at the expected value of the potential results.

All non-current provisions have been recognised at their expected performance amounts as of the balance sheet date. Due to negative market interest rates at present, provisions are not discounted.

Financial instruments

Primary financial instruments: Shareholdings, loans, securities, trade receivables, other cash receivables and cash and cash equivalents are reported as financial assets on the asset side of the balance sheet. Primary financial instruments are measured at fair value upon addition, taking due account of transaction costs.

Financial assets are subsequently measured either at fair value or at amortised cost. The subsequent measurement of financial assets in the "financial assets available for sale" category is generally based on their fair values.

Pursuant to IAS 39, changes in fair values are recognised directly in equity, taking due account of deferred taxes. Upon disposal, these changes are recognised through profit or loss. The asset is written down through profit or loss if there are any objective indications of impairment. Permanent recoveries in value are recognised with write-ups to amortised cost. Assets whose fair values cannot be reliably estimated are measured at amortised cost. The subsequent measurement of financial assets in the "loans and receivables" and "financial instruments held to maturity" categories is based on amortised cost, with application of the effective interest rate method where appropriate. The amortised cost of a financial asset is equivalent to the fair value of the consideration provided, adjusted to account for impairments, interest payments and principal repayments. Impairment losses are recognised for any identifiable risks, especially those resulting from expected payment defaults or reductions in expected cash flows. Impairment losses are recognised directly in period earnings.

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

The fair values of financial instruments traded on organised markets are determined by reference to the bid prices listed on the stock market on the balance sheet date. The fair values of financial instruments for which there is no active market are estimated with due application of valuation techniques. These methods are based on recent transactions performed on customary market terms, on the current value of other instruments which are essentially the same instruments, on analysis of discounted cash flows or on option price models. Pursuant to IFRS 13, due account is also taken of market and credit risks when determining fair values.

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

Financial debt, trade payables and other liabilities are reported as financial liabilities on the liabilities side of the balance sheet. Financial liabilities are mainly recognised at amortised cost, with application of the effective interest rate method where appropriate. In the case of financial debt, cost is equivalent to the amount disbursed. In the case of trade payables and other liabilities, cost is equivalent to the fair value of the consideration received.

Financial liabilities are retired when the underlying obligation has been met or terminated, or has expired.

No use is made of the fair value option.

Derivative financial instruments: Derivative financial instruments include interest rate and currency derivatives, as well as commodity derivatives, in this case mainly for electricity, gas, coal and CO_2. Derivative financial instruments are measured at fair value both upon initial recognition and in subsequent periods and are reported under other assets or other liabilities. The amounts recognised are derived from market values or using generally recognised valuation methods (present value method or option pricing models based on current market parameters). Changes in the value of interest rate and currency derivatives are recognised as income or expenses in the financial result. Changes in the value of all other derivative financial instruments are recognised as income or expenses under other operating income and expenses. Derivatives deployed in cash flow hedges are treated separately. Where they additionally meet IAS 39 hedge accounting requirements, changes in the fair value of the effective portion of the hedging instrument are recognised directly in equity under fair value measurement of financial instruments. When the underlying transaction is recognised in the income statement, the hedge is also recognised through profit and loss and thus compensates for the impact of the underlying transaction. Alongside cash flow hedge accounting, risks may also be hedged with fair value hedges. Here, changes in the fair value of derivatives serving to hedge a fair value and qualifying as fair value hedges are recognised through profit or loss at the same time as the risk thereby hedged.

Pending transactions intended to secure market prices in the field of energy trading fall within the scope of IAS 39 and are recognised as derivative financial instruments, while the hedged items (sales contracts) are generally not covered by IAS 39. The accounting treatment under IAS 39 relates in particular to commodities futures transactions. To limit volatility, application is made of the own use exemption or of cash flow hedge accounting, particularly in the electricity and gas businesses.

For closed foreign currency positions, fair value hedges are used and are recognised in accordance with fair value hedge accounting requirements.

Interest rate risks are limited by drawing in particular on interest swaps. These instruments secure the cash flows from financial liabilities with floating interest rates by means of cash flow hedges.

Measurement uncertainties

Discretionary decisions have to be made when applying the accounting policies. Moreover, the preparation of consolidated financial statements in accordance with IFRS requires assumptions and estimates to be made which could impact on the values stated for the assets and liabilities, income and expenses thereby recognised, as well as on the disclosure of contingent liabilities.

Discretionary decisions in the application of accounting policies

The exercising of discretion in the application of accounting policies has not had any material influence on the values of the assets and liabilities as reported in the financial statements.

Uncertainties involved in estimates

The following section provides information on the most important forward-looking assumptions and major sources of uncertainty involved in estimates made at the balance sheet date, as a result of which there is a risk that a material adjustment will be required in the carrying amounts of assets and liabilities in the coming financial year.

The fair values of assets and liabilities and the useful lives of assets have been determined on the basis of management assessment. The same applies to the calculation of any impairments of assets.

The impairment test performed on goodwill and assets requires an estimation of the value in use of the cash generating unit to which the goodwill or asset is allocated. To estimate the value in use, the MVV Energie Group has to estimate the cash flow surpluses expected to be generated by the cash generating unit in future and furthermore to select an appropriate discount rate to calculate the present value of the cash flow. All assumptions and estimates are based on circumstances and assessments at the balance sheet date or at the date during the financial year on which event-specific impairment becomes necessary. Any deviation in the underlying framework could result in differences arising between such estimates and actual values. Appropriate amendments are made in such cases to the assumptions and if necessary to the carrying amount of the goodwill and the assets.

Moreover, assumptions also have to be made when calculating actual and deferred taxes. In particular, the possibility of generating corresponding future taxable income plays a major role in the assessment as to whether it will be possible to use deferred tax assets.

The uncertainties arising when measuring the provisions to be recognised are countered with the best possible estimates. Among other methods, the calculations have also been based on probability considerations.

The measurement of sales and cost of materials is dependent on estimates to the extent that consumption deferrals have been undertaken as of the balance sheet date for trade receivables and payables already incurred but not yet invoiced.

Compensation liabilities for partnerships are recognised at prorated fair value. This is determined by compiling a company valuation, taking due account of current budgets and the yield curve.

When assessing measurement uncertainties, reference is always made to the best information available concerning circumstances at the balance sheet date. Actual amounts may differ from estimates. The carrying amounts recognised in the financial statements which are subject to these uncertainties have been stated in the balance sheet and the accompanying information provided in the notes.

The amendments made to estimates in the 2016 financial year due to IAS 8 did not lead to any notable adjustments in the relevant income, expenses, assets or liabilities.

NOTES TO INCOME STATEMENT

1. Sales after electricity and natural gas taxes

Sales include all revenues generated by the typical business activities of the Group. They are recognised upon the transfer of significant risks and rewards to customers or upon performance of the respective services, provided that receipt of the payment can reliably be expected. The composition of sales broken down into individual segments can be found in the Segment Reporting in Note 37.

The main products of MVV Energie AG are electricity, heating energy, gas, water and waste. Due to the initial consolidation of the Juwi subgroup in the financial year under report, the Group generated additional revenues of Euro 233,744 thousand from renewable energies project development. Other sales are of subordinate significance.

Translated into the group currency, sales at our foreign subsidiaries amounted to Euro 440,329 thousand (previous year: Euro 94,835 thousand). The increase in this share of sales is chiefly due to the first-time inclusion of the Juwi subgroup with several foreign subsidiaries in the consolidated financial statements of MVV Energie AG.

Customer-specific construction contracts are recognised at percentage of completion. This means that prorated sales and the cost of sales incurred are recognised at the percentage of completion, based on the contractual arrangements with the customers, reached by the balance sheet date and as soon as the results of the construction contract can be reliably estimated. Percentage of completion is calculated on the basis of the project costs incurred by the balance sheet date as a proportion of the total costs of the project. In the balance sheet, the sales posted in line with their percentage of completion are reduced by advance payments received and recognised under trade receivables. As soon as the result of a construction contract cannot be reliably estimated, the revenues from the contract are only recognised at the level of contract costs incurred and probably collectible. Losses on contracts are immediately expensed in full as soon as they are expected.

Mainly as a result of the first-time consolidation of the Juwi subgroup, sales from customer-specific construction contracts rose to Euro 332,130 thousand (previous year: Euro 491 thousand).

2. Changes in inventories

Changes in inventories mainly relate to unfinished projects, project rights and the first-time recognition of renewable obligation certificates (ROC).

3. Own work capitalised

Own work capitalised relates in particular to the construction and expansion of distribution grids.

4. Other operating income

Other operating income

Euro 000s	**FY 2016**	FY 2015
Income from IAS 39 derivatives	202,199	299,859
Reversals of provisions	23,632	5,842
Income from emission rights	17,663	15,130
Reversals of write-downs and receipts of receivables already retired	8,644	7,888
Agency agreements and personnel supplies	6,078	7,376
Exchange rate gains	6,346	4,752
Credits and refunds	4,608	4,764
Benefits to employees	4,027	3,052
Income from sales of assets	3,848	6,467
Rental income	3,030	3,002
Reimbursements of damages claims	1,717	10,537
Miscellaneous	33,783	20,788
	315,575	**389,457**

Other operating income particularly relates to positive measurement items for energy trading transactions requiring measurement under IAS 39. Measurement items relating to energy trading transactions have been reported on a gross basis. This valuation-dependent income is offset by corresponding expenses.

The full consolidation of the Juwi subgroup led other operating income to change by Euro 11,444 thousand.

The review of provisions and assessment of the underlying items resulted in reversals of Euro 23,632 thousand, which were credited to earnings.

The increase in miscellaneous other operating income items was chiefly due to an agreement reached out of court and to the resultant refund of refurbishment funds.

5. Cost of materials

Cost of materials

Euro 000s	FY 2016	FY 2015
Raw materials, supplies and purchased goods	2,232,608	2,269,274
Purchased services for construction of windfarms and solar parks	430,932	–
Purchased services	544,371	408,046
	3,207,911	**2,677,320**

The first-time consolidation of the Juwi subgroup led to the first-time recognition of purchased services for the construction of windfarms and solar parks.

Expenses for purchased services mainly relate to expenses for grid utilisation fees, concession duties, maintenance and repair expenses, disposal costs for residual waste and other third-party services.

6. Employee benefit expenses

Employee benefit expenses

Euro 000s	FY 2016	FY 2015
Wages and salaries	333,199	286,907
Social security expenses and welfare expenses	54,924	48,957
Pension expenses	18,196	19,395
	406,319	**355,259**

Due to the first-time consolidation of the Juwi subgroup, employee benefit expenses rose year-on-year by Euro 47,786 thousand.

The MVV Energie Group had an annual average of 6,169 employees (previous year: 5,243). This personnel total includes 11 executives (previous year: 11), 5,807 employees (previous year: 4,873), 315 trainees (previous year: 319) and 36 interns/students (previous year: 40).

The executives relate to members of the management in key functions, i.e. to authorised representatives and division heads at MVV Energie AG.

7. Other operating expenses

Other operating expenses

Euro 000s	FY 2016	FY 2015
Expenses for IAS 39 derivatives	178,071	306,535
Contributions, fees and duties	32,654	22,726
Legal, consulting and surveyor expenses	19,986	12,938
Rental, leasehold and leasing expenses	19,924	19,117
Maintenance, repair and IT service expenses	17,877	11,293
Operating taxes (incl. energy taxes)	14,169	12,501
Additions to write-downs and receivables defaults	13,716	15,808
Employee benefit and welfare expenses	10,759	8,162
Personnel supplies	10,258	9,179
Public relations expenses	10,135	8,385
Exchange rate losses	8,827	2,940
Facility management	7,772	4,699
Service contracts	7,458	5,958
Losses incurred on sales of assets	5,620	4,263
Accounting and year-end expenses	3,156	1,969
Hospitality expenses	2,059	2,107
Office materials and specialist literature	1,926	1,327
Expenses for emission rights	501	6,699
Miscellaneous	30,055	23,304
	394,923	**479,910**

Other operating expenses include negative measurement items for energy trading transactions requiring measurement under IAS 39. Measurement items relating to energy trading transactions have been reported on a gross basis. These valuation-dependent expenses are countered by other operating income offsetting this item.

The full consolidation of the Juwi subgroup led other operating expenses to change by Euro 34,229 thousand. The launch of operations at a biomass power plant and a CHP plant in the UK resulted in an overall increase in other operating expenses by Euro 3,808 thousand. In particular, these first-time inclusions impacted on contributions, fees and duties.

The increase in legal, consulting and surveyor expenses was due to the inclusion of the Juwi subgroup and to personnel and organisational consulting expenses.

Maintenance expenses rose on account of new IT projects.

The reduction in additions to write-downs and receivables defaults is attributable to the successful management of working capital in previous years.

The rise in exchange rate losses is chiefly due to the increase in activities in the UK and the inclusion of the Juwi subgroup.

8. Income from companies recognised at equity and other income from shareholdings

Interests in associates and joint ventures are recognised initially at cost and subsequently at the amortised value of the prorated net assets. The carrying amounts are increased or reduced annually to account for prorated earnings, dividend distributions and other changes in equity. Any goodwill thereby recognised is included in the value of the shareholding, rather than being reported separately. Impairment losses are recognised on the at-equity carrying amount when the recoverable amount falls short of the carrying amount. The carrying amount is correspondingly written up through profit or loss when the reasons for impairment losses previously recognised no longer apply.

Income from companies recognised at equity and other income from shareholdings

Euro 000s	**FY 2016**	FY 2015
Income from companies recognised at equity	75,384	10,836
Income from other shareholdings	488	1,758
Expenses/income from sales of financial assets	1,765	249
	77,637	**12,843**

The increase in income from companies recognised at equity is primarily due to the disposal of ZVO Energie GmbH, which contributed Euro 18,776 thousand, and to the year-on-year increase in prorated earnings by Euro 44,752 thousand in connection with the Juwi subgroup.

9. Restructuring expenses

The ongoing transformation in the market and competitive climate in the energy industry led the MVV Energie Group to perform an in-depth review of potential optimisation measures in the current financial year. This resulted in a realignment of the entire process chain within the range of solutions and commodities on offer, a process accompanied by changes in the product portfolio, increased efficiency and simultaneous exploitation of growth potential. To this end, a restructuring plan was compiled and approved in the 4th quarter of 2016.

Restructuring expenses amounted to Euro 7,419 thousand in the 2016 financial year and mainly related to the recognition of restructuring provisions to cover socially responsible reductions in staff totals.

To enhance transparency, restructuring expenses have been recognised in a separate line item within operating earnings. These expenses are not included in adjusted EBIT, the key figure referred to for group management purposes, and therefore do not impact on operating earnings as reported here.

10. Depreciation and amortisation

Depreciation and amortisation

Euro 000s	**FY 2016**	FY 2015
Depreciation and amortisation	212,172	161,239
of which impairment losses	32,615	985

Scheduled depreciation and amortisation rose in the financial year under report. Of this increase, the major share was due to the completion of a CHP plant and a biomass power plant in the UK, at Euro 17,846 thousand, and to the full consolidation of the Juwi subgroup, at Euro 7,866 thousand.

Details about impairment losses can be found in the tables on intangible assets and property, plant and equipment.

11. Financing income

Financing income

Euro 000s	FY 2016	FY 2015
Income from currency translation in connection with financing activities	4,304	3,723
Interest income from finance leases	3,017	3,106
Interest income from current account, overnight and fixed-term deposits	945	522
Income from IAS 39 measurement	459	1,142
Other interest and similar income	3,937	3,079
	12,662	**11,572**

Financing income increased by Euro 3,902 thousand due to the inclusion of the Juwi subgroup.

12. Financing expenses

Financing expenses

Euro 000s	FY 2016	FY 2015
Interest expenses on overdraft facilities, non-current and current loans	48,510	44,897
Expenses from currency translation in connection with financing facilities	6,233	5,477
Compounding of provisions	8,005	3,654
Expenses for IAS 39 measurement	100	1,065
Other interest and similar expenses	21,341	−3,245
	84,189	**51,848**

The full consolidation of the Juwi subgroup led financial expenses to increase by Euro 14,866 thousand in the year under report.

The other interest and similar expenses reported for the previous year were influenced by a reduction in expenses due to the capitalisation of borrowing costs of Euro 16,248 thousand. As a result of the completion of a CHP plant and a biomass power plant, the reduction in expenses due to the capitalization of borrowing costs in the year under report only amounted to Euro 1,715 thousand.

The assumed financing cost rate ranged from 3.1% to 5.7% (previous year: 3.1% to 3.5%).

13. Taxes on income

Taxes on income

Euro 000s	FY 2016	FY 2015
Actual taxes	51,605	52,609
Deferred taxes	−7,111	−16,420
	44,494	**36,189**

Current tax expenses include the payable trade tax and corporate income tax charge (including the solidarity surcharge), as well as foreign taxes on income.

The calculation of deferred taxes in Germany has been based on the tax rates applicable at individual companies. This tax rate results from the unchanged corporate income tax rate of 15%, the unchanged solidarity surcharge of 5.5% and the respectively applicable trade tax rate (currently 12% to 16%). The equivalent calculations for foreign companies are based on the respective national tax rates. Where the requirements of IAS 12 are met, deferred tax assets and liabilities are stated on a net basis for each company or fiscal unit.

The deferred tax income results from tax expenses of Euro 11,839 thousand (previous year: tax expenses of Euro 1,234 thousand) that are attributable to the changes in the write-down on losses carried forward and to the recognition through profit or loss of losses carried forward, as well as from deferred tax income of Euro 18,950 thousand (previous year: Euro 17,654 thousand) attributable to the arising and/or reversal of temporary differences.

Actual tax expenses were reduced by Euro 4,078 thousand by using tax losses not previously recognised (previous year: Euro 3,154 thousand).

The reconciliation of expected tax expenses with those actually reported is presented in the following table. The tax rate applicable for the tax reconciliation amounts to 30.3 % (previous year: 30.3 %) and comprises the corporate income tax rate, the solidarity surcharge and an average trade tax rate of 14.5 % (previous year: 14.5 %).

Reconciliation of income tax expenses

Euro 000s	FY 2016	FY 2015
Earnings before taxes (EBT)	**153,142**	**121,421**
Expected tax expenses based on tax rate of 30.3 % (previous year: 30.3 %)	**46,402**	**36,791**
Deviations resulting from trade tax assessment base	1,599	2,685
Deviations from expected tax rate	1,258	−2,942
Utilisation of losses carried forward, change in write-downs for losses and losses for which no deferred taxes are recognised	11,833	1,224
Non-deductible expenses	10,178	1,920
Tax-exempt income	−15,022	−7,418
Income from shareholdings recognised at equity	−8,655	4,197
Permanent differences	2,529	1,469
Taxes for previous years	−6,158	−1,777
Other	530	40
Effective tax expenses	**44,494**	**36,189**
Effective tax rate in %	**29.1**	**29.8**

14. Share of earnings attributable to MVV Energie AG shareholders and earnings per share

Share of earnings attributable to MVV Energie AG shareholders and earnings per share

	FY 2016	FY 2015
Share of earnings attributable to MVV Energie AG shareholders (Euro 000s)	106,440	71,907
Number of shares (weighted average in 000s)	65,907	65,907
Earnings per share (Euro)	1.62	1.09
Dividend per share (Euro)	0.90	0.90

The number of individual registered shares in MVV Energie AG amounts to 65,906,796. The weighted annual average is calculated to the nearest day.

The dividend for the 2016 financial year is based on the proposal made by the Executive Board and is subject to approval by the Annual General Meeting on 10 March 2017. This proposal involves the distribution of a total dividend of Euro 59,316 thousand. The appropriation of earnings proposed for the 2015 financial year was approved by the Annual General Meeting on 4 March 2016. A total dividend of Euro 59,316 thousand was distributed.

NOTES TO BALANCE SHEET

15. Intangible assets

Intangible assets include concessions, industrial property rights, customer lists and similar rights and values, goodwill and advance payments.

Concessions, industrial property rights and similar rights and values consist of software and contractually agreed grants to customers and suppliers. The useful lives of such rights are based on the relevant economic aspects or contractual requirements and range from one to 50 years.

MVV Energie AG only performs an immaterial volume of research and development activities, the costs of which are expensed directly in the period in which they are incurred. The amount of research and development expenses qualifying under IFRS came to Euro 659 thousand in the 2016 financial year (previous year: Euro 809 thousand).

The impairment tests performed in the 2016 financial year were based on determining the recoverable amount/value in use. This involved discounting expected cash flows at the shareholdings with discount rates after tax (weighted costs of capital) of 4.3 % to 7.5 %. The discount rates were determined on the basis of available market data. The budget period for the underlying cash flows generally amounted to three years. Growth rates of up to 0.5 % were assumed for perpetuity in the impairment tests performed in the 2016 financial year.

Within the framework of a sensitivity analysis, the impairments resulting from any increase/reduction in the capitalisation discount rate by 0.5 % were calculated. This did not result in any notable changes in the ongoing values.

According to new opinions in the relevant specialist literature, the calculation of goodwill may now only be based on the addition method. Accordingly, the goodwill recognised at the Energieversorgung Offenbach subgroup was adjusted in the financial year under report.

The carrying amounts stated for goodwill are structured as follows:

Goodwill carrying amounts

Euro 000s	**30 Sep 2016**	30 Sep 2015
Juwi subgroup	98,970	—
Energieversorgung Offenbach subgroup	75,894	71,689
MVV Enamic subgroup	36,611	36,611
Windwärts subgroup	6,073	6,073
MVV Energie CZ subgroup	5,939	5,897
MVV Umwelt subgroup	5,584	5,591
Other subgroups	1,038	1,038
	230,109	**126,899**

For the purposes of performing impairment tests, goodwill was allocated to cash generating units. The cash generating units basically correspond to the legal subgroups, which consist of legal units that belong together in geographical or material terms. No impairment losses were recognised for goodwill in the 2016 financial year.

Intangible assets

Euro 000s	Concessions, industrial property rights and similar rights and values	Goodwill	Advance payments	**Total**
Gross value at 1 October 2014	265,144	130,923	3,785	399,852
Change in scope of consolidation	5,530	11,937	—	17,467
Currency adjustments	42	106	35	183
Additions	15,566	—	4,873	20,439
Disposals	−284	—	−52	−336
Reclassifications	3,424	—	−3,448	−24
Gross value at 30 September 2015	**289,422**	**142,966**	**5,193**	**437,581**
Amortisation at 1 October 2014	−182,069	−16,050	−16	−198,135
Change in scope of consolidation	—	9	—	9
Currency adjustments	−22	−26	−1	−49
Scheduled amortisation	−12,643	—	—	−12,643
Impairment losses	−140	—	—	−140
Disposals	281	—	6	287
Reclassifications	−37	—	12	−25
Amortisation at 30 September 2015	**−194,630**	**−16,067**	**1**	**−210,696**
Net value at 30 September 2015	**94,792**	**126,899**	**5,194**	**226,885**
Gross value at 1 October 2015	289,422	142,966	5,193	437,581
Change in scope of consolidation	29,911	99,832	30	129,773
Currency adjustments	−199	49	—	−150
Additions	3,820	—	5,692	9,512
Disposals	−2,077	—	—	−2,077
Reclassifications	2,659	—	−2,960	−301
Gross value at 30 September 2016	**323,536**	**242,847**	**7,955**	**574,338**
Amortisation at 1 October 2015	−194,630	−16,067	1	−210,696
Change in scope of consolidation	—	3,343	—	3,343
Currency adjustments	38	−14	−1	23
Scheduled amortisation	−17,195	—	—	−17,195
Impairment losses	−122	—	—	−122
Disposals	1,441	—	—	1,441
Reclassifications	49	—	—	49
Amortisation at 30 September 2016	**−210,419**	**−12,738**	**—**	**−223,157**
Net value at 30 September 2016	**113,117**	**230,109**	**7,955**	**351,181**

16. Property, plant and equipment

Property, plant and equipment

Euro 000s	Land, leasehold rights and buildings, including buildings on third-party land	Technical equipment and machinery	Other assets, plant and operating equipment	Advance payments and construction in progress	**Total**
Gross value at 1 October 2014	744,978	4,138,777	198,051	394,311	5,476,117
Change in scope of consolidation	426	6,649	1,510	170	8,755
Currency adjustments	1,603	2,433	49	6,484	10,569
Additions	4,639	60,636	7,573	169,203	242,051
Subsidy payments received	−20	−15,907	−106	−1,429	−17,462
Disposals	−7,756	−42,726	−6,429	371	−56,540
Reclassifications	36,369	180,473	1,316	−218,134	24
Reclassifications pursuant to IFRS 5	−213	−50,379	−96	−145	−50,833
Gross value at 30 September 2015	**780,026**	**4,279,956**	**201,868**	**350,831**	**5,612,681**
Depreciation at 1 October 2014	−370,206	−2,460,535	−141,042	–	−2,971,783
Change in scope of consolidation	−12	−1,920	–	–	−1,932
Currency adjustments	−566	−1,175	−29	–	−1,770
Scheduled depreciation	−15,098	−122,044	−10,462	–	−147,604
Impairment losses	−329	−420	−96	–	−845
Disposals	5,446	19,226	5,918	–	30,590
Reclassifications	–	–	25	–	25
Reclassifications pursuant to IFRS 5	91	11,929	25	–	12,045
Depreciation at 30 September 2015	**−380,674**	**−2,554,939**	**−145,661**	**–**	**−3,081,274**
Net value at 30 September 2015	**399,352**	**1,725,017**	**56,207**	**350,831**	**2,531,407**
Gross value at 1 October 2015	780,026	4,279,956	201,868	350,831	5,612,681
Change in scope of consolidation	44,737	−36,573	6,212	294	14,670
Currency adjustments	−13,605	−29,016	−304	5,174	−37,751
Additions	1,234	72,309	6,554	136,034	216,131
Subsidy payments	−13	−19,670	−9	−257	−19,949
Disposals	−3,659	−43,429	−4,148	−2,421	−53,657
Reclassifications	106,003	222,081	1,893	−329,677	300
Reclassifications pursuant to IFRS 5	200	−117	–	–	83
Gross value at 30 September 2016	**914,923**	**4,445,541**	**212,066**	**159,978**	**5,732,508**
Depreciation at 1 October 2015	−380,674	−2,554,939	−145,661	–	−3,081,274
Change in scope of consolidation	1	33,711	–	–	33,712
Currency adjustments	241	639	67	–	947
Scheduled depreciation	−22,830	−127,855	−11,677	–	−162,362
Impairment losses	−3,018	−29,265	−210	–	−32,493
Disposals	1,990	42,909	3,432	–	48,331
Reclassifications	−14	−2	−32	–	−48
Reclassifications pursuant to IFRS 5	–	−13	–	–	−13
Depreciation at 30 September 2016	**−404,304**	**−2,634,815**	**−154,081**	**–**	**−3,193,200**
Net value at 30 September 2016	**510,619**	**1,810,726**	**57,985**	**159,978**	**2,539,308**

The impairment losses arising in the 2016 financial year were mainly attributable to the development in the market climate of various cash generating units. The future values in use were determined using discount rates after tax of between 3.6 % and 5.3 %.

Due to the development in convergence, the cavern volume in the Generation and Infrastructure reporting segment reduced faster than originally expected. The management saw this as a triggering event for the performance of an impairment test at the "Gas Storage Facility Kiel" cash generating unit, which comprises three caverns and one above-ground facility.

The economic viability of the biogas and biomass plants is determined by the margin achieved from operations management and revenues. While the revenue side is subject to the German Renewable Energies Act (EEG) and is thus price-bound, the relevant expenses develop in line with inflation. The insolvencies announced by German Pellet GmbH and its subsidiaries and Woodox pellet works indicated the need to review the ongoing value of the "Pellet" cash generating unit. Both reviews resulted in write-down requirements in the Sales and Services reporting segment.

Property, plant and equipment up to an equivalent value of Euro 73 million (previous year: Euro 86 million) has been provided as security for financial debt. This involves land, buildings, technical equipment and machinery. Property, plant and equipment subject to restrictions on disposal amounts to Euro 32 million (previous year: Euro 29 million).

The subsidy payments received in the 2016 financial year chiefly relate to urban planning measures in connection with the distribution grid. There are no conditions that have not been met or other performance uncertainties in connection with these subsidy payments.

The largest additions to advance payments and construction in progress in the 2016 financial year related to preparations for a gas-fired CHP plant and for a windfarm.

17. Investment property

The property reported under investment property in previous years was sold in the previous year. Due to the acquisition of Juwi AG, one item of investment property was added in the 2016 financial year.

The investment property involves a piece of land let out in the USA. Rental income amounted to Euro 34 thousand in the financial year under report (previous year: Euro 23 thousand). Direct operating expenses came to Euro 0 thousand (previous year: Euro 1 thousand).

Investment property

Euro 000s	FY 2016	FY 2015
Gross value at 1 October	–	448
Change in scope of consolidation	2,606	–
Currency adjustments	–64	–
Disposals	–	–448
Gross value at 30 September	**2,542**	**–**
Depreciation at 1 October	–	–164
Scheduled depreciation	–	–7
Disposals	–	171
Depreciation at 30 September	**–**	**–**
Net value at 30 September	**2,542**	**–**

18. Joint ventures

MVV Energie AG operates joint ventures together with partners. In view of their size and their influence on the Group, the following companies have been identified as material joint ventures:

Juwi AG operates worldwide as a windfarm and solar park project developer and complements the Group's value chain. Through to 17 December 2015, this company was included in the MVV Energie Group as a joint venture recognised at equity.

Gemeinschaftskraftwerk Kiel GmbH operates a hard coal-fired power plant in Kiel. The company has joint shareholders, namely Uniper Kraftwerke GmbH and Stadtwerke Kiel AG, which is a subsidiary of MVV Energie AG. Stadtwerke Kiel AG owns a 50 % share of the capital in Gemeinschaftskraftwerk Kiel GmbH. All significant decisions have to be reached jointly by the shareholders.

Stadtwerke Ingolstadt is responsible for the energy supply in the Ingolstadt region. MVV Energie AG owns a 48.4 % share of the capital in Stadtwerke Ingolstadt Beteiligungen GmbH, which as the financial holding company pools several subsidiaries together. All significant decisions have to be reached jointly by the shareholders.

The assets, liabilities, equity, sales, annual net income and other income and expenses at material joint ventures are presented in the following tables:

Statement of comprehensive income for material joint ventures

	Juwi AG, Wörrstadt		**Gemeinschaftskraftwerk Kiel GmbH, Kiel**		**Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt**	
Euro 000s	**1 Oct 2015 to 17 Dec 2015**	1 Oct 2014 to 30 Sep 2015	**Financial year**	Previous year	**Financial year**	Previous year
Sales excluding energy taxes	246,634	370,116	96,939	91,840	181,896	200,823
Scheduled depreciation and amortisation	−3,069	−10,230	−3,038	−3,100	−12,121	−11,971
Interest income	4,882	818	17	135	89	90
Interest expenses	−2,824	−6,673	−7,667	−5,521	−986	−1,079
Income tax expenses/income	−9,916	7,950	3,385	–	−7,784	−5,780
Annual net income	25,578	−31,943	1,534	1,534	19,628	13,989
Other income and expenses	−95	3,140	—	—	−45	−71
Total comprehensive income for period	**25,483**	**−28,803**	**1,534**	**1,534**	**19,583**	**13,918**
Dividends received from material joint ventures	—	—	767	767	8,558	9,848

Further key financial figures for material joint ventures

	Juwi AG, Wörrstadt		Gemeinschaftskraftwerk Kiel GmbH, Kiel		Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt	
Euro 000s	**17 Dec 2015**	30 Sep 2015	**Financial year**	Previous year	**Financial year**	Previous year
Assets	**621,199**	**538,853**	**110,598**	**101,001**	**269,303**	**227,956**
Non-current assets	129,986	143,376	10,306	13,047	214,100	187,753
Current assets	491,213	395,477	100,292	87,954	55,203	40,203
of which cash and cash equivalents	116,024	55,622	10,137	34,572	10,655	36
Equity and liabilities	**621,199**	**538,853**	**110,598**	**101,001**	**269,303**	**227,956**
Equity	118,170	92,687	16,873	16,873	66,036	64,135
Non-current provisions	9,473	9,169	56,296	50,704	3,765	3,349
Non-current liabilities and other liability items	150,132	136,679	–	–	123,351	85,651
of which non-current financial debt	119,684	93,388	–	–	46,632	21,581
Current provisions	77,276	72,451	34,110	31,111	86	145
Current liabilities and other liability items	266,148	227,867	3,319	2,313	76,065	74,676
of which current financial debt	19,953	9,350	–	–	48,061	37,883

Reconciliation of summarised key financial figures with carrying amounts of material joint ventures

	Juwi AG, Wörrstadt		Gemeinschaftskraftwerk Kiel GmbH, Kiel		Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt	
Euro 000s	**1 Oct 2015 to 17 Dec 2015**	1 Oct 2014 to 30 Sep 2015	**Financial year**	Previous year	**Financial year**	Previous year
Net assets at 1 October	92,687	51,490	16,873	16,873	64,135	70,565
Profit/loss for period	25,578	–31,943	1,534	1,534	19,628	13,989
Distribution	–	–	–1,534	–1,534	–17,682	–20,348
Other income and expenses	–95	3,140	–	–	–45	–71
Capital increase	–	70,000	–	–	–	–
Net assets at 30 September	**118,170**	**92,687**	**16,873**	**16,873**	**66,036**	**64,135**
Group share of net assets	74,589	58,504	8,437	8,437	31,961	31,041
Other items	–	–	322	322	–154	–154
Goodwill	106,716	106,716	–	–	53,759	53,759
Carrying amount of interest in joint ventures	**181,305**	**165,220**	**8,759**	**8,759**	**85,566**	**84,646**

The aggregate profit/loss, total comprehensive income and carrying amounts at non-material joint ventures are presented in the following table:

Summarised key financial figures for non-material joint ventures

Euro 000s	Financial year	Previous year
Profit/loss for period	−9,136	2,621
Total comprehensive income for period	−9,136	2,621
Carrying amount of interest in non-material joint ventures	**34,944**	**50,000**

19. Associates

MVV Energie AG has identified Grosskraftwerk Mannheim AG as a material associate in view of its size and its influence on the Group.

Grosskraftwerk Mannheim AG operates what is one of Europe's most efficient hard coal-fired power plants in Mannheim. Overall, the Group owns a 28 % share of the capital in this company. Grosskraftwerk Mannheim AG is a power plant jointly owned by the following shareholders: RWE Generation SE, Essen, EnBW Energie Baden-Württemberg AG, Karlsruhe, and MVV RHE GmbH, Mannheim. Due to the positions held on the company's supervisory board and its votes at the annual general meeting, MVV RHE GmbH exercises significant influence on this company.

The assets, liabilities, equity, sales, annual net income and other income and expenses of the material associate Grosskraftwerk Mannheim AG are as follows:

Statement of comprehensive income for material associates

	Grosskraftwerk Mannheim AG, Mannheim	
Euro 000s	**Financial year**	Previous year
Sales excluding energy taxes	603,080	492,825
Scheduled depreciation and amortisation	−71,791	−23,451
Interest expenses	−46,606	−20,600
Income tax expenses/income	−27,204	−19,745
Annual net income	49,188	51,452
Other income and expenses	14,877	−78,439
Total comprehensive income for period	**64,065**	**−26,987**
Dividends received from material associates	1,861	1,861

Further key financial figures for material associates

	Grosskraftwerk Mannheim AG, Mannheim	
Euro 000s	**Financial year**	Previous year
Assets	**2,190,315**	**2,156,948**
Non-current assets	1,980,544	1,968,173
Current assets	209,771	188,775
of which cash and cash equivalents	26,357	536
Equity and liabilities	**2,190,315**	**2,156,948**
Equity	172,954	133,761
Non-current provisions	651,496	672,521
Non-current liabilities and other liability items	1,191,201	1,139,971
of which non-current financial debt	1,100,000	1,070,000
Current provisions	110,097	95,631
Current liabilities and other liability items	64,567	115,064
of which current financial debt	14,395	69,727

Reconciliation of summarised key financial figures with carrying amounts of material associates

	Grosskraftwerk Mannheim AG, Mannheim	
Euro 000s	**Financial year**	Previous year
Net assets at 1 October	133,761	149,168
Profit/loss for period	49,188	51,452
Distribution	−6,646	−6,647
Other income and expenses	14,877	−78,439
Other Group adjustments	−18,226	18,227
Net assets at 30 September	**172,954**	**133,761**
Group share of net assets	48,427	37,453
Other items	1,897	1,897
Carrying amount of investment in associate	**50,324**	**39,350**

The aggregate profit/loss, total comprehensive income and carrying amounts at non-material associates are presented in the following table:

Summarised key financial figures for non-material associates

Euro 000s	**Financial year**	Previous year
Profit/loss for period	5,312	34
Total comprehensive income for period	5,312	34
Carrying amount of investment in non-material associates	**9,927**	**3,795**

Other comprehensive income includes items resulting from the measurement of pension obligations and currency translation differences.

The income from shareholdings collected from associates by the MVV Energie Group amounted to Euro 9,158 thousand in the 2016 financial year (previous year: Euro 1,869 thousand).

Our share of the contingent liabilities of companies measured at equity amounts to Euro 550 thousand (previous year: Euro 1,413 thousand).

The associates included in consolidation have deviating financial years ending on 31 December. Their results have been recognised at the Group accordingly. As in the previous year, no publicly listed market prices were available.

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

On account of their size and their influence on the Group, the following companies have been identified as material subsidiaries: Stadtwerke Kiel AG, Kiel, Energieversorgung Offenbach AG, Offenbach am Main, and Juwi AG, Wörrstadt.

The statements of comprehensive income and further key financial information concerning the non-controlled interests in the companies are presented in the following tables.

The figures stated represent amounts prior to consolidation.

Statement of comprehensive income for non-controlled interests in Energieversorgung Offenbach AG

Euro 000s	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015
Sales excluding energy taxes	388,372	438,346
Annual net income	11,319	12,640
Other income and expenses	2,385	990
Total comprehensive income for period	**13,704**	**13,630**
Total comprehensive income attributable to non-controlling interests	6,852	6,815
Dividends paid (to non-controlling shareholders)	6,812	7,350

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

Euro 000s	**30 Sep 2016**	30 Sep 2015
Assets	**354,177**	**419,012**
Non-current assets	285,937	298,933
Current assets	68,240	120,079
of which cash and cash equivalents	11,974	33,746
Equity and liabilities	**354,177**	**419,012**
Equity	146,139	155,413
Non-current provisions	31,041	27,711
Non-current liabilities and other liability items	98,156	136,910
of which non-current financial debt	64,189	101,548
Current provisions	9,206	10,188
Current liabilities and other liability items	69,635	88,790
of which current financial debt	27,359	17,874

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

Euro 000s	1 Oct 2015 to 30 Sep 2016	1 Oct 2014 to 30 Sep 2015
Sales excluding energy taxes	739,791	795,406
Annual net income	21,596	18,228
Other income and expenses	314	467
Total comprehensive income for period	**21,910**	**18,695**
Total comprehensive income attributable to non-controlling interests	10,736	9,161
Dividends paid (to non-controlling shareholders)	10,143	6,076

Statement of comprehensive income for non-controlled interests in Juwi AG

Euro 000s	18 Dec 2015 to 30 Sep 2016	1 Oct 2014 to 30 Sep 2015
Sales excluding energy taxes	33,161	–
Annual net income	2,229	–
Other income and expenses	–112	–
Total comprehensive income for period	**2,117**	**–**
Total comprehensive income attributable to non-controlling interests	781	–
Dividends paid (to non-controlling shareholders)	–	–

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

Euro 000s	30 Sep 2016	30 Sep 2015
Assets	**612,108**	**664,150**
Non-current assets	530,950	551,704
Current assets	81,158	112,446
of which cash and cash equivalents	149	143
Equity and liabilities	**612,108**	**664,150**
Equity	207,187	206,604
Non-current provisions	34,627	31,420
Non-current liabilities and other liability items	171,291	221,085
of which non-current financial debt	129,920	173,383
Current provisions	15,083	20,612
Current liabilities and other liability items	183,920	184,429
of which current financial debt	102,607	89,819

Further key financial figures for non-controlled interests in Juwi AG

Euro 000s	30 Sep 2016	30 Sep 2015
Assets	**237,518**	**–**
Non-current assets	82,491	–
Current assets	155,027	–
of which cash and cash equivalents	15,315	–
Equity and liabilities	**237,518**	**–**
Equity	104,053	–
Non-current provisions	571	–
Non-current liabilities and other liability items	92,045	–
of which non-current financial debt	91,713	–
Current provisions	3,753	–
Current liabilities and other liability items	37,096	–
of which current financial debt	19,319	–

Total non-controlled interests in subsidiaries in the period under report amounted to Euro 243,653 thousand, of which Euro 99,400 thousand related to Stadtwerke Kiel AG, Kiel, Euro 54,435 thousand to Energieversorgung Offenbach AG, Offenbach am Main, Euro 41,272 thousand to Juwi AG, Wörrstadt, and Euro 48,547 thousand to non-material subsidiaries.

21. Other financial assets

Write-downs and the development in other financial assets have been reported in the following table, as well as under income from companies recognised at equity and other income from shareholdings (Note 8), financing income (Note 11) and financing expenses (Note 12).

Other financial assets

Euro 000s	Other majority shareholdings	Other shareholdings	Loans in connection with finance leases	General loans and securities	**Total**
Gross value at 1 October 2014	3,162	14,093	47,018	2,291	66,564
Change in scope of consolidation	2,969	23	–	1,749	4,741
Currency adjustments	5	–	–	–	5
Additions	114	15	2,687	543	3,359
Disposals	–3,144	–126	–391	–2,304	–5,965
Reclassifications	–	–	–5,466	564	–4,902
Gross value at 30 September 2015	**3,106**	**14,005**	**43,848**	**2,843**	**63,802**
Amortisation at 1 October 2014	–1,814	–75	–33	–683	–2,605
Currency adjustments	–5	–	–	–	–5
Disposals	158	75	–	683	916
Amortisation at 30 September 2015	**–1,661**	**–**	**–33**	**–**	**–1,694**
Net value at 30 September 2015	**1,445**	**14,005**	**43,815**	**2,843**	**62,108**
Gross value at 1 October 2015	3,106	14,005	43,848	2,843	63,802
Change in scope of consolidation	306	999	–	22	1,327
Currency adjustments	3	–1	–	–	2
Additions	2,601	6	5,136	13,859	21,602
Disposals	–4,769	–115	–408	–9,872	–15,164
Reclassifications	100	–	–6,118	453	–5,565
Reclassifications pursuant to IFRS 5	–	–7,654	–	–	–7,654
Gross value at 30 September 2016	**1,347**	**7,240**	**42,458**	**7,305**	**58,350**
Amortisation at 1 October 2015	–1,661	–	–33	–	–1,694
Currency adjustments	–3	–	–	–	–3
Impairment losses	–71	–845	–	–	–916
Disposals	1,243	–	–	–	1,243
Amortisation at 30 September 2016	**–492**	**–845**	**–33**	**–**	**–1,370**
Net value at 30 September 2016	**855**	**6,395**	**42,425**	**7,305**	**56,980**

Other financial assets include loans, receivables in connection with finance leases, securities, other majority shareholdings and other shareholdings. These are measured and categorised as follows:

The loans included in this line item are classified under loans and receivables, while leasing receivables are classified under leases. Loans have been valued at amortised cost, less impairments where applicable. Finance leases have been recognised as receivables in the amount of the present value of the minimum leasing payments (net investment value). Securities have been recognised at fair value. The other shareholdings recognised under other financial assets involve minority shareholdings, associates and joint ventures not included in MVV Energie's consolidated financial statements due to materiality considerations. Other majority shareholdings and other shareholdings are measured at amortised cost, corrected where necessary to account for impairments due to a reduction in expected cash flows or existing default risks.

Any default risks identifiable for financial assets are accounted for with write-downs. These write-downs are recognised under income from shareholdings or in the financial result.

Loans and leasing receivables have fixed interest rates, with an average interest rate of 3.3 % (previous year: 5.2 %). The average period for which interest rates remain fixed amounts to 6.5 years in the case of fixed-interest loans (previous year: 5.0 years) and to 6.5 years in the case of finance leases (previous year: 5.9 years). Reclassifications mainly involve reclassifications of the aforementioned items to current financial assets in line with their respective maturities, as well as the reclassification of one other shareholding to assets held for sale.

Further information about financial instruments can be found in Note 36.

Securities chiefly consist of shareholdings in funds, in most cases held to secure part-time early retirement credit balances.

As in the previous year, there were no restrictions on disposal or other encumbrances.

Other financial assets also include the non-current share of finance leases. In several contracting projects, the MVV Energie Group acts as lessor in the context of finance lease agreements. The reconciliation of the minimum leasing payments with gross investments in leases is as follows:

Reconciliation

Euro 000s	**30 Sep 2016**	30 Sep 2015
Present value of minimum leasing payments with maturities < 1 year	**5,763**	**4,493**
Present value of minimum leasing payments with maturities > 1 year		
1 to 5 years	20,288	18,312
longer than 5 years	22,383	24,133
Present value of minimum leasing with maturities > 1 year	**42,671**	**42,445**
Total present value of minimum leasing payments	**48,434**	**46,938**
Financing income not yet realised	14,700	18,209
Gross investments in finance leases	**63,134**	**65,147**

22. Other receivables and assets

Other receivables and assets have been broken down into their respective contents and counterparties in the following tables. The hedging relationship has also been stated in the case of derivative financial instruments.

Other receivables and assets

	30 September 2016			30 September 2015		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	365,663	186,042	551,705	300,775	189,512	490,287
Other tax receivables	–	20,308	20,308	–	14,437	14,437
Receivables from security deposits for energy trading transactions	–	45,604	45,604	–	54,016	54,016
Deferred expenses and accrued income	7,462	7,034	14,496	13,194	8,495	21,689
Receivables in connection with finance leases	–	5,330	5,330	–	4,877	4,877
Suppliers with debit balances	–	3,263	3,263	–	2,742	2,742
Emission rights	–	448	448	–	496	496
Loans	–	1,258	1,258	–	361	361
Receivables from employees	–	295	295	–	406	406
Escrow accounts	–	53	53	–	104	104
Miscellaneous other assets	22,616	36,989	59,605	11,753	38,621	50,374
	395,741	**306,624**	**702,365**	**325,722**	**314,067**	**639,789**

Derivative financial instruments

	30 September 2016			30 September 2015		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	365,663	186,042	551,705	300,775	189,512	490,287
of which without IAS 39 hedges	353,437	184,822	538,259	292,747	187,305	480,052
of which cash flow hedges	12,226	1,220	13,446	8,028	2,207	10,235

The increase in derivative financial instruments was due to extended trading activities. These items relate to interest, currency and commodity derivatives for electricity, gas, coal, CO_2 and other rights.

Further information about financial instruments can be found in Note 36.

Other tax receivables mainly include input tax and energy tax credits.

Non-current miscellaneous other assets include expenses of Euro 7,747 thousand for the extension and renewal of infrastructure assets at the two British power plants. These assets are not within the power of control of MVV Energie AG but are essential for the supply of electricity and steam. The outlays thereby incurred are being deferred over the corresponding contractual term.

Current other assets also include the current portion of leasing receivables and loans. Measurement of the current portion of leasing receivables and loans is based on the same principles as measurement of the non-current portions. These principles are outlined under other financial assets.

Furthermore, miscellaneous other assets mainly relate to receivables due from a former shareholder of a subsidiary, receivables due from third parties for building cost grants and input taxes not yet deductible.

Other receivables and assets

Euro 000s	30 September 2016 Non-current	30 September 2016 Current	30 September 2016 Total	30 September 2015 Non-current	30 September 2015 Current	30 September 2015 Total
Other receivables and assets						
from third parties	393,821	304,704	698,525	314,889	312,136	627,025
from other majority shareholdings	–	376	376	–	254	254
from companies recognised at equity	1,920	1,494	3,414	10,833	1,677	12,510
	395,741	**306,624**	**702,365**	**325,722**	**314,067**	**639,789**

The write-downs and maturity structures for other receivables and assets have been presented in Note 36.

To minimise the counterparty risk involved in highly fluctuating fair values of energy trading derivatives, security deposits are exchanged with external trading partners. These involve margins. To reduce counterparty risks, payments are made both with the European Energy Exchange (EEX) and in some cases within the framework of bilateral agreements. These are reflected in the receivables from security deposits for energy transactions line item. Receivables from security deposits amounted to Euro 45,604 thousand (previous year: Euro 54,016 thousand).

There were no indications of impairment requirements for non-impaired other receivables and assets. All write-downs undertaken were calculated following individual consideration of each case and were not based on any general allowance.

23. Inventories

Inventories

Euro 000s	30 Sep 2016	30 Sep 2015
Raw materials and supplies	42,577	35,694
Finished and unfinished products and services, project rights	109,555	13,101
Finished and unfinished products (other) and merchandise	46,779	22,306
Advance payments	95,296	656
Commodity trading assets	1,850	2,246
	296,057	**74,003**

The full consolidation of the Juwi subgroup led inventories to increase by Euro 217,990 thousand.

Write-downs of Euro 137 thousand were recognised for raw materials and supplies (previous year: Euro 193 thousand). This figure includes write-ups of Euro 3 thousand on raw materials and supplies due to an increase in the net disposal price (previous year: Euro 67 thousand).

The commodity trading assets item comprises inventories relating to special gas storage transactions. These items have been measured by reference to wholesale prices as of the balance sheet date and thus involve Level 2 measurement. Definitions of individual measurement levels can be found in Note 36.

24. Trade receivables

Trade receivables

Euro 000s	30 Sep 2016	30 Sep 2015
Trade receivables	457,961	367,406
of which due from other majority shareholdings	433	107
of which due from companies recognised at equity	27,007	9,636
of which due from other shareholdings	1,435	527

The table shows those trade receivables with terms of under one year. Trade receivables with terms of more than one year are of immaterial significance at the Group and have been recognised under other receivables and assets.

The trade receivables recognised as of 30 September 2016 include receivables of Euro 82,465 thousand (previous year: Euro 988 thousand) for the settlement of construction contracts in line with their percentage of completion. Revenues of Euro 334,059 thousand were recognised for construction contracts in the year under report (previous year: Euro 698 thousand). Total costs incurred for construction contracts not yet complete as of the balance sheet date came to Euro 252,804 thousand (previous year: Euro 797 thousand). Construction contracts not yet complete resulted in a profit of Euro 34,597 thousand (previous year: loss of Euro 99 thousand). Advance payments received for construction contracts amounted to Euro 21,659 thousand at the balance sheet date (previous year: Euro 0 thousand).

The full consolidation of the Juwi subgroup led trade receivables to increase by Euro 133,251 thousand.

Receivables with carrying amounts totalling Euro 290 thousand were sold within the framework of factoring agreements in the 2016 financial year (previous year: Euro 495 thousand). These receivables were fully retired.

The write-downs and maturity structures for trade receivables have been presented in Note 36. Receivables are written down on the basis of their actual age. Furthermore, large receivables are assessed individually to determine their specific write-down requirements. There were no indications of write-down requirements for non-impaired trade receivables.

25. Tax receivables

The tax receivables of Euro 15,958 thousand (previous year: Euro 13,315 thousand) mainly relate to corporate income tax and trade tax refund claims. These have been recognised at nominal value or, where necessary, at present value.

26. Cash and cash equivalents

Cash and cash equivalents predominantly comprise credit balances at banks. The acquisition of fully consolidated companies and other business units resulted in the addition of cash and cash equivalents of Euro 116,054 thousand (previous year: Euro 614 thousand). The disposal of fully consolidated companies and other business units led to the retirement of cash and cash equivalents of Euro 1,842 thousand (previous year: Euro 7,848 thousand).

Within the framework of short-term liquidity management structures, credit balances are exclusively deposited at banks of impeccable creditworthiness. As in the previous year, such balances bear interest at interbank levels.

27. Assets held for sale

The partial stake held in the shares of one other shareholding was classified as held for sale. The sale of this other shareholding is expected to be completed as of 1 January 2017.

28. Equity

The structure and development of equity have been presented in the statement of changes in equity.

Share capital: The share capital of MVV Energie AG amounts to Euro 168,721 thousand and is divided into 65,906,796 individual registered shares of Euro 2.56 each. All registered shares are paid up in full. The City of Mannheim directly and indirectly owned 50.1 % of the shares as of 30 September 2016, while EnBW Energie Baden-Württemberg AG held 22.5 %, RheinEnergie AG 16.3 % and ENGIE Deutschland AG 6.3 % of the shares. The remaining 4.8 % of the shares were in free float.

Authorised capital II: By resolution dated 14 March 2014, the Annual General Meeting of MVV Energie AG authorised the Executive Board until 13 March 2019 to increase the share capital on one or several occasions by a total of up to Euro 51,200 thousand. Shareholders must generally be granted subscription rights; however, the Executive Board may exclude such rights on one or several occasions, in full or in part, for a total of Euro 13,180 thousand. The Executive Board of MVV Energie AG has not yet made any use of this authorisation.

Authorisation to buy back treasury stock: By resolution dated 13 March 2015, the Annual General Meeting authorised the Executive Board until 12 March 2020 to acquire treasury stock on a scale of up to 10 % of existing share capital upon adoption of the resolution. The Executive Board of MVV Energie AG has not yet made any use of this authorisation.

Capital reserve: The capital reserve relates to MVV Energie AG. This reserve includes external flows of funds requiring inclusion under § 272 HGB.

Equity generated: In addition to the prorated revenue reserves and accumulated annual net income of MVV Energie AG and of other consolidated companies since the date of initial consolidation, equity generated also includes accumulated changes recognised directly in equity as a result of the fair value measurement of financial instruments, mainly relating to hedging relationships recognised under IAS 39, as well as currency translation differences arising upon the translation of foreign financial statements and actuarial gains and losses for defined benefit plans. Income of Euro 13,274 thousand was recognised directly in equity in the financial year under report in connection with the fair value measurement of financial instruments (previous year: expenses of Euro 7,192 thousand).

29. Provisions

Provisions

Euro 000s	Balance at 1 Oct 2015	Change in scope of consolidation	Currency adjustments	Utilised	Reversed	Added	Reclassified	Interest component	**Balance at 30 Sep 2016**
Non-current provisions									
Pensions and similar obligations	**72,566**	**837**	**–**	**–2,593**	**–**	**14,944**	**–**	**1,707**	**87,461**
Tax provisions	**2,969**	**141**	**–**	**–**	**–**	**787**	**–**	**–**	**3,897**
Other provisions									
Early retirement	14,946	–	–	–4	8	3,123	–1,279	952	17,730
Employee benefit expenses	30,934	–	–7	–431	620	4,249	–1,039	3,835	36,921
Restructuring obligations	3,934	–	–	–	–	3,643	–6,479	112	1,210
Refurbishment measures	8,294	–	–	–	–	–	–546	266	8,014
Warranties	–	7,560	–2	–427	–	2,285	–	339	9,755
Dismantling obligations	21,769	46	2	–	–	2,944	–362	641	25,040
Miscellaneous contingencies	15,991	889	–	–37	502	3,968	–1,436	153	19,026
Total other provisions	**95,868**	**8,495**	**–7**	**–899**	**1,130**	**20,212**	**–11,141**	**6,298**	**117,696**
Total non-current provisions	**171,403**	**9,473**	**–7**	**–3,492**	**1,130**	**35,943**	**–11,141**	**8,005**	**209,054**
Current provisions									
Tax provisions	**25,162**	**4,407**	**–98**	**–13,941**	**2,032**	**24,445**	**–**	**–**	**37,943**
Other provisions									
Early retirement	7,994	136	–3	–7,697	–	4	8,041	–	8,475
Employee benefit expenses	26,157	5,989	–78	–27,066	2,374	30,067	2,099	–	34,794
Services not yet invoiced	2,402	9,700	–73	–10,096	236	9,240	–	–	10,937
Restructuring obligations	3,518	–	–	–2,176	–	6,209	–1,342	–	6,209
Refurbishments	1,587	62	1	–570	108	–	546	–	1,518
Warranties	51	22,633	–13	–14,587	1,019	3,109	–	–	10,174
Dismantling obligations	1,939	–	1	–88	93	–	362	–	2,121
Miscellaneous contingencies	57,811	31,488	–371	–33,016	19,252	54,350	1,406	–	92,416
Total other provisions	**101,459**	**70,008**	**–536**	**–95,296**	**23,082**	**102,979**	**11,112**	**–**	**166,644**
Total current provisions	**126,621**	**74,415**	**–634**	**–109,237**	**25,114**	**127,424**	**11,112**	**–**	**204,587**
Total provisions	**298,024**	**83,888**	**–641**	**–112,729**	**26,244**	**163,367**	**–29**	**8,005**	**413,641**

Provisions broken down by maturity

	30 September 2016			30 September 2015		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Provisions for pensions and similar obligations	87,461	–	87,461	72,566	–	72,566
Tax provisions	3,897	37,943	41,840	2,969	25,162	28,131
Employee benefit expenses	36,921	34,794	71,715	30,934	26,157	57,091
Early retirement	17,730	8,475	26,205	14,946	7,994	22,940
Services not yet invoiced	–	10,937	10,937	–	2,402	2,402
Restructuring obligations	1,210	6,209	7,419	3,934	3,518	7,452
Refurbishments	8,014	1,518	9,532	8,294	1,587	9,881
Warranties	9,755	10,174	19,929	–	51	51
Dismantling obligations	25,040	2,121	27,161	21,769	1,939	23,708
Miscellaneous contingencies	19,026	92,416	111,442	15,991	57,811	73,802
	209,054	**204,587**	**413,641**	**171,403**	**126,621**	**298,024**

Uncertain tax liabilities have been recognised as tax provisions by reference to the best estimate of the anticipated tax payment or the expected amount to the extent that such payment is likely to arise. Tax provisions include provisions for taxes on income, such as corporate income tax, including the solidarity surcharge, and trade tax. The increase in tax provisions was primarily due to the first-time consolidation of the Juwi subgroup in the financial year under report and to increased additions to provisions for corporate income tax at group companies.

The provisions for early retirement expenses mainly relate to legal and constructive obligations towards employees as a result of part-time early retirement agreements. The actuarial assumptions correspond to those used in the measurement of pensions and similar provisions.

Of the restructuring obligations whose recognition dates back to the "Once Together" restructuring programme introduced in 2011 to cover socially responsible personnel cuts, an amount of Euro 6,762 thousand was reclassified to provisions for early retirement expenses in the financial year under report. The obligations are underpinned by signed part-time early retirement agreements and will gradually be added. Furthermore, an amount of Euro 294 thousand was reclassified in this regard to other provisions for employee benefit expenses.

The provisions for employee benefit expenses mainly include collectively agreed obligations, such as allowances, compensation payments, bonus payments, employee working hour credits and anniversary bonuses. The provisions for employee benefit expenses include individual items for which utilisation is dependent on a specified degree of target achievement.

Restructuring obligations of Euro 7,419 thousand were newly added in the 2016 financial year. This provision results from a restructuring plan compiled and approved within a programme for restructuring and making socially responsible personnel cuts in business fields.

The services not yet invoiced line item principally involves supplies and services from third parties which have already been provided but not yet invoiced. These have been measured on the basis of appropriate estimates.

The provisions for dismantling obligations were added in connection with the construction of a gas storage facility and for wind turbines.

The provisions for warranties relate to wind and solar projects already completed. These provisions were recognised on the basis of contractual requirements. Recognition has been based on assessments of individual cases and relevant factors. The year-on-year increase in this item is chiefly due to the first-time consolidation of the Juwi subgroup.

Miscellaneous contingencies mainly include provisions for potential losses on pending transactions, provisions for risks in connection with a company audit of interest expenses pursuant to § 233a of the German Fiscal Code (AO) and provisions for risks in connection with contractual obligations for completed projects and for the renewal of infrastructure assets. Furthermore, this item also includes provisions for litigation risks. These involve several individual risks for which the level of claim is uncertain. The value has been based on the most likely outcome of the litigation expected on the basis of the information currently available. The provisions recognised are utilised in line with the terms to which they have been allocated.

30. Provisions for pensions and similar obligations

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

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

Given the redistribution of the benefits provided by ZVKs among member companies and the lack of adequate information about the age structures, personnel turnover rates and salaries of the employees thereby covered, no information is available on the proportion of future payment obligations (economic obligation) accruing to the MVV Energie Group. In view of this, IFRS does not permit recognition of provisions and the amounts therefore have to be treated at the MVV Energie Group as a defined contribution obligation, even though it is actually a defined benefit pension plan. Contributions to the pension plan are measured as a percentage of compensation subject to the additional pension premium and are borne by employees and employers. The percentage rate of contribution is determined by the ZVKs. Contributions in the 2017 financial year are expected in the same amount. The contributions are used for the beneficiaries as a collective entity. Should the ZVKs have insufficient funds, then they could raise the mandatory contribution. Should the MVV Energie Group terminate its membership of the ZVKs, then they would be entitled to financial settlement. The amount of settlement is calculated as the present value of beneficiaries' existing entitlement and future claims on the part of their surviving dependants and existing pension entitlements for vested claims at the time at which membership is terminated.

An amount of Euro 26,023 thousand was paid into the state pension systems in the 2016 financial year (previous year: Euro 24,743 thousand). The payments made to municipal supplementary pension companies (ZVKs) and the state pension system are viewed as payments to defined contribution plans. These contributions have been recognised as expenses and reported under employee benefit expenses.

An amount of Euro 14,248 thousand was paid into defined contribution pension systems in the 2016 financial year (previous year: Euro 15,722 thousand).

Furthermore, there are direct pension obligations resulting from former collectively agreed provisions (measured in terms of duration of company service and employee compensation), as well as individual commitments made to Executive Board members.

Provisions for pension and similar obligations are recognised exclusively for defined benefit plans.

The principal estimates involved in the measurement of provisions for pensions and similar obligations relate in particular to the discount factor, biometric probabilities and trend assumptions. Any deviations in the development in these estimates could result in differences between the amounts recognised and the obligations actually arising over time. Actuarial gains and losses have been fully recognised in the period in which they arise. They have been recognised outside the income statement in the statement of income and expenses recognised in group equity. This means that any amendments in estimates have direct implications for the MVV Energie Group.

Pursuant to IAS 19, these pension provisions are calculated using the projected unit credit method. As well as pensions and vested claims known of at the balance sheet date, this method also accounts for pay rises and pension increases expected in future. The calculation made application of the 2005 G mortality tables published by Prof. Dr. Klaus Heubeck.

The main parameters used to calculate the defined benefit plans as of 30 September 2016 are:

	30 Sep 2016	30 Sep 2015
Discount rate	1.4%	2.4%
Future pay rises	2.5–3.0%	0.0–3.0%
Future pension increases	1.6–3.0%	1.6–2.0%

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

Pension provision expenses

Euro 000s	**FY 2016**	FY 2015
Service cost	2,197	2,054
Interest expenses	1,707	1,700
	3,904	**3,754**

The interest expenses for vested pension claims have been reported in the income statement under financing expenses (other interest and similar expenses). The other expenses have been recognised as employee benefit expenses.

The present value of the defined benefit obligations developed as follows:

Development in pension claims

	30 September 2016			30 September 2015		
Euro 000s	**Present value of defined benefit obligations**	**Fair value of plan assets**	**Total**	Present value of defined benefit obligations	Fair value of plan assets	Total
Balance at 1 October	72,566	–	72,566	72,232	–	72,232
Current service cost	2,197	–	2,197	2,054	–	2,054
Interest expenses (interest income)	1,707	–	1,707	1,700	–	1,700
Remeasurement						
(i) Income from plan assets (excluding amounts included in interest income from plan assets)	–	7	7	–	–	–
(ii) Actuarial gains/losses	13,147	1	13,146	–982	–	–982
Retrospective service cost	–	–	–	–	–	–
Payments made to beneficiaries	–2,592	–	–2,592	–2,438	–	–2,438
Contributions to plan assets	–	393	393	–	–	–
Change in scope of consolidation	837	–	837	–	–	–
Reclassifications	111	111	–	–	–	–
Balance at 30 September	**87,973**	**512**	**87,461**	**72,566**	**–**	**72,566**

Due to the full consolidation of the Juwi subgroup in the 2016 financial year, the defined benefit pension obligations at the Group are now partly countered by plan assets.

Amount of provision recognised in balance sheet

Euro 000s	FY 2016	FY 2015
Present value of defined benefit obligation	87,973	72,566
Fair value of plan assets	512	–
Provision recognised at 30 September	**87,461**	**72,566**

The plan assets involve contractual trust arrangements (CTAs) managed as trust assets by the trustee Deutsche Pensflex Treuhand e.V. Furthermore, there are insurance contracts with private insurers and an investment fund organised by an international fund company and listed on the capital market.

The actuarial gains and losses recognised in group equity for defined benefit obligations developed as follows:

Accumulated actuarial gains and losses recognised in equity

Euro 000s	FY 2016	FY 2015
Accumulated actuarial gains (+) and losses (-) recognised in equity at 1 October	–12,229	–12,588
Actuarial gains (+) and losses (-) recognised in equity	–7,179	359
Accumulated actuarial gains (+) and losses (-) recognised in equity at 30 September	**–19,408**	**–12,229**

Experience adjustments to the present value of pension claims (changes in assumptions) represent part of the actuarial gains and losses attributable to pension claims in the given year.

Pension payments of Euro 2,850 thousand are forecast for existing pension obligations for the 2017 financial year.

The weighted average duration of the defined benefit plans amounts to 16.1 years.

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

Expected pension payments

Euro 000s	
2017	2,850
2018	2,918
2019	3,246
2020	3,327
2021	3,385
>2021	82,985
	98,711

The sensitivity analysis is based on changes in one assumption while other assumptions remain constant. This is unlikely to occur in reality. Furthermore, it is possible that changes in several assumptions will correlate with each other. The sensitivity of the defined benefit obligation to actuarial assumptions has been calculated using the same method used to calculate pension provisions in the balance sheet.

The methods and types of assumption used to prepare the sensitivity analysis have not changed compared with the previous year.

Sensitivity analysis

	Impact on obligation		
	Change in assumption by	Increase in assumption	Reduction in assumption
Discount rate	0.50 %	Reduction by 7 %	Increase by 6 %
Future pay rises	0.50 %	Increase by 1 %	Reduction by 3 %
Future pension increase	0.50 %	Increase by 3 %	Reduction by 5 %
Mortality	1 year	Increase by 3 %	–

31. Financial debt

Financial debt

Euro 000s	30 September 2016 Non-current	30 September 2016 Current	30 September 2016 Total	30 September 2015 Non-current	30 September 2015 Current	30 September 2015 Total
Liabilities						
to banks	1,092,927	369,240	1,462,167	1,356,552	187,712	1,544,264
in connection with finance leases	50,672	3,468	54,140	1,777	1,535	3,312
to other majority shareholdings	–	418	418	–	360	360
to companies recognised at equity	–	31,836	31,836	–	26,581	26,581
to other shareholdings	–	970	970	–	350	350
Other financial debt	32,249	34,189	66,438	24,583	3,914	28,497
	1,175,848	**440,121**	**1,615,969**	**1,382,912**	**220,452**	**1,603,364**

Maturity in years

Euro 000s	30 September 2016 < 1 year	30 September 2016 1 – 5 years	30 September 2016 > 5 years	30 September 2015 < 1 year	30 September 2015 1 – 5 years	30 September 2015 > 5 years
Liabilities						
to banks	369,240	454,918	638,009	187,712	675,373	681,178
in connection with finance leases	3,468	3,401	47,271	1,535	1,777	–
to other majority shareholdings, companies recognised at equity and other shareholdings	33,224	–	–	27,291	–	–
Other financial debt	34,189	16,414	15,835	3,914	13,360	11,224
	440,121	**474,733**	**701,115**	**220,452**	**690,510**	**692,402**

The fixed-rate liabilities to banks amounting to Euro 1,246 million (previous year: Euro 1,266 million) have an average interest rate of 2.9 % (previous year: 2.5 %). The floating-rate liabilities to banks amounting to Euro 216 million (previous year: Euro 278 million) have an average interest rate of 2.7 % (previous year: 0.5 %). The average remaining period for which the rate remains fixed in the case of fixed-rate liabilities amounts to six years (previous year: six years).

As of 30 September 2016, the MVV Energie Group had undrawn committed credit lines of Euro 527 million at its disposal (previous year: Euro 437 million).

Liabilities in connection with finance leases are recognised at the present value of future leasing payments. The fair values of other financial debt items are basically equivalent to the carrying amounts reported.

The liabilities in connection with finance lease contracts involve buildings, various items of technical equipment and plant and office equipment. The agreements provide for extension options in some cases, but do not include any purchase options or price adjustment clauses.

The transition from the present value of future minimum leasing payments to the liabilities reported is as follows:

Present value of minimum leasing payments

Euro 000s	30 Sep 2016	30 Sep 2015
Present value of minimum leasing payments with maturities		
up to 1 year	3,468	1,445
1 to 5 years	3,401	1,618
longer than 5 years	47,271	–
Total	**54,140**	**3,063**
Financing costs not yet realised	33,169	292
Gross liabilities in connection with finance leases	**87,309**	**3,355**

32. Other liabilities

Other liabilities have been broken down into their respective contents and counterparties in the tables below. The hedging relationship has also been stated in the case of derivative financial instruments. Following initial recognition, liabilities other than derivative financial instruments are measured at amortised cost using the effective interest rate method. This is basically consistent with their present values.

Other liabilities

	30 September 2016			30 September 2015		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	381,031	207,892	588,923	375,837	202,525	578,362
Liabilities for other taxes	–	46,491	46,491	–	34,457	34,457
Deferred income and accrued expenses	155,820	12,497	168,317	133,297	1,197	134,494
Liabilities to employees	–	24,555	24,555	–	21,811	21,811
Advance payments received	–	120,621	120,621	–	19,456	19,456
Customer credit balances	–	8,491	8,491	–	8,991	8,991
Interest liabilities	–	7,354	7,354	–	7,897	7,897
Liabilities for security deposits for energy trading transactions	–	2,203	2,203	–	2,358	2,358
Concession duties	–	1,243	1,243	–	788	788
Social security liabilities	–	676	676	–	607	607
Miscellaneous other liabilities	13,396	17,904	31,300	26,874	21,348	48,222
	550,247	**449,927**	**1,000,174**	**536,008**	**321,435**	**857,443**

Other liabilities

	30 September 2016			30 September 2015		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Liabilities	550,247	329,306	879,553	536,008	301,979	837,987
of which to companies recognised at equity	1,315	11,143	12,458	117	7,051	7,168
Advance payments received for orders	–	120,621	120,621	–	19,456	19,456
	550,247	**449,927**	**1,000,174**	**536,008**	**321,435**	**857,443**

Derivative financial instruments involve interest rate derivatives, currency derivatives and commodity derivatives for electricity, gas, coal, CO_2 and other rights. Further details about financial instruments can be found in Note 36.

Derivative financial instruments

	30 September 2016			30 September 2015		
Euro 000s	**Non-current**	**Current**	**Total**	Non-current	Current	Total
Derivative financial instruments	381,031	207,892	588,923	375,837	202,525	578,362
of which without IAS 39 hedges	331,552	195,503	527,055	303,004	189,335	492,339
of which cash flow hedges	49,479	12,389	61,868	72,833	13,190	86,023

To reduce the counterparty risk involved in highly fluctuating fair values of energy trading derivatives, security deposits (margins) are exchanged with the EEX. Moreover, the Group has entered into bilateral risk reduction agreements in some cases.

Liabilities for other taxes mainly involve energy tax and value added tax liabilities.

Mainly as a result of the first-time consolidation of the Juwi subgroup, advance payments received for orders relating to projects due to be implemented rose to a total of Euro 121 million in the 2016 financial year.

Miscellaneous other liabilities mainly relate to liabilities for the remaining purchase price payment for a subsidiary acquired, liabilities for the capital contribution not yet paid up in full at a shareholding and liabilities for progress payments.

Deferred income and accrued expenses largely involve building cost grants for house connection costs.

33. Trade payables

Trade payables

Euro 000s	**30 Sep 2016**	30 Sep 2015
Trade payables	397,233	386,455
to other majority shareholdings	57	157
to companies recognised at equity	14,617	20,053
to other shareholdings	27	9

Trade payables are measured at amortised cost. The table shows trade payables with terms of under one year. Due to their immaterial significance for the Group, trade payables maturing in the medium to long term have been recognised under other liabilities.

The full consolidation of the Juwi subgroup led trade payables to increase by Euro 65,946 thousand.

34. Tax liabilities and deferred taxes

The tax liabilities of Euro 5,477 thousand (previous year: Euro 303 thousand) consist of income tax liabilities.

The deferred taxes reported for the 2016 financial year relate to the following items:

Deferred taxes

	30 September 2016		30 September 2015	
Euro 000s	**Deferred tax assets**	**Deferred tax liabilities**	Deferred tax assets	Deferred tax liabilities
Intangible assets	1,511	−23,845	1,941	−15,758
Property, plant and equipment, including investment property	10,374	−164,833	14,288	−129,307
Inventories	1,838	−6,393	989	−1,118
Special item	–	−2,121	–	−1,663
Other assets and positive fair values of derivatives	15,206	−246,439	3,002	−229,174
Provisions for pensions	14,508	–	10,245	–
Non-current other provisions	21,482	–	12,803	–
Current other provisions	7,000	−14,815	4,639	−11,273
Liabilities and negative fair values of derivatives	277,731	−20,004	241,715	−2,000
Losses carried forward	36,865	–	7,233	–
Deferred taxes (gross)	**386,515**	**−478,450**	**296,855**	**−390,293**
Value adjustment	−2,229	–	−7,028	–
Netting	−333,673	333,673	−269,527	269,527
Deferred taxes (net)	**50,613**	**−144,777**	**20,300**	**−120,766**

Of the (net) deferred taxes presented above, Euro 33,199 thousand relate to non-current deferred tax assets (previous year: Euro 13,322 thousand) and Euro 109,593 thousand to non-current deferred tax liabilities (previous year: Euro 88,341 thousand).

No deferred tax assets have been recognised for corporate income tax loss carryovers of Euro 80,831 thousand (previous year: Euro 23,658 thousand), for trade tax loss carryovers of Euro 77,318 thousand (previous year: Euro 19,362 thousand) or for international loss carryovers of Euro 89,093 thousand (previous year: Euro 23,753 thousand).

For temporary differences at shareholdings of Euro 11,081 thousand (previous year: Euro 10,568 thousand), no deferred tax liabilities have been stated for an amount of Euro 3,358 thousand (previous year: Euro 3,202 thousand), as such differences are unlikely to be reversed by dividend distributions or disposal of the respective companies in the foreseeable future.

Deferred tax assets of Euro 16,895 thousand have been recognised as of the balance sheet date for companies that generated a loss in the financial year under report or the previous year. The realisation of these assets is exclusively dependent on the generation of future profits. Based on the budget figures available, we expect these assets to be realised.

Deferred taxes of Euro 23,105 thousand were recognised directly in other comprehensive income within group equity in the 2016 financial year (previous year: Euro 28,444 thousand).

Income tax items within other comprehensive income in group equity can be broken down into their components as follows:

Income tax items

	30 September 2016		30 September 2015	
Euro 000s	**Income tax**	**Gross**	Income tax	Gross
Cash flow hedges	−8,814	27,022	986	−7,601
Actuarial gains and losses	3,475	−13,142	−274	982
Currency translation difference	–	17,862	–	−5,450
Share of total earnings attributable to companies recognised at equity	–	4,084	–	−20,016

35. Contingent claims, liabilities and financial obligations

The volume of obligations listed below corresponds to the scope of liability pertaining at the balance sheet date. The company has such obligations in the form of guarantees amounting to Euro 1.3 million (previous year: Euro 1.2 million). As in the previous year, no collateral has been provided for third-party liabilities.

The purchase commitments of the MVV Energie Group in connection with investment orders placed amounted to Euro 5.4 million for investments in intangible assets (previous year: Euro 4.2 million) and to Euro 27.5 million for investments in property, plant and equipment (previous year: Euro 65.6 million). Due to the completion of construction projects, the volume of investment orders placed for property, plant and equipment has reduced significantly.

The financial obligations relating to operating leases primarily involve water grids, car pools, IT equipment, land leasehold payments and rental payments for buildings and storage facilities. The minimum leasing payments have the following maturity structure:

Financial obligations for operating leases

	Nominal value	
Euro 000s	**30 Sep 2016**	30 Sep 2015
Operating leases		
up to 1 year	6,191	5,691
1 to 5 years	14,635	14,217
longer than 5 years	23,665	26,828
	44,491	**46,736**

In leases where economic ownership remains with the lessor (operating leases), the assets thereby leased are recognised at the lessor. The leasing expenses incurred are recognised as expenses over the term of the leasing contract.

The contracts provide for extension options in some cases, but do not include any purchase options. In some cases, rental contracts include price adjustment clauses linked to the consumer price index.

Contingent liabilities involve potential obligations to third parties or existing obligations for which an outflow of resources is unlikely or whose amount cannot be reliably determined. Contingent liabilities are not recognised in the balance sheet. The volume of obligations stated in the notes for contingent liabilities corresponds to the scope of liability at the balance sheet date. Contingent claims are treated by analogy with this approach.

The Group has a contingent claim with a present value of Euro 4.7 million from the State of Baden-Württemberg and the City of Mannheim in connection with a land decontamination measure.

36. Financial instruments

In the field of interest hedges, existing underlying transactions have been included in cash flow hedges with terms of up to 10 years as of 30 September 2016 (previous year: 18 years). For commodity hedges, the terms of planned hedged items amount to up to six years (previous year: up to four years). Both interest rate hedging instruments and commodity derivatives require net settlements to be paid at contractually fixed dates largely congruent with the hedged items. The hedging instruments mostly involve swaps which generate cash flows throughout their contractual terms.

Income of Euro 18,208 thousand was recognised directly in equity in the 2016 financial year (previous year: expenses of Euro 6,615 thousand).

The amounts reclassified from equity and recognised through profit or loss in the income statement in connection with cash flow hedge accounting were as follows:

Amounts reclassified

Euro 000s	**FY 2016**	FY 2015
Included in EBIT	−22,738	−20,256
Included in financial result and tax result	−11,431	−7,106
Total amounts withdrawn	**−34,169**	**−27,362**

The amounts recognised directly in equity and attributable reclassification amounts are presented in the following table:

Amounts recognised in equity

Euro 000s	30 Sep 2016	30 Sep 2015
Cash flow hedges	18,208	–6,615
of which changes recognised in equity	–15,961	–33,977
of which reclassified to income statement	34,169	27,362

Income of Euro 100 thousand was recognised in connection with the ineffective portion of cash flow hedges in the 2016 financial year (previous year: income of Euro 1,022 thousand). The results of ineffective portions of cash flow hedges are recognised as other operating income or expenses to the extent that they exceed the cumulative fair value changes in the respective hedged items. For interest rate hedges, the results are recognised under other interest income and expenses.

Fair value hedges were deployed for closed foreign currency positions in the 2016 financial year. The following amounts were recognised in the income statement in connection with these hedge relationships:

Gains and losses recognised in income statement for fair value hedges

Euro 000s	FY 2016	FY 2015
Gains/losses on underlying transaction	–39,016	12,888
Gains/losses on hedging instrument	39,643	–13,864

The carrying amounts and fair values of financial instruments and their allocation to IAS 39 measurement categories have been presented in the following tables. The classes presented are based on the balance sheet.

IAS 39 measurement categories for carrying amounts at 30 September 2016

Euro 000s	IAS 39 measurement categories	Carrying amounts	of which not within scope of IFRS 7	Fair values
Assets				
Financial assets				
of which unconsolidated shareholdings	available for sale	7,250	–	7,250
of which loans excluding finance leases	loans and receivables	8,563	–	8,563
of which loans in connection with finance leases	not applicable	47,755	–	47,755
of which securities	held for trading	32	–	32
Trade receivables < 1 year	loans and receivables	457,961	–	457,961
Other assets				
of which derivatives outside hedge accounting	held for trading	538,259	–	538,259
of which derivatives within hedge accounting	not applicable	13,446	–	13,446
of which other operating assets	loans and receivables	144,072	35,547	144,072
Cash and cash equivalents	loans and receivables	333,041	–	333,041
		1,550,379	**35,547**	**1,550,379**
Liabilities				
Financial debt				
of which financial debt in connection with financial leases	not applicable	54,140	–	54,140
of which other financial debt	amortised cost	1,561,829	–	1,673,137
Trade payables <1 year	amortised cost	397,233	–	397,233
Other liabilities				
of which derivatives outside hedge accounting	held for trading	527,055	–	527,055
of which derivatives within hedge accounting	not applicable	61,868	–	61,868
of which other operating liabilities	amortised cost	411,251	336,105	411,251
		3,013,376	**336,105**	**3,124,684**

IAS 39 measurement categories for carrying amounts at 30 September 2015

Euro 000s	IAS 39 measurement categories	Carrying amounts	of which not within scope of IFRS 7	Fair values
Assets				
Financial assets				
of which unconsolidated shareholdings	available for sale	15,450	–	15,450
of which loans excluding finance leases	loans and receivables	3,178	–	3,178
of which loans in connection with finance leases	not applicable	48,692	–	48,692
of which securities	held for trading	614	–	614
	available for sale	13	–	13
Trade receivables < 1 year	loans and receivables	367,406	–	367,406
Other assets				
of which derivatives outside hedge accounting	held for trading	480,052	–	480,052
of which derivatives within hedge accounting	not applicable	10,235	–	10,235
of which other operating assets	loans and receivables	144,264	37,028	144,264
Cash and cash equivalents	loans and receivables	262,710	–	262,710
		1,332,614	**37,028**	**1,332,614**
Liabilities				
Financial debt				
of which financial debt in connection with finance leases	not applicable	3,312	–	3,312
of which other financial debt	amortised cost	1,600,052	–	1,702,423
Trade payables <1 year	amortised cost	386,455	–	386,455
Other liabilities				
of which derivatives outside hedge accounting	held for trading	492,339	–	492,339
of which derivatives within hedge accounting	not applicable	86,023	–	86,023
of which other operating liabilities	amortised cost	279,081	189,014	279,081
		2,847,262	**189,014**	**2,949,633**

Given the predominantly short-term remaining terms of trade receivables and payables, other operating receivables and liabilities and cash and cash equivalents, their carrying amounts as of the balance sheet date are basically equivalent to their fair values.

The fair value of other financial debt items is determined as their present value, taking due account of future payments. These items are discounted using the currently valid interest rate as of the balance sheet date (Level 2).

The following table presents the key parameters for financial instruments measured at fair value. Pursuant to IFRS 7, the individual levels are defined as follows:

Level 1: Measurement based on prices listed on active markets and taken over without amendment

Level 2: Measurement based on directly or indirectly observable factors other than those in Level 1

Level 3: Measurement based on factors not observable on the market.

Measurement at cost: This category includes those financial instruments which IAS 39 requires to be measured at cost. On their transaction dates, these instruments were not in liquid markets, as a result of which their current recognition at cost approximates to their fair value. These items mainly involve other shareholdings and other majority shareholdings.

Fair value hierarchy at 30 September 2016

Euro 000s	Level 1	Level 2	Level 3	At cost
Financial assets				
Unconsolidated shareholdings	–	–	–	7,250
Securities	–	27	–	5
Derivatives outside hedge accounting	134,019	404,044	196	–
Derivatives within hedge accounting	13,393	53	–	–
Financial liabilities				
Derivatives outside hedge accounting	152,853	373,769	433	–
Derivatives within hedge accounting	22,941	38,927	–	–

Fair value hierarchy at 30 September 2015

Euro 000s	Level 1	Level 2	Level 3	At cost
Financial assets				
Unconsolidated shareholdings	–	–	–	15,450
Securities	–	621	–	6
Derivatives outside hedge accounting	112,794	366,854	404	–
Derivatives within hedge accounting	9,997	238	–	–
Financial liabilities				
Derivatives outside hedge accounting	114,855	377,115	369	–
Derivatives within hedge accounting	39,027	46,996	–	–

The following reconciliation account presents the development in financial instruments recognised in Level 3.

Development in financial instruments recognised in Level 3

Euro 000s	Balance at 1 Oct 2015	Gains/losses in income statement	Balance at 30 Sep 2016
Financial assets			
Derivatives outside hedge accounting	404	–208	196
Financial liabilities			
Derivatives outside hedge accounting	369	64	433

Development in financial instruments recognised in Level 3

Euro 000s	Balance at 1 Oct 2014	Gains/losses in income statement	Balance at 30 Sep 2015
Financial assets			
Derivatives outside hedge accounting	233	171	404
Financial liabilities			
Derivatives outside hedge accounting	323	46	369

Gains and losses in income statement for Level 3 financial instruments FY 2016

Euro 000s	Total	of which still held at 30 Sep 2016
Other operating income	–	–
Other operating expenses	–272	–
	–272	**–**

Gains and losses in income statement for Level 3 financial instruments FY 2015

Euro 000s	Total	of which still held at 30 Sep 2015
Other operating income	171	–
Other operating expenses	–46	–
	125	**–**

Impairments of financial assets

Euro 000s	Unconsolidated shareholdings	Loans	Trade receivables < 1 year	Other operating assets
Balance at 1 October 2014	1,889	2,182	19,382	3,787
Utilisations/diposals	233	648	7,771	826
Net additions	5	–	8,803	491
Balance at 30 September 2015	**1,661**	**1,534**	**20,414**	**3,452**
Balance at 1 October 2015	1,661	1,534	20,414	3,452
Utilisations/disposals	1,243	–	9,245	1,634
Net additions	919	–	24,080	508
Balance at 30 September 2016	**1,337**	**1,534**	**35,642**	**1,998**

Impairment losses recognised in the 2016 financial year for individual IFRS 7 categories amounted to Euro 916 thousand for unconsolidated shareholdings (previous year: Euro 0 thousand), Euro 13,060 thousand for trade receivables (previous year: Euro 12,437 thousand) and Euro 656 thousand for other operating assets (previous year: Euro 3,371 thousand).

Netting of financial assets and financial liabilities

The financial assets and financial liabilities listed below are subject to netting, enforceable master netting agreements or similar arrangements.

Netting of financial assets at 30 September 2016

Euro 000s	Gross amount of financial assets reported	Gross amount of financial liabilities reported that are netted in balance sheet	Net amount of financial assets reported in balance sheet	Related amounts not netted in balance sheet		Net amount
				Financial instruments	Cash collateral received	
Loans excluding finance leases	8,563	–	8,563	–	–	8,563
Securities	32	–	32	–	–	32
Trade receivables < 1 year	731,869	–273.908	457,961	–	–	457,961
Derivative financial instruments	551,705	–	551,705	–447,196	–2,203	102,306
Other operating assets	144,072	–	144,072	–	–	144,072
Cash and cash equivalents	333,041	–	333,041	–2,509	–	330,532
	1,769,282	**–273.908**	**1,495,374**	**–449,705**	**–2,203**	**1,043,466**

Netting of financial liabilities at 30 September 2016

Euro 000s	Gross amount of financial liabilities reported	Gross amount of financial assets reported that are netted in the balance sheet	Net amount of financial liabilities reported in balance sheet	Related amounts not netted in balance sheet		Net amount
				Financial instruments	Cash collateral received	
Financial debt	1,561,829	–	1,561,829	–48,358	–489	1,610,676
Trade payables < 1 year	652,677	–255,444	397,233	–	–	397,233
Derivative financial instruments	588,923	–	588,923	–447,196	–45,604	1,081,723
Other operating liabilities	429,715	–18,464	411,251	–	–	411,251
	3,233,144	**–273,908**	**2,959,236**	**–495,554**	**–46,093**	**3,500,883**

Netting of financial assets at 30 September 2015

Euro 000s	Gross amount of financial assets reported	Gross amount of financial liabilities reported that are netted in balance sheet	Net amount of financial assets reported in balance sheet	Related amounts not netted in balance sheet		Net amount
				Financial instruments	Cash collateral received	
Loans excluding finance leases	3,178	–	3,178	–	–	3,178
Securities	627	–	627	–	–	627
Trade receivables < 1 year	629,860	–262,454	367,406	–	–	367,406
Derivative financial instruments	490,287	–	490,287	–388,891	–5,658	95,738
Other operating assets	144,264	–	144,264	–	–	144,264
Cash and cash equivalents	262,710	–	262,710	–19,515	–	243,195
	1,530,926	**–262,454**	**1,268,472**	**–408,406**	**–5,658**	**854,408**

Netting of financial liabilities at 30 September 2015

Euro 000s	Gross amount of financial liabilities reported	Gross amount of financial assets reported that are netted in balance sheet	Net amount of financial liabilities reported in balance sheet	Related amounts not netted in balance sheet		Net amount
				Financial instruments	Cash collateral received	
Financial liabilities	1,600,052	–	1,600,052	–58,005	-286	1,541,761
Trade payables < 1 year	633,719	–247,264	386,455	–	–	386,455
Derivative financial instruments	578,362	–	578,362	–388,891	–57,316	132,155
Other operating liabilities	294,271	–15,190	279,081	–	–	279,081
	3,106,404	**–262,454**	**2,843,950**	**–446,896**	**–57,602**	**2,339,452**

Net results by measurement category

Financial instruments have been recognised in the income statement with the following net results pursuant to IFRS 7:

Net results (IFRS 7)

Euro 000s	FY 2016	FY 2015
Financial assets and financial liabilities held for trading	26,415	−4,113
Financial assets available for sale	2,914	1,417
Loans and receivables	−8,152	−10,723

The presentation of net results takes due account of standalone derivatives included in the "financial assets and financial liabilities held for trading" measurement category. The net result in the "financial assets and financial liabilities held for trading" category is largely attributable to fair value measurement pursuant to IAS 39.

The net result in the "financial assets available for sale" category chiefly involves income and distributions from shareholdings, as well as disposal gains.

The net results in the "loans and receivables" category predominantly relate to write-downs and additions.

The interest income and interest expenses in connection with financial assets and financial liabilities measured at amortised cost chiefly result from the total interest income and expenses presented below.

Total interest income and expenses

Euro 000s	FY 2016	FY 2015
Total interest income	7,879	6,146
Total interest expenses	57,763	33,525

The financial result also includes interest components for provisions not covered by IFRS 7 disclosure requirements, as a result of which the figures published here differ from the financial result. The interest income reported here mainly results from credit balances at banks, overnight and fixed-term deposits, and loans. The interest expenses largely relate to loan obligations. As in the previous year, total interest income does not include interest on financial assets already impaired.

Financing and price risks

General information about financing and price risks: Due to its business activities, the MVV Energie Group is exposed to various financial risks. These comprise receivables default and liquidity risks, market price risks on both procurement and sales markets and risks resulting from interest rate and exchange rate movements.

The MVV Energie Group's risk management pursues the objective of identifying developments on financial markets at an early stage and of countering any resultant negative implications. This is achieved by laying down internal guidelines, discretionary frameworks, responsibilities, separations of functions and checks.

Derivative financial instruments are used to cover against market price risks. For interest rate risks, these mainly involve interest swaps. Currency risks are hedged by concluding forward currency transactions. Commodity derivatives are deployed in the field of energy trading. The use of commodity derivatives for proprietary energy trading is only permitted within narrow limits and is monitored and managed with a separate limit system.

Receivables default risks: The risk of economic loss arising as a result of a business partner failing to meet its contractual payment obligations is referred to as receivables default risk. This encompasses both the risk of direct default and the risk of reduced creditworthiness. The MVV Energie Group maintains its business relationships predominantly with banks and other trading partners of good credit standing. Receivables default risks towards contractual partners are inspected upon conclusion of the contract and monitored continuously. This risk is limited by setting trading limits for transactions with business partners and, where appropriate, by demanding cash collateral. Where possible, default risk is already reduced in advance by means of suitable framework agreements with trading partners. Risk clusters only apply to an immaterial extent at various subsidiaries that have sales contracts with just one customer.

The MVV Energie Group is exposed to receivables default risks in its sales business, as customers may potentially fail to meet their payment obligations. This risk is limited by regularly inspecting the creditworthiness of major items in our customer portfolio.

In the carrying amounts recognised in the balance sheet for financial assets (receivables, derivatives and other assets, as well as cash and cash equivalents and assets held for sale), default risks have already been recognised in the form of impairments. The volume of receivables defaults was immaterial both in the year under report and the previous year.

As derivatives may be subject to substantial fluctuations in their fair values, the counterparty risk of derivative financial assets has been presented in the following overviews. Only recognised accounts have been included. Where netting agreements are in place with a trading partner, the actual risk, i.e. the net risk, has been presented. No account has been taken of counterparties with negative balances, i.e. where there is no counterparty risk. In all other cases, the figures have not been netted against negative fair values.

Counterparty risk at 30 September 2016

Euro 000s	**Total**		**of which < 1 year**		**of which 1 to 5 years**	
Counterparty rating as per Standard & Poor's and/or Moody's	**Nominal value**	**Counterparty risk**	**Nominal value**	**Counterparty risk**	**Nominal value**	**Counterparty risk**
AAA and Aaa to AA- and Aa3	234,970	38,436	4,302	310	230,668	38,126
A+ and A1 to A- and A3	46,712	13,326	17,035	2,799	29,677	10,527
BBB+ and Baa1 to BBB- and Baa3	297,239	49,813	52,317	4,903	244,922	44,910
BB+ and Ba1 to BB- and Ba3	–	–	–	–	–	–
Other	1,218,292	164,015	441,312	52,983	776,980	111,032
	1,797,213	**265,590**	**514,966**	**60,995**	**1,282,247**	**204,595**

Counterparty risk at 30 September 2015

Euro 000s	Total		of which < 1 year		of which 1 to 5 years	
Counterparty rating as per Standard & Poor's and/or Moody's	Nominal value	Counterparty risk	Nominal value	Counterparty risk	Nominal value	Counterparty risk
AAA and Aaa to AA- and Aa3	54,272	398	44,992	398	9,280	–
A+ and A1 to A- and A3	12,712	796	187	26	12,525	770
BBB+ and Baa1 to BBB- and Baa3	208,806	28,496	47,613	5,308	161,193	23,188
BB+ and Ba1 to BB- and Ba3	548	135	548	135	–	–
Other	643,704	74,741	233,402	30,167	410,302	44,574
	920,042	**104,566**	**326,742**	**36,034**	**593,300**	**68,532**

As in the previous year, there were no receivables default risks with terms longer than five years. Major shares of the nominal derivative volumes in question involve trading partners for which external ratings are available. Internal ratings are available for the nominal derivative volumes reported under "Other".

For trading transactions concluded with stock exchanges, security payments are deposited in order to reduce any additional receivables default risks.

The receivables default risks involved in financial assets and their maturities broken down by category are structured as follows:

Receivables default risks and maturities at 30 September 2016

Euro 000s	Loans	Trade receivables < 1 year	Other operating assets
Neither overdue nor impaired	56,318	371,079	106,533
Overdue but not impaired			
≤ 6 months	–	46,969	993
> 6 months ≤ 1 year	–	2,630	341
> 1 year	–	6,790	43
Net value of assets written down	–	30,493	615
	56,318	**457,961**	**108,525**

Receivables default risks and maturities at 30 September 2015

Euro 000s	Loans	Trade receivables < 1 year	Other operating assets
Neither overdue nor impaired	51,870	305,523	103,669
Overdue but not impaired			
≤ 6 months	–	28,727	37
> 6 months ≤ 1 year	–	666	5
> 1 year	–	356	45
Net value of assets written down	–	32,134	3,480
	51,870	**367,406**	**107,236**

Liquidity risks: Liquidity risk involves the risk of a company being unable to meet its financial obligations adequately. The MVV Energie Group is subject to liquidity risks as a result of its obligation to meet its liabilities in full and on time, as well as its obligation to service security payments (margins) from energy trading partners. Cash and liquidity management at the MVV Energie Group is responsible for maintaining the company's solvency at all times. This involves calculating all cash requirements and all cash surpluses. The major subgroups have a cash pooling process which enables liquidity requirements and surpluses to be balanced at short notice, thus reducing bank transactions to a necessary minimum.

A financial budget is compiled for liquidity management purposes. Any financing requirements arising are covered by means of suitable liquidity management instruments. Alongside the liquidity available on a daily basis, the MVV Energie Group has further liquidity reserves in the form of committed credit lines. The volume of contractually committed credit lines is structured in such a way as to ensure that the Group has adequate liquidity reserves available at all times, even in a difficult market climate. In view of its available liquidity and existing credit lines, the MVV Energie Group does not see itself as being exposed to any material liquidity risks.

Group companies within the MVV Energie Group are generally financed by banks and by MVV Energie AG.

Items of security have been provided to banks to limit their risks in connection with loans granted to the MVV Energie Group. These are subdivided into non-current assets, receivables and cash and cash equivalents with a total amount of Euro 90,376 thousand (previous year: Euro 104,100 thousand) and firmly deposited debt service reserves with a carrying amount of Euro 385 thousand (previous year: Euro 9,141 thousand). Furthermore, interests in subsidiaries amounting to Euro 13,505 thousand have been provided as security (previous year: Euro 13,058 thousand).

Contractually agreed outflows of funds for financial liabilities are presented in undiscounted form in the table below. The figures include the corresponding interest payments.

Undiscounted cash flows

Euro 000s	30 September 2016 Maturities < 1 year	30 September 2016 Maturities 1 - 5 years	30 September 2016 Maturities > 5 years	30 September 2015 Maturities < 1 year	30 September 2015 Maturities 1 - 5 years	30 September 2015 Maturities > 5 years
Non-derivative financial liabilities						
Liabilities to banks	407,816	563,298	760,363	229,737	793,616	827,602
Liabilities in connection with finance leases	6,920	4,306	76,083	1,585	1,770	–
Trade payables	397,233	432	757	386,455	599	894
Other financial debt	64,815	18,211	15,835	31,809	15,758	11,224
Other financial liabilities	62,147	6,169	6,053	63,369	19,941	6,949
Derivative financial liabilities	183,168	338,998	22	184,613	348,589	30
	1,122,099	**931,414**	**859,113**	**897,568**	**1,180,273**	**846,699**

Interest rate risks: Interest rate risks relate to credit balances at banks on the asset side and to floating-rate liabilities to banks on the liabilities side of the balance sheet.

The sensitivity analysis below presents the impact of changes in interest rates on annual earnings and equity. This analysis has been based on the assumption that there are no changes in any other parameters, such as exchange rates. The analysis only includes financial instruments where interest rate risk could impact on equity or annual earnings.

Any upward or downward variance in the level of interest rates in the euro area by 10 % as of the balance sheet date on 30 September 2016 would have led annual net income to deteriorate/improve by a total of Euro 20 thousand/Euro 20 thousand (previous year: Euro 4 thousand/Euro 4 thousand). This variance would have reduced/increased equity by a total of Euro 694 thousand/ Euro 702 thousand (previous year: Euro 1,691 thousand/Euro 2,104 thousand).

Foreign currency risks: Foreign currency risks mainly relate to our UK projects. During the operating stage of the projects, cash flows will be generated exclusively in British pounds. The resultant foreign currency risks are hedged by natural hedges in the form of currency-congruent financing and by using derivative financial instruments.

The sensitivity analysis below presents the impact of changes in exchange rates on annual earnings. Any upward or downward variance by 10% in the exchange rate would have led annual net income to decrease/increase by Euro 16,382 thousand/Euro 16,382 thousand (previous year: Euro 16,858 thousand/Euro 36,970 thousand).

Commodity price risks: Within the framework of our energy trading activities, energy trading contracts are concluded for the purposes of price risk management, adjustments to actual loads and margin optimisation. All transactions are governed by narrow, clearly defined limits which have to be adhered to at all times.

Price change risks chiefly arise in connection with the procurement and disposal of electricity and gas and the procurement of coal and emission rights. These price risks are hedged with suitable financial instruments by reference to the stipulated limits. The Group made use of derivative hedging instruments in the year under report. The hedging instruments used mainly involved forwards, futures, swaps and options.

The sensitivity involved in the measurement of electricity, coal, gas and emission right derivatives is analysed in the following section. This analysis has been based on the assumption that there are no changes in all other parameters and that there is mutual dependency between the commodities. The analysis only includes derivatives for which fluctuations in market values could impact on equity or annual earnings. These involve derivatives requiring mandatory recognition. The analysis does not include derivatives earmarked for the physical delivery of non-financial items in line with the company's expected procurement, sale or utilisation (own use). These do not require recognition under IAS 39.

If the market price at the balance sheet date on 30 September 2016 had been 10 % higher/lower, this would have increased/decreased annual net income by Euro 14,495 thousand/Euro 14,607 thousand (previous year: Euro 6,456 thousand/Euro 6,456 thousand). Equity would have increased/reduced by Euro 23,920 thousand/Euro 24,034 thousand (previous year: Euro 16,156 thousand/Euro 16,156 thousand).

The following table presents the nominal volumes and fair values of the derivatives used:

Nominal volumes and fair values

	30 September 2016			30 September 2015		
	Nominal volumes		**Fair values**	Nominal volumes		Fair values
Euro 000s	**Total**	**of which with remaining terms of more than 1 year**		Total	of which with remaining terms of more than one year	
Interest derivatives	338,034	319,633	–45,235	496,201	431,296	–45,611
Commodity derivatives	7,284,170	1,739,947	7,905	9,260,832	2,390,853	–42,510
Currency derivatives	1,992	47	112	46	46	46
	7,624,196	**2,059,627**	**–37,218**	**9,757,079**	**2,822,195**	**–88,075**

Interest derivatives almost exclusively involve interest swaps. Currency derivatives are mainly intended to hedge foreign exchange risks.

Commodity derivatives can be subdivided as follows:

Commodity derivatives

Euro 000s	30 September 2016 Nominal volumes	30 September 2016 Fair values	30 September 2015 Nominal volumes	30 September 2015 Fair values
Commodity derivatives				
Electricity	4,755,973	4,588	6,404,198	−19,256
Coal	22,508	15,182	20,912	−18,673
Gas	2,414,595	669	2,753,466	−11,101
CO_2 rights	90,266	−12,297	81,554	6,486
Other	828	−237	702	34
	7,284,170	**7,905**	**9,260,832**	**−42,510**
Commodity derivatives				
Futures	7,260,186	−8,153	9,239,577	−24,448
Swaps	22,508	15,182	20,912	−18,673
Options	1,476	876	343	611
	7,284,170	**7,905**	**9,260,832**	**−42,510**

The positive fair values amounting to Euro 551,705 thousand (previous year: Euro 490,287 thousand) were countered by margining liabilities of Euro 2,203 thousand (previous year: Euro 2,358 thousand). These are reported under other liabilities. The negative fair values of Euro 588,923 thousand (previous year: Euro 578,362 thousand) were countered by cash collateral amounting to Euro 45,604 thousand (previous year: Euro 54,016 thousand).

Capital management

MVV Energie AG is not subject to any statutory minimum capital requirements, but pursues its internal objective of using effective financial management to maintain its equity ratio at a level necessary to attain a good rating in the banking market and to boost the earnings strength of our company.

The adjusted equity ratio referred to for management purposes represents adjusted consolidated equity as a proportion of adjusted total assets. Adjusted equity consists of share capital, the capital reserve, accumulated net income, accumulated other comprehensive income and minority interests excluding non-operating IAS 39 derivative measurement items. It is intended to maintain an adjusted equity ratio of at least 30 %.

Measures to comply with the targeted equity ratio initially take place within the business planning process and within the framework of investment budgeting in the case of major (unplanned) investment measures. By issuing shares, the company is able to adjust its equity basis to requirements.

The key figure used in the value-based management of the company and the capital management thereby required is the value spread. This key figure is calculated as the difference between the period-based adjusted return on capital employed (adjusted ROCE) and the weighted average cost of capital (WACC). There were no changes in the underlying capital management requirements compared with the previous year.

37. Segment reporting

Segment report from 1 October 2015 to 30 September 2016

Euro 000s	External sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation	Impairment losses
Generation and Infrastructure	1,109,616	636,938	133,876	21,613
Trading and Portfolio Management	645,317	643,235	270	–
Sales and Services	2,209,854	262,362	17,103	11,002
Strategic Investments	99,149	3,930	10,486	–
Other Activities	2,510	25,489	17,822	–
Consolidation	–	–1,571,954	–	–
	4,066,446	**–**	**179,557**	**32,615**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Income from companies recognised at equity	Investments
Generation and Infrastructure	2,526	160,531	47,034	195,921
Trading and Portfolio Management	1,723	–30,663	–	–
Sales and Services	10,511	29,414	1,011	19,916
Strategic Investments	–1,222	24,059	9,949	5,622
Other Activities	244	30,040	17,390	15,024
Consolidation	–	76	–	–
	13,782	**213,457**	**75,384**	**236,483**

Segment report from 1 October 2014 to 30 September 2015

Euro 000s	External sales excluding energy taxes	Intercompany sales excluding energy taxes	Scheduled depreciation	Impairment losses
Generation and Infrastructure	454,334	651,229	116,485	143
Trading and Portfolio Management	732,815	727,661	288	140
Sales and Services	2,133,129	281,595	16,040	330
Strategic Investments	98,821	1,208	10,685	34
Other Activities	2,428	25,167	16,756	338
Consolidation	–	–1,686,860	–	–
	3,421,527	**–**	**160,254**	**985**

Euro 000s	Material non-cash income and expenses	Adjusted EBIT	Income from companies recognised at equity	Investments
Generation and Infrastructure	6,256	133,031	2,397	416,458
Trading and Portfolio Management	2,549	–28,953	–	11,909
Sales and Services	11,877	42,566	1,426	21,597
Strategic Investments	6,388	20,606	6,771	5,405
Other Activities	7,231	7,882	242	14,382
Consolidation	–	–20	–	–
	34,301	**175,112**	**10,836**	**469,751**

External reporting is based on the internal management structure, thus complying with the management approach pursuant to IFRS 8. Accordingly, segment delineation and disclosures are based on the information used by the management to manage the company's constituent components. The information on the segments is regularly reviewed by the topmost management body of MVV Energie AG within its internal management reporting framework. Units are grouped in such a way that the pooling of suitable specialist competence under one roof forms the basis for stringent portfolio management at the Group. Business fields based on the respective energy industry value chain stages have been allocated to the reporting segments of Generation and Infrastructure, Trading and Portfolio Management, Sales and Services, Strategic Investments and Other Activities. The characteristics used to identify and aggregate segments relate above all to asset and capital intensity, technical features, customer structures and needs, internal cooperation and the pooling of activities and processes.

Analytically, the business fields can be further broken down by subgroup and individual company with their products.

- The **Generation and Infrastructure** reporting segment comprises the conventional power plants, energy from waste plants and biomass power plants at the Mannheim, Stadtwerke Kiel, Energieversorgung Offenbach and MVV Umwelt subgroups. This reporting segment also contains our waterworks, wind turbines and biomethane plants. Moreover, it comprises grid facilities for electricity, heating energy, gas and water and technical service units for the grid-based distribution of energy and water and thus allocated to the grids business field. Furthermore, this reporting segment includes renewable energies project development, especially Juwi AG and Windwärts Energie GmbH.

  The business fields aggregated here are based on classifications that are significant for the Group. The criteria referred to relate in particular to the high asset intensity, long technical lifecycles, long-term financing structures and comparable customer and supplier groups.

- The **Trading and Portfolio Management** reporting segment includes energy procurement and portfolio management and the energy trading business at MVV Trading GmbH.

- The **Sales and Services** reporting segment includes the retail and secondary distribution business for electricity, heating energy, gas and water at the Mannheim, Stadtwerke Kiel and Energieversorgung Offenbach subgroups, the energy-related services business at the MVV Enamic and Energieversorgung Offenbach subgroups and the new ventures business field.

  The key focus of aggregation for these business fields relates to the service business and to customer requirements. Use is made of comparable services methods, the customer is the key focus of the business, activities and marketing processes for the customers are pooled and almost exclusively target external customers (e.g. sales to third parties).

- The **Strategic Investments** reporting segment consists of the Köthen Energie and MVV Energie CZ subgroups and the at-equity result of the Stadtwerke Ingolstadt subgroup.

- The **Other Activities** reporting segment consists in particular of shared service companies and cross-divisional functions.

- Consolidation includes figures for transactions with other reporting segments that are eliminated for consolidation purposes.

Intercompany sales represent the volume of sales between segments. The transfer prices between segments correspond to customary market terms. Segment sales prior to consolidation are equivalent to the total of intercompany and external sales.

Reconciliation of EBIT (income statement) with adjusted EBIT

Euro 000s	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015	+/– change
EBIT as per income statement	224,669	161,697	62,972
Financial derivative measurement items	–24,129	6,676	–30,805
Structural adjustment for part-time early retirement	2,481	3,633	–1,152
Restructuring expenses	7,419	–	7,419
Interest income in connection with finance leases	3,017	3,106	–89
Adjusted EBIT	**213,457**	**175,112**	**38,345**

Of segment sales with external customers, 89.2 % were generated in Germany (previous year: 97.2 %). The regional breakdown of sales is based on the geographical location of the respective companies.

No individual customers of the MVV Energie Group account for or exceed 10 % of the Group's total sales.

The segment reporting presented in accordance with IFRS 8 is based on the internal management structure. This is mainly reflected in segment earnings (adjusted EBIT) and investments. The reconciliation of EBIT with adjusted EBIT is apparent in the above table. In the management perspective, the concept of investments includes both the additions apparent in the respective schedules and the change in non-current assets from first-time consolidation. By contrast, additions to securities and loans do not form part of the investment concept in the management perspective and have therefore been excluded.

Consistent with the management approach, the earnings stated for the reporting segments include internal transfer relationships between the reporting segments (charges and credits). The distribution of reporting segment earnings presented in the "adjusted EBIT" column corresponds to the distribution of earnings referred to in internal reporting. In some cases, this means that items are charged or credited to earnings in other business fields, and thus in other reporting segments, than the field or segment in which the item responsible for such charge or credit is located. This applies in particular to reporting segments and business fields fully or partly managed on the basis of cost centre logic (conventional generation, shared service centres and cross-divisional functions). In the case of conventional generation, primary costs are incurred in operative terms in the Generation and Infrastructure reporting segment. These are charged in full to the Trading and Portfolio Management and Sales and Services reporting segments. The latter segments reimburse the Generation and Infrastructure reporting segment by way of a return on its capital employed.

38. Cash flow statement

The cash flow statement portrays the flow of funds from operating activities, investing activities and financing activities. The cash flows from investing and financing activities have been calculated directly. The cash flow from operating activities, on the other hand, has been derived indirectly. The amount of cash and cash equivalents stated in the cash flow statement is consistent with the corresponding figure in the balance sheet.

Inflows and outflows of funds from the acquisition and disposal of consolidated companies are included in the cash flow from investing activities. The cash and cash equivalents thereby acquired or disposed of have been reported separately.

Having accounted for opinions in relevant specialist literature, the disclosure method used in the cash flow statement for the change in cash and cash equivalents due to changes in the scope of consolidation has been amended. Liquid funds relating to corporate transactions are now recognised on a net basis in the cash flow from investing activities. The figures for the comparative period have been adjusted accordingly. The liquid funds of the Juwi subgroup, which was included in the MVV Energie Group by way of full consolidation for the first time in the financial year under report, are thus largely responsible for the increase in the cash flow from investing activities. The marked changes in other assets and other liabilities compared with the previous year were chiefly due to certain receivables and liabilities subject to offsetting in the financial year under report and therefore no longer reported on a gross basis. In the previous year, this led to a change of Euro 251,762 thousand.

Detailed explanations of the development in individual cash flows can be found in the report on the financial position, which forms a component of the combined management report.

39. Related party disclosures

Business transactions performed between the parent company and its consolidated subsidiaries, which constitute related parties, are not outlined in this section, as they were eliminated in the course of consolidation.

The City of Mannheim is the sole shareholder in MVV GmbH. MVV GmbH owns 99.99 % of the shares in MVV Verkehr GmbH, which in turn has a 50.1 % shareholding in MVV Energie AG. The City of Mannheim and the companies it controls therefore represent related parties as defined in IFRS.

Numerous contractually agreed legal relationships are in place between the companies of the MVV Energie Group and the City of Mannheim and the companies it controls (electricity, gas, water and district heating supply agreements, rental, leasing and service agreements). Moreover, concession agreements are also in place between MVV Energie AG and the City of Mannheim.

The concession duties to the City of Mannheim amounted to Euro 19,032 thousand (previous year: Euro 18,631 thousand).

All business agreements have been concluded on customary market terms and are basically analogous to the supply and service agreements concluded with other companies.

Related party disclosures

	Goods and services provided				Receivables		Liabilities	
	Income		Expenses					
Euro 000s	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015	**1 Oct 2015 to 30 Sep 2016**	1 Oct 2014 to 30 Sep 2015	**30 Sep 2016**	30 Sep 2015	**30 Sep 2016**	30 Sep 2015
GBG Mannheimer Wohnungsbau-gesellschaft mbH	10,737	9,808	132	176	776	929	–	25
m:con - mannheim :congress GmbH	3,875	3,790	411	403	7,166	6,513	–	–
MVV GmbH	66	76	–	160	–	–	–	–
MVV Verkehr GmbH	33	45	5	9	1	4	–	–
Rhein-Neckar-Verkehr GmbH	6,474	5,751	290	4	2,624	558	2,469	2,800
Stadtentwässerung Mannheim	1,737	2,301	653	1,031	345	7	13	13
City of Mannheim	13,780	15,302	21,518	21,295	1,196	1,259	5,454	7,635
Companies recognised at equity	102,968	77,514	222,909	232,726	25,689	22,728	58,911	53,802
Other related parties	24,301	16,761	4,733	5,233	3,946	893	1,964	1,804
	163,971	**131,348**	**250,651**	**261,037**	**41,743**	**32,891**	**68,811**	**66,079**

Pursuant to IAS 24, related parties also include management staff performing key functions. Alongside the Executive Board, this group of persons at the MVV Energie Group also includes active heads of division and authorised company representatives of MVV Energie AG.

Customer contracts concerning the supply of electricity, gas, water and district heating have been concluded between MVV Energie AG and members of its Executive and Supervisory Boards and members of the management (division heads, authorised representatives). These have been concluded on customary market terms and do not differ from other customer contracts.

The MVV Energie Group has otherwise not concluded or performed any material related party transactions. In particular, as in the previous year no loans or advances had been granted to members of the Executive or Supervisory Boards as of 30 September 2016. As in the previous year, the company also did not issue any guarantees on behalf of members of the Executive or Supervisory Boards.

MVV Energie AG has compiled a dependent company report in accordance with § 312 AktG for the financial year ending on 30 September 2016.

The disclosure requirements for the compensation of management staff performing key functions at the Group cover the compensation paid to active members of the Executive Board, the Supervisory Board, active division heads and authorised representatives.

Active members of the Executive Board were compensated as follows:

Euro 000s	**FY 2016**	FY 2015
Short-term employee benefits (excluding share-based compensation)	2,770	2,446
Post-employment benefits	706	635
Total	**3,476**	**3,081**

Post-employment benefits correspond to the service cost resulting from pension provisions for active members of the Executive Board.

The compensation paid to active division heads and authorised representatives came to Euro 2,993 thousand in the year under report (previous year: Euro 2,662 thousand). Of this total, Euro 2,860 thousand involved current benefits (previous year: Euro 2,538 thousand).

Unless they are insured via municipal supplementary pension companies (ZVK), management staff performing key functions receive a defined contribution company pension of up to 8.6% of their fixed basic compensation. They can determine which biometric risks should be covered. The expenses incurred for this amounted to Euro 133 thousand in the 2016 financial year (previous year: Euro 124 thousand).

Active members of the Supervisory Board were compensated as follows:

Euro 000s	**FY 2016**	FY 2015
Fixed compensation (including meeting allowances)	438	456

Individualised information and further details concerning the compensation of Executive Board and Supervisory Board members can be found in the audited compensation report, which forms a component of the combined management report.

Former members of the Executive Board received benefits of Euro 475 thousand in the year under report. Provisions totalling Euro 18,666 thousand have been stated for pension obligations towards former members of the Executive Board. A total of Euro 385 thousand was allocated to this item in the year under report.

40. Scope of consolidation of the MVV Energie Group

Information about the composition of the companies and shareholdings included in the consolidated financial statements of MVV Energie AG pursuant to § 313 (2) HGB form part of the consolidated financial statements submitted to the electronic Federal Gazette (Bundesanzeiger). The list of shareholdings has also been published online at www.mvv-investor.de.

41. Auditor's fee

The following fees were incurred in Germany for the services performed by the auditor of the consolidated financial statements, PricewaterhouseCoopers Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, in the 2016 financial year:

Auditor's fee

Euro 000s	**FY 2016**	FY 2015
Audit	1,460	994
Other auditing services	303	259
Tax advisory services	189	93
Other services	457	209
	2,409	**1,555**

42. Utilisation of exemption under § 264 (3) HGB

The following German subsidiaries will draw on the disclosure exemption provided for under § 264 (3) HGB for the 2016 financial year:

- BFE Institut für Energie und Umwelt GmbH, Mühlhausen
- MVV Alpha zwei GmbH, Mannheim
- MVV Alpha fünfzehn GmbH, Mannheim
- MVV Umwelt GmbH, Mannheim
- MVV Umwelt Ressourcen GmbH, Mannheim
- MVV Umwelt UK GmbH, Mannheim
- MVV Windenergie GmbH, Mannheim

43. Declaration of Conformity under § 161 AktG

The Executive and Supervisory Boards of MVV Energie AG submitted their Declaration of Conformity with the recommendations of the German Corporate Governance Code pursuant to § 161 AktG and made it available to the company's shareholders.

The complete declaration can be viewed online at www.mvv-investor.de.

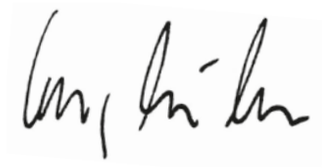
44. Information on concessions

In addition to the concession agreement between the City of Mannheim and MVV Energie AG (please see Note 39 Related party disclosures), further concession agreements have also been concluded between companies of the MVV Energie Group and local and regional authorities. The remaining terms range from one to 19 years. These agreements assign responsibility for operating the respective distribution girds and providing for their maintenance. Should these agreements not be extended upon expiry, the facilities for supplying the respective utility services must be taken over by the municipalities upon payment of commensurate compensation.

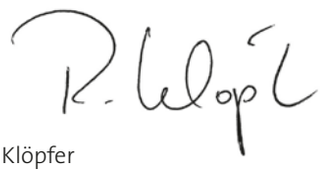
45. Events after balance sheet date

At its meeting on 11 November 2016, the Supervisory Board of Stadtwerke Kiel AG approved the construction of the gas-fired CHP plant in Kiel.

Mannheim, 16 November 2016
MVV Energie AG
Executive Board



Dr. Müller



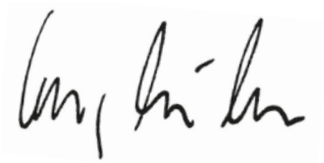
Klöpfer

Dr. Roll

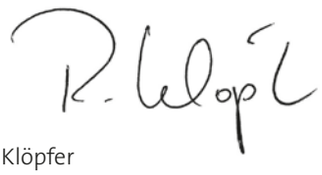
Responsibility Statement

"We affirm that, to the best of our knowledge, the consolidated financial statements give a true and fair view of the net asset, financial and earnings position of the Group in accordance with applicable accounting principles and that the group management report provides a fair view of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group."

Mannheim, 16 November 2016
MVV Energie AG
Executive Board



Dr. Müller



Klöpfer

Dr. Roll

Directors and Officers

EXECUTIVE BOARD OF MVV ENERGIE AG

Dr. Georg Müller
Chairman and Commercial Director

Udo Bekker
Personnel (until 30 September 2016)

Ralf Klöpfer
Sales

Dr. Hansjörg Roll
Technology

SUPERVISORY BOARD OF MVV ENERGIE AG

Dr. Peter Kurz (Chairman)
Lord High Mayor of City of Mannheim

Peter Dinges[1] (Deputy Chairman)
Chairman of MVV Energie AG Group Works Council

Johannes Böttcher[1]
Chairman of Works Council of
Energieversorgung Offenbach AG

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

Ralf Eisenhauer
Specialist Construction Manager for Historic Burdens at
GBG Mannheimer Wohnungsbaugesellschaft mbH

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

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

Reinhold Götz
1st Representative of IG Metall Mannheim
(until 4 March 2016)

Dieter Hassel
Member of Executive Board of RheinEnergie AG, Cologne
(since 7 October 2016)

Barbara Hoffmann
Auditor, Tax Advisor
(since 4 March 2016)

Prof. Dr. Egon Jüttner
Member of Federal Parliament (MdB)
(until 4 March 2016)

Prof. Dr. Heidrun Kämper
Academic Employee at Institut für deutsche Sprache,
Mannheim (since 4 March 2016)

Heike Kamradt[1]
Member of Works Council of MVV Energie AG

Brigitte Kemmer
Tax Advisor (since 4 March 2016)

Daniela Kirchner[1]
Director of Accounting and Tax Division at
MVV Energie AG (until 4 March 2016)

Dr. Antje Mohr[1]
Trade Union Secretary at ver.di Kiel

Dr. Lorenz Näger
Member of Executive Board of HeidelbergCement AG

Wolfgang Raufelder
Member of Baden-Württemberg State Parliament
(until 4 March 2016)

Bernhard Schumacher[1]
Director of Regional Sales Division at MVV Energie AG
(since 4 March 2016)

Christian Specht
First Mayor of City of Mannheim

Dr. Dieter Steinkamp
CEO of RheinEnergie AG, Cologne
(until 30 September 2016)

Carsten Südmersen
Management Consultant

Katja Udluft[1]
Trade Union Secretary at ver.di Rhine/Neckar

Prof. Heinz-Werner Ufer
Graduate in Economics

Jürgen Wiesner[1]
Deputy Chairman of Works Council of
MVV Energie AG

Additional positions held by members of the Executive and Supervisory Boards on supervisory boards or comparable supervisory bodies are listed in detail on the following pages.

1 Employee representatives

MEMBERS OF SUPERVISORY BOARD COMMITTEES AT MVV ENERGIE AG

Committee	Name
Audit Committee	• Prof. Heinz-Werner Ufer (Chairman) • Peter Dinges (Deputy Chairman) • Peter Erni • Detlef Falk • Dr. Lorenz Näger • Carsten Südmersen
Personnel Committee	• Dr. Peter Kurz (Chairman) • Peter Dinges • Ralf Eisenhauer • Heike Kamradt • Carsten Südmersen • Jürgen Wiesner
Nomination Committee	• Dr. Peter Kurz (Chairman) • Ralf Eisenhauer • Barbara Hoffmann (since 4 March 2016) • Wolfgang Raufelder (until 4 March 2016) • Dr. Dieter Steinkamp (until 30 September 2016) • Carsten Südmersen • Prof. Heinz-Werner Ufer
Mediation Committee	• Dr. Peter Kurz (Chairman) • Peter Dinges • Carsten Südmersen • Jürgen Wiesner
New Authorised Capital Creation Committee	• Dr. Peter Kurz (Chairman) • Peter Dinges • Ralf Eisenhauer • Peter Erni • Christian Specht • Dr. Dieter Steinkamp (until 30 September 2016) • Carsten Südmersen • Prof. Heinz-Werner Ufer

MEMBERS OF EXECUTIVE BOARD OF MVV ENERGIE AG

Name	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Dr. Georg Müller	• Energieversorgung Offenbach AG, Offenbach (Chairman) • Grosskraftwerk Mannheim AG, Mannheim • Juwi AG, Wörrstadt (Chairman) • MVV Enamic GmbH, Mannheim (Deputy Chairman) • MVV Insurance Services GmbH, Mannheim (since 15 January 2016 – Chairman) • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim • Saarschmiede GmbH, Völklingen • Stadtwerke Kiel AG, Kiel (Chairman)	
Udo Bekker (until 30 September 2016)	• Energieversorgung Offenbach AG, Offenbach (until 30 September 2016) • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt (until 30 September 2016) • Stadtwerke Kiel AG, Kiel (until 30 September 2016)	• MVV Energie CZ a.s., Prague, Czech Republic (until 30 September 2016 – Chairman) • Soluvia GmbH, Mannheim (until 30 September 2016 – Chairman)
Ralf Klöpfer	• Energieversorgung Offenbach AG, Offenbach • IDOS Software AG, Karlsruhe • Juwi AG, Wörrstadt • MVV Enamic GmbH, Mannheim (Chairman) • MVV Trading GmbH, Mannheim (Chairman) • Stadtwerke Kiel AG, Kiel • Stadtwerke Ingolstadt Beteiligungen GmbH, Ingolstadt (Deputy Chairman)	• BEEGY GmbH, Mannheim (Chairman) • MVV Energie CZ a.s., Prague, Czech Republic (since 14 October 2016 – Chairman) • Soluvia GmbH, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Dr. Hansjörg Roll	• Energieversorgung Offenbach AG, Offenbach • Grosskraftwerk Mannheim AG, Mannheim • Juwi AG, Wörrstadt • MVV Umwelt GmbH, Mannheim (Chairman) • Netrion GmbH, Mannheim (Chairman) • Stadtwerke Kiel AG, Kiel	• MVV Energie CZ a.s., Prague, Czech Republic • Soluvia GmbH, Mannheim (since 19 October 2016 – Chairman)

MEMBERS OF SUPERVISORY BOARD OF MVV ENERGIE AG

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Dr. Peter Kurz (Chairman) Lord High Mayor of City of Mannheim	• Klinikum Mannheim GmbH • University Hospital, Mannheim (Chairman) • MVV GmbH, Mannheim (Chairman)	• GBG Mannheimer Wohnungsbaugesellschaft mbH, Mannheim (Chairman) • m:con – mannheim:congress GmbH, Mannheim (Chairman) • MWS Projektentwicklungsgesellschaft mbH, Mannheim (Chairman) • Popakademie Baden-Württemberg GmbH, Mannheim • Sparkasse Rhein Neckar Nord, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Peter Dinges (Deputy Chairman) Chairman of MVV Energie AG Group Works Council	• Energieversorgung Offenbach AG, Offenbach • MVV Enamic GmbH, Mannheim • MVV GmbH, Mannheim • MVV Umwelt GmbH, Mannheim • Netrion GmbH, Mannheim	• Soluvia GmbH, Mannheim
Johannes Böttcher Chairman of Works Council of Energieversorgung Offenbach AG	• Energieversorgung Offenbach AG, Offenbach	
Timo Carstensen Deputy Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	
Ralf Eisenhauer Specialist Construction Manager for Historic Burdens at GBG Mannheimer Wohnungsbaugesellschaft mbH		• Sparkasse Rhein Neckar Nord, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Peter Erni Trade Union Secretary at ver.di Rhine/Neckar		
Detlef Falk Chairman of Works Council of Stadtwerke Kiel AG	• Stadtwerke Kiel AG, Kiel	• Soluvia GmbH, Mannheim
Reinhold Götz 1st Authorised Representative IG Metall Mannheim (until 4 March 2016)	• EVO Bus GmbH, Mannheim • Wabco Holding GmbH, Hanover	• GBG Mannheimer Wohnungsbaugesellschaft mbH, Mannheim • Caterpillar Energy Solutions GmbH, Mannheim

MEMBERS OF SUPERVISORY BOARD OF MVV ENERGIE AG

Name Occupation	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Dieter Hassel Member of Excecutive Board of RheinEnergie AG, Cologne (since 7 October 2016)	• NetCologne Gesellschaft für Telekommunikation mbH, Cologne • BRUNATA-METRONA GmbH, Hürth (since constitution)	• AggerEnergie GmbH, Gummersbach • BELKAW GmbH, Bergisch Gladbach (Deputy Supervisory Board Chairman) • Energieversorgung Leverkusen GmbH & Co. KG, Leverkusen • Gasversorgungsgesellschaft mbH, Rhein-Erft, Hürth • Rheinische NETZGesellschaft mbH, Cologne • Stadtwerke Leichlingen GmbH, Leichlingen (Deputy Supervisory Board Chairman) • Stadtwerke Lohmar GmbH & Co. KG, Lohmar
Barbara Hoffmann Auditor, Tax Advisor (since 4 March 2016)		• Berliner Stadtreinigungsbetriebe, Anstalt des öffentlichen Rechts, Berlin
Prof. Dr. Egon Jüttner Member of Federal Parliament (MdB) (until 4 March 2016)		• Haus-, Wohnungs- und Grundeigentümerverein Mannheim e.V., Mannheim
Prof. Dr. Heidrun Kämper Academic Employee at Institut der deutschen Sprache Mannheim (since 4 March 2016)		• m:con – mannheim:congress GmbH, Mannheim • Stadt Mannheim Beteiligungs GmbH, Mannheim
Heike Kamradt Member of Works Council of MVV Energie AG	• MVV Insurance Services GmbH, Mannheim • MVV Trading GmbH, Mannheim • MVV Umwelt GmbH, Mannheim	
Brigitte Kemmer Tax Advisor (since 4 March 2016)		
Daniela Kirchner Director of Accounting and Tax Division at MVV Energie AG (until 4 March 2016)	• MVV Trading GmbH, Mannheim	• MVV Energie CZ a.s., Prague, Czech Republic • Stadtwerke Sinsheim Versorgungs GmbH & Co. KG, Sinsheim
Dr. Antje Mohr Trade Union Secretary at ver.di Kiel	• Stadtwerke Kiel AG, Kiel	

MEMBERS OF SUPERVISORY BOARD OF MVV ENERGIE AG

Name **Occupation**	**Positions held on other statutory supervisory boards of German companies**	**Membership of comparable German and foreign company supervisory boards**
Dr. Lorenz Näger Member of Excecutive Board of Heidelberg-Cement AG		• Castle Cement Limited, Maidenhead, UK • Cimenteries CBR S.A., Brussels, Belgium • ENCI Holding N.V., 's-Hertogenbosch, Netherlands • Hanson Limited, Maidenhead, UK • Hanson Pioneer España, S.L.U., Madrid, Spain • HeidelbergCement Canada Holding Limited, Maidenhead, UK • HeidelbergCement Holding S.à.r.l., Luxembourg • HeidelbergCement India Limited, Karnataka (Tumkur District), India (until 25 January 2016) • HeidelbergCement Netherlands Holding B.V., 's-Hertogenbosch, Netherlands (until 30 June 2016) • HeidelbergCement UK Holding Limited, Maidenhead, UK • HeidelbergCement UK Holding II Limited, Maidenhead, UK • Italcementi Fabbriche Riunite Cemento S.p.A, Bergamo, Italy (since 1 July 2016) • Lehigh B.V., 's-Hertogenbosch, Netherlands (Chairman) • Lehigh Hanson, Inc., Irving, TX, USA • Lehigh Hanson Materials Limited, Calgary, Canada • Lehigh UK Limited, Maidenhead, UK • Palatina Insurance Limited, Sliema, Malta • PT Indocement Tunggal Prakarsa Tbk., Jakarta, Indonesia • PHOENIX Pharmahandel GmbH & Co. KG, Mannheim, Germany • Recem S.A., Luxembourg
Wolfgang Raufelder Member of Baden-Württemberg State Parliament (until 4 March 2016)	• MVV GmbH, Mannheim • Rhein-Neckar-Verkehr GmbH, Mannheim	• Mannheimer Parkhausbetriebe GmbH, Mannheim • Rhein-Neckar Flugplatz GmbH, Mannheim
Bernhard Schumacher Director of Regional Sales Division at MVV Energie AG (since 4 March 2016)		• Management Stadtwerke Buchen GmbH, Buchen (Deputy Supervisory Board Chairman) • Stadtwerke Schwetzingen Verwaltungs-gesellschaft mbH, Schwetzingen • Stadtwerke Walldorf GmbH & Co.KG, Walldorf

MEMBERS OF SUPERVISORY BOARD OF MVV ENERGIE AG

Name Occupation	Positions held on other statutory supervisory boards of German companies	Membership of comparable German and foreign company supervisory boards
Christian Specht First Mayor of City of Mannheim	• MVV Verkehr GmbH, Mannheim (Chairman) • Rhein-Neckar-Verkehr GmbH, Mannheim	
Dr. Dieter Steinkamp CEO of RheinEnergie AG, Cologne (until 30 September 2016)	• AWB Abfallwirtschaftsbetriebe Köln GmbH, Cologne • BRUNATA-METRONA GmbH, Hürth (since constitution) • Innogy SE, Essen (since 1 September 2016) • NetCologne Gesellschaft für Telekommunikation mbH, Cologne • rhenag Rheinische Energie Aktiengesellschaft, Cologne	• AggerEnergie GmbH, Gummersbach (Supervisory Board Chairman) • AVG Abfallentsorgungs- und Verwertungsgesellschaft Köln mbH, Cologne • BELKAW GmbH, Bergisch Gladbach • BRUNATA Wärmemesser-Gesellschaft Schultheiss GmbH + Co., Hürth (until August 2016) • Energieversorgung Leverkusen GmbH & Co. KG (EVL), Leverkusen • Gasversorgungsgesellschaft mbH Rhein-Erft, Hürth • METRONA Wärmemesser Gesellschaft Schultheiß GmbH & Co., Hürth (until August 2016) • modernes köln, Gesellschaft für Stadtentwicklung mbH, Cologne • moderne stadt, Gesellschaft zur Förderung des Städtebaues und der Gemeindeentwicklung mbH Cologne (Supervisory Board Chairman) • Stadtwerke Lohmar GmbH & Co. KG, Lohmar (Deputy Supervisory Board Chairman) • Stadtwerke Troisdorf GmbH, Troisdorf • Unternehmensverwaltungsgesellschaft Metrona mbH, Hürth (until August 2016) • Verwaltungsgesellschaft Schultheiss mbH, Hürth (until August 2016) • Stromnetz Bornheim GmbH & Co. KG (Deputy Supervisory Board Chairman)
Carsten Südmersen Management Consultant		• m:con – mannheim:congress GmbH, Mannheim • MWS Projektentwicklungsgesellschaft mbH, Mannheim • Sparkasse Rhein Neckar Nord, Mannheim • Stadtmarketing Mannheim GmbH, Mannheim
Katja Udluft Trade Union Secretary at ver.di Rhine/Neckar		
Prof. Heinz-Werner Ufer Graduate in Economics	• Amprion GmbH, Dortmund (Chairman)	
Jürgen Wiesner Deputy Chairman of Works Council of MVV Energie AG	• MVV Enamic GmbH, Mannheim • MVV Trading GmbH, Mannheim	

Auditor's Report

We have audited the consolidated financial statements prepared by MVV Energie AG, Mannheim, comprising the balance sheet, the income statement, statement of changes in equity, cash flow statement and the notes to the consolidated financial statements, together with the group management report for the business year from 1 October 2015 to 30 September 2016. The preparation of the consolidated financial statements and the group management report in accordance with IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § (Article) 315a Abs. (paragraph) 1 HGB ("Handelsgesetzbuch": German Commercial Code) are the responsibility of the parent company's management. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit. In addition we have been instructed to express an opinion as to whether the consolidated financial statements comply with full IFRS.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the Group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit.

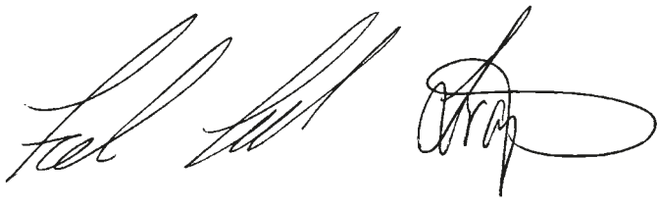
The audit includes assessing the annual financial statements of those entities included in consolidation, the determination of entities to be included in consolidation, the accounting and consolidation principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and the group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRSs as adopted by the EU, the additional requirements of German commercial law pursuant to § 315a Abs. 1 HGB and full IFRS and give a true and fair view of the net assets, financial position and results of operations of the Group in accordance with these requirements. The group management report is consistent with the consolidated financial statements and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Mannheim, 16 November 2016

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft



Folker Trepte
German Public Auditor

Kerstin Krauß
German Public Auditor

OTHER DISCLOSURES

About this Report

Notes to Consolidated Financial Statements Page 119

In our 2016 Annual Report we have documented information about sustainability at the MVV Energie Group. This information has been compiled for the first time in accordance with the Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) in the G4 version. Furthermore, we have accounted for the G4 Sector Disclosures for Electric Utilities.

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Unless otherwise indicated, the information we provide refers to our 2016 financial year (1 October 2015 to 30 September 2016). **G4-28** Based on our assessment, our reporting complies with the "Core" option set out in the Guidelines. In the ▸ **index of GRI-G4 contents** we state both the material topics for our Group and the associated G4 indicators. We additionally publish proprietary company indicators. The page references in the index all refer to this 2016 Annual Report which we published on 13 December 2016. Our previous annual report was published on 10 December 2015 and also included a chapter on sustainability. **G4-29**

Within the report, indications and references are denoted as follows:

- Reference to other information contained in this report
- Reference to other information on the internet
- **G4** Reference to a sentence or paragraph that contains disclosures in accordance with the Sustainability Reporting Guidelines of the Global Reporting Initiative.
- **G4** If underlined, the reference indicates a section.

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- Reference to information audited by PricewaterhouseCoopers Wirtschaftsprüfungsgesellschaft (PwC) within the ISAE 3000 audit.

Unless otherwise indicated, the information refers to the MVV Energie Group, i.e. to all ▸ **fully consolidated companies.** In our sustainability reporting we publish additional data about our at-equity shareholdings as our stakeholders rightly expect a high degree of transparency from us. Most of the energy we generate conventionally comes from the two joint power plants, namely Grosskraftwerk Mannheim (GKM) and Gemeinschaftskraftwerk Kiel (GKK). For select topics, we focus on our three largest locations of Mannheim, Offenbach und Kiel – for example in our disclosures on grid infrastructure. Unless stated otherwise in the comments on the various indicators, our reporting focuses on those markets and regions in which we primarily operate. Those are Germany, the UK and the Czech Republic. Most of our suppliers and partners are also located in these regions. **G4-8** **G4-17**

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

GRI reviewed our disclosures within the framework of its Materiality Disclosure Services and confirmed the correct positioning of the "G4 materiality disclosures" (G4-17 – G4-27).

In the ▸ **index of GRI-G4 contents** we have indicated which report contents are subject to an external audit. These audits were performed by PricewaterhouseCoopers Wirtschaftsprüfungsgesellschaft (PwC) – on the one hand on the basis of the "International Standard of Assurance Engagements 3000" (ISAE 3000) and on the other hand within its audit of the consolidated financial statements and management report (FSA). The audits performed in the context of ISAE 3000 have been additionally marked in the tables. **G4-33**

Index of GRI-G4 Contents

Indicator	Designation	Page	Notes	Assurance **G4-33**
General standard disclosures				
Strategy and analysis				
G4-1	CEO statement	3-5		
Organisational profile				
G4-3	Name	53		FSA
G4-4	Brands	54-56		FSA
G4-5	Headquarters	53		FSA
G4-6	Countries	53		FSA
G4-7	Nature of ownership and legal form	53		FSA
G4-8	Markets	184		FSA
G4-9	Company size	53, 66		FSA
G4-10	Total workforce	39		FSA
G4-11	Bargaining agreements	39		
G4-12	Supply chain	22		
G4-13	Major changes in report		None	
G4-14	Explanation of precautionary approach	17		
G4-15	Sustainability initiatives	19, 23		
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Identified material aspects and boundaries				
G4-17	Scope of consolidation	184, 119		FSA
G4-18	Definition of report contents	19-20	Supplementary information on Pages 16-18	
G4-19	Material aspects	20-21	Supplementary information on Page 19	
G4-20	Aspect boundaries outside the organisation	21		
G4-21	Aspect boundaries inside the organisation	21		
G4-22	Changes in form of presentation	20		
G4-23	Changes in scope of report		We are reporting in accordance with GRI-G4 for the first time.	
Stakeholder engagement				
G4-24	Overview of stakeholders	17		
G4-25	Selection of stakeholders	18		
G4-26	Approach to stakeholder engagement	18	Supplementary information on Pages 19-20	
G4-27	Consideration of key stakeholder concerns	17-19, 20-21	Key stakeholder concerns are dealt with in greater detail under the material topics (Pages 22-46).	
Report profile				
G4-28	Reporting period	184		
G4-29	Publication date	184		
G4-30	Reporting cycle		Annually	
G4-31	Contact partner	Reverse cover		
G4-32	GRI content index	185-187	GRI-G4 in accordance with the Core option	
G4-33	External assurance	184, 185-187		
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G4-34	Governance structure	17, 53		
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Indicator	Designation	Page	Notes	Assurance **G4-33**
General standard disclosures for the sector - G4 Sector Disclosures Electric Utilities (EU)				
G4-10+EU	Subcontractors	40		
G4-11+EU	Bargaining agreements at subcontractors	40		
G4-EU1	Installed capacity	24-26		ISAE3000
G4-EU2	Net energy output	28-29		ISAE3000
G4-EU3	Number of customers		For competition-related reasons, we do not publish any detailed disclosures on customer totals.	
G4-EU4	Grid lengths	29		
G4-EU5	CO_2 rights	77		
Specific standard disclosures concerning material topics				
Material topic: renewable energies				
DMA	Management approach	24		
Material aspect: contribution to energy turnaround				
MVV Energie-1	Electricity generation	24		
MVV Energie-2	Installed capacity for renewable energies	25		
Material topic: supply reliability				
DMA	Management approach	27		
Material GRI aspect (sector-specific): availability and reliability				
MVV Energie-3	Diversified generation portfolio	28-29		
G4-EU29	Average power outage duration (SAIDI)	29		
Material GRI aspect: indirect economic impacts				
G4-EC7	Investments in public infrastructure	29		
Material topic: customer				
DMA	Management approach	30		
Material GRI aspect: product labelling				
G4-PR5	Customer satisfaction surveys	31		
Material aspect: data protection and information security				
MVV Energie-4	Data protection and information security	31		
Material topic: energy efficiency				
DMA	Management approach	32		
Material GRI aspect: energy				
G4-EN7	Reducing energy requirements	33		ISAE3000
Material GRI aspect (sector-specific): system efficiency				
G4-EU11	System efficiency	32		
G4-EU12	Grid losses	33		

Indicator	Designation	Page	Notes	Assurance **G4-33**
Material topic: climate protection				
DMA	Management approach	34		
Material GRI aspect: emissions				
G4-EN15	Direct greenhouse gas emissions (Scope 1)	35		ISAE3000
G4-EN15+EU	Specific Scope 1 emissions	37		
G4-EN16	Indirect greenhouse gas emissions (Scope 2)	35		ISAE3000
G4-EN16+EU	Specific Scope 2 emissions	37		
G4-EN17	Other indirect greenhouse gas emissions (Scope 3)	35		ISAE3000
G4-EN19	Reduction in GHG emissions	36		
G4-EN21	Air pollutant emissions (absolute)	37		
G4-EN21+EU	Air pollutant emissions (specific)	37		
Material topic: resource use				
DMA	Management approach	37		
Material GRI aspect: materials				
G4-EN1	Materials used	38		ISAE3000
Material topic: employees				
DMA	Management approach	40		
Material GRI aspect: occupational health and safety				
G4-LA5	Occupational safety committees	44		
G4-LA6	Work-related accidents	44		
G4-LA6+EU	Work-related accidents at subcontractors	44		
Material GRI aspect: training and education				
G4-LA10	Knowledge management	41		
Material topic: social responsibility				
DMA	Management approach	45		
Material GRI aspect: economic performance				
G4-EC1	Our value creation	45		FSA
Material GRI aspect: local communities				
G4-SO1	Measures to involve local communities	46	No disclosures on scope	
Material aspect: commitment to society				
MVV Energie-5	Commitment to society	47		

Further GRI disclosures reported

MVV Energie reports further GRI disclosures; the further information provided on indicators either does not relate to material aspects or exceeds the "Core" scope option: G4-2 (Pages 99-108), G4-36 (Page 17), G4-46 (Page 102), G4-51 (Pages 92-94), G4-57 (Page 16, Page 91), G4-LA1 (in part: Page 39), G4-LA12 (in part: Page 42, Pages 174-179), G4-LA14 (Page 23), G4-LA 15 (Page 23), G4-PR8 (Page 31), G4-SO4 (Page 16, Page 91), G4-SO6 (Page 16, Page 102)

Audit Opinion

Independent Practitioner's Limited Assurance Report to MVV Energie AG, Mannheim.

We have been engaged to perform a limited assurance engagement on the sustainability information marked with „ ☑ " in the sustainability chapter of the Annual Report of MVV Energie AG[1]„ Mannheim, (hereafter the "Company") for the period 1 October 2015 to 30 September 2016 (hereafter the "sustainability chapter").

Management's Responsibility

Company's Management is responsible for the preparation and presentation of the sustainability chapter in accordance with the criteria as set out in the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) (hereafter the "GRI-Criteria") and for the selection of the information to be assessed.

This responsibility includes the selection and application of appropriate methods to prepare the sustainability chapter as well as the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the sustainability chapter, which is free of material misstatements due to intentional or unintentional errors.

Audit Firm's Independence and Quality Control

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

The audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Institut der Wirtschaftsprüfer (Institute of Public Auditors in Germany; IDW): Requirements to quality control for audit firms ("Entwurfs eines IDW Qualitätssicherungsstandards 1 „Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis" (IDW EQS 1) – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's Responsibility

Our responsibility is to express an opinion on the sustainability information marked with „ ☑ " in the sustainability chapter based on our work performed.

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the sustainability chapter

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that the sustainability information marked with „ ☑ " in the sustainability chapter has not been prepared, in all material respects, in accordance with the GRI-Criteria. In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the practitioner's judgement. This includes the assessment of the risks of material misstatements of the sustainability information in the sustainability chapter with regard to the GRI-Criteria.

1 Published on the website of MVV Energie AG: www.mvv-energie.de

Within the scope of our work we performed amongst others the following procedures:

- Inquiries of personnel involved in the preparation of the sustainability chapter regarding the preparation process, the underlying internal control system and the selected sustainability information in the sustainability chapter of the annual report
- Analytical procedures on selected sustainability information of the sustainability chapter of the annual report
- Comparison of selected sustainability information with corresponding data in the consolidated financial statements and in the group management report
- Assessment of the presentation of selected sustainability information in the sustainability chapter regarding the sustainability performance

Conclusion

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the sustainability information marked with „ ✓ “ in the sustainability chapter of the Company for the period 1 October 2015 to 30 September 2016 has not been prepared, in all material respects, in accordance with the GRI-Criteria.

Emphasis of Matter – Recommendations

Without qualifying our conclusion above, we make the following recommendations for the further development of the Company's sustainability reporting:

- Further formalization of the internal sustainability reporting process and controls

Restriction on Use and Distribution

We issue this report on the basis of the engagement agreed with the Company. The audit has been performed for purposes of the Company and is solely intended to inform the Company about the results of the audit. The report is not intended for any third parties to base any (financial) decision thereon. We do not assume any responsibility towards third parties.

Munich, November 11, 2016

PricewaterhouseCoopers
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

ppa.

(gez. Hendrik Fink)
Wirtschaftsprüfer
(German Public Auditor)

(gez. Axel Faupel)

Ten-Year Overview

Ten-year overview

	FY 2016[1,2]	FY 2015[1,2]	FY 2014[2]	FY 2013[2]	FY 2012[2]
Income statement (Euro million)					
Sales excluding energy taxes	4,066	3,422	3,717[1]	4,044	3,895
Adjusted EBITDA	425	336	330[1]	376	399
Adjusted EBIT	213	175	170[1]	208	223
Adjusted EBT	139	132	127[1]	143	151
Adjusted annual net income	98	92	93[1]	101	98
Adjusted annual net income after minority interests	95	75	86[1]	85	80
Sales excluding energy taxes (Euro million)					
Generation and Infrastructure	1,110	454	403	390	354
Trading and Portfolio Management	645	733	928[1]	1,054	976
Sales and Services	2,210	2,133	2,278	2,356	2,162
Strategic Investments	99	99	104[1]	243	398
Other Activities/Consolidation	2	3	4	1	5
Total	**4,066**	**3,422**	**3,717**	**4,044**	**3,895**
Adjusted EBIT (Euro million)					
Generation and Infrastructure	161	133	124	149	141
Trading and Portfolio Management	−31	−29	−22	−16	3
Sales and Services	29	42	31	40	21
Strategic Investments	24	21	28[1]	32	38
Other Activities/Consolidation	30	8	9	3	20
Total	**213**	**175**	**170**	**208**	**223**
Investments (Euro million)					
Generation and Infrastructure	196	417	270	337	224
Trading and Portfolio Management	–	12	9	9	4
Sales and Services	20	22	14[1]	14	33
Strategic Investments	5	5	4[1]	17	17
Other Activities/Consolidation	15	14	13	15	16
Total	**236**	**470**	**310**	**392**	**294**
of which growth investments	121	336	207[1]	301	191
of which investments in existing business	115	134	103[1]	91	103

	FY 2011[2]	FY 2010[2]	FY 2009[2]	FY 2008[2]	FY 2007[2]
	3,600	3,359	3,161	2,636	2,259
	404	406	385	398	344
	242	243	239	249	199
	179	165	165	181	123
	125	105	112	123	126
	108	95	98	110	109
	327	329	–	–	–
	800	684	–	–	–
	2,096	1,984	–	–	–
	373	356	–	–	–
	4	6	–	–	–
	3,600	**3,359**	**3,161**	**2,636**	**2,259**
	138	122	–	–	–
	24	40	–	–	–
	39	39	–	–	–
	35	37	–	–	–
	6	5	–	–	–
	242	**243**	**239**	**249**	**199**
	148	151	–	–	–
	4	0	–	–	–
	21	60	–	–	–
	84	34	–	–	–
	24	22	–	–	–
	281	**267**	**255**	**241**	**255**
	177	156	–	–	–
	104	111	–	–	–

1 Since 2015 financial year: Ingolstadt subgroup no longer recognised proportionately, but included in consolidated financial statements at equity (figures for 2014 financial year adjusted)
2 Since 2007 financial year: excluding non-operating measurement items for financial derivatives; since 2009 financial year: also excluding restructuring expenses; since 2011 financial year: also including interest income from finance leases; since 2013 financial year: also excluding structural adjustment for part-time early retirement

Ten-year overview

	FY 2016[1,2]	FY 2015[1,2]	FY 2014[2]	FY 2013[2]	FY 2012[2]
Balance sheet figures (Euro million)					
Non-current assets	3,586	3,513	3,056[1]	3,032	2,868
Current assets	1,417	1,071	1,015[1]	1,207	1,211
Share capital	169	169	169	169	169
Capital reserve	455	455	455	455	455
Accumulated net income	641	594	579[1]	547	517
Accumulated other comprehensive income	−81	−107	−73	−74	−48
Non-controlling interests	243	203	206[1]	206	207
Equity	1,426	1,314	1,336[1]	1,303	1,300
Non-current debt	2,080	2,211	1,710[1]	1,751	1,882
Current debt	1,497	1,059	1,025[1]	1,185	897
Total assets	5,004	4,584	4,071[1]	4,239	4,079
Net financial debt[3]	1,283	1,341	1,063[1]	1,111	1,028
Key balance sheet figures and ratios					
Cash flow from operating activities (Euro million)	274	255[4]	407[1]	372	285
Adjusted equity ratio[5] (%)	33.0	33.8	35.7[1]	34.5	36.1
ROCE[6] (%)	7.6	6.6	6.7[1]	8.3	9.0
WACC[7] (%)	6.4	6.4	7.4	7.4	8.6
Value spread[8] (%)	1.2	0.2	−0.7[1]	0.9	0.4
Capital employed[9] (Euro million)	2,806	2,660	2,527[1]	2,507	2,486
Share and dividend					
Closing price[10] at 30 September (Euro)	19.90	21.15	23.89	22.35	21.39
Annual high[10] (Euro)	22.00	26.20	26.05	28.00	27.96
Annual low[10] (Euro)	19.30	20.26	21.85	20.50	19.50
Market capitalisation at 30 September (Euro million)	1,312	1,394	1,575	1,473	1,410
Average daily trading volume (no. of shares)	5,630	4,233	2,882	4,121	6,707
No. of individual shares at 30 September (000s)	65,907	65,907	65,907	65,907	65,907
No. of shares with dividend entitlement (000s)	65,907	65,907	65,907	65,907	65,907
Dividend per share (Euro)	0.90[11]	0.90	0.90	0.90	0.90
Dividend total (Euro million)	59.3[11]	59.3	59.3	59.3	59.3
Adjusted earnings per share[12] (Euro)	1.45	1.14	1.30[1]	1.29	1.21
Cash flow from operating activities per share[12] (Euro)	4.16	3.86	6.18[1]	5.64	4.33
Adjusted carrying amount per share[12,13] (Euro)	18.36[14]	17.73[14]	18.03[1,14]	17.89[14]	17.80[14]
Price/earnings ratio[12,15]	13.7	18.6	18.4[1]	17.3	17.7
Price/cash flow ratio[12,15]	4.8	5.5	3.9[1]	4.0	4.9
Dividend yield[15] (%)	4.5[11]	4.3	3.8	4.0	4.2

	FY 2011[2]	FY 2010[2]	FY 2009[2]	FY 2008[2]	FY 2007[2]
	2,965	2,684	2,795	2,725	2,479
	910	953	1,159	1,062	799
	169	169	169	169	143
	455	455	455	455	255
	512	452	371	506	383
	−3	16	15	24	17
	213	95	103	116	116
	1,346	1,187	1,113	1,270	914
	1,555	1,500	1,698	1,445	1,377
	974	950	1,143	1,072	987
	3,875	3,637	3,954	3,787	3,278
	1,011	1,202	1,192	1,139	1,314
	376	356	258	262	353
	37.7	35.7	33.9	35.5	27.9
	9.7	9.1	9.0	10.2	8.4
	8.5	8.5	8.5	8.5	7.5
	1.2	0.6	0.5	1.7	0.9
	2,489	2,688	2,649	2,444	2,390
	23.86	29.00	30.83	33.20	29.49
	29.90	33.00	34.04	33.75	34.24
	18.85	29.00	26.55	28.00	22.00
	1,573	1,911	2,032	2,188	1,645
	8,431	6,108	19,162	29,575	32,396
	65,907	65,907	65,907	65,907	55,767
	65,907	65,907	65,907	65,907	65,907
	0.90	0.90	0.90	0.90	0.80
	59.3	59.3	59.3	59.3	52.7
	1.63	1.44	1.48	1.69	1.96
	5.70	5.40	3.91	4.01	6.33
	17.61[14]	16.94[14]	16.52[14]	16.53[14]	14.32
	14.6	20.1	20.8	19.6	15.0
	4.2	5.4	7.9	8.3	4.7
	3.8	3.1	2.9	2.7	2.7

1 Since 2015 financial year: Ingolstadt subgroup no longer recognised proportionately, but included in consolidated financial statements at equity (figures for 2014 financial year adjusted)
2 Since 2007 financial year: excluding non-operating measurement items for financial derivatives; since 2009 financial year: also excluding restructuring expenses; since 2011 financial year: also including interest income from finance leases; since 2013 financial year: also excluding structural adjustment for part-time early retirement
3 Non-current and current financial debt less cash and cash equivalents
4 Previous year's figure adjusted
5 Since 2008 financial year: adjusted equity as percentage of adjusted total assets
6 Return on capital employed: until 2009 financial year: adjusted EBITA as percentage of capital employed; since 2010 financial year: adjusted EBIT as percentage of capital employed
7 Weighted average cost of capital
8 Value spread (ROCE less WACC)
9 Until 2010 financial year: adjusted equity plus financial debt plus provisions for pensions and similar obligations plus accumulated goodwill amortisation (calculated as annual average); since 2011 financial year: adjusted equity plus financial debt plus provisions for pensions and similar obligations less cash and cash equivalents (calculated as annual average)
10 Xetra trading
11 Pending approval by Annual General Meeting on 10 March 2017
12 Weighted average number of shares: since 2009 financial year: 65,906,796; 2008 and 2007 financial years: 55,767,290
13 Excluding minority interests, weighted annual average number of shares
14 Excluding non-operating measurement items for financial derivatives
15 Basis: closing price in XETRA trading at 30 September

Ten-year overview

	FY 2016[1,2]	FY 2015[1,2]	FY 2014[2]	FY 2013[2]	FY 2012[2]
Sales volumes					
Electricity turnover (kWh million)	21,797	20,823	23,207[1]	25,817	28,283
of which Generation and Infrastructure (kWh million)	465	351	142	61	93
of which Trading and Portfolio Management (kWh million)	9,982	10,342	12,154[1]	14,489	15,750
of which Sales and Services (kWh million)	11,093	9,891	10,678	10,733	11,071
of which Strategic Investments (kWh million)	257	239	233[1]	534	1,369
Heating energy turnover (kWh million)	6,716	6,995	6,292[1]	7,510	6,888
of which Generation and Infrastructure (kWh million)	1,069	1,188	496	402	274
of which Trading and Portfolio Management (kWh million)	–	–	–	–	673
of which Sales and Services (kWh million)	4,909	5,065	5,021[1]	5,901	4,772
of which Strategic Investments (kWh million)	738	742	775[1]	1,207	1,169
Gas turnover (kWh million)	28,270	27,410[4]	22,517[1]	25,078	17,418
of which Generation and Infrastructure (kWh million)	259	144	103	60	4
of which Trading and Portfolio Management (kWh million)	21,467	20,556[4]	15,883[1]	16,313	7,762
of which Sales and Services (kWh million)	6,377	6,563	6,393	7,482	7,567
of which Strategic Investments (kWh million)	168	147	138[1]	1,223	2,085
Water turnover (m^3 million)	41	46	47	47	53
Combustible waste delivered (tonnes 000s)	2,306	2,041	1,940	1,888	1,897
Employees					
Headcount (no. of employees at 30 September)					
MVV Energie Group	6,174	5,308	5,166[1]	5,459	5,541
of which in Germany	5,328	4,676	4,561[1]	4,890	4,900
of which abroad	846	632	605	569	641
Full-time equivalents (at 30 September)	5,575	4,828	4,688[1]	4,785	4,898

	FY 2011[2]	FY 2010[2]	FY 2009[2]	FY 2008[2]	FY 2007[2]
	26,093	23,891	19,582	18,188	14,302
	155	334	–	–	–
	12,855	10,771	–	–	–
	11,678	11,510	–	–	–
	1,405	1,276	–	–	–
	7,289	7,586	7,217	7,006	6,299
	141	305	–	–	–
	669	721	–	–	–
	5,226	5,239	–	–	–
	1,253	1,321	–	–	–
	10,888	11,775	10,851	9,166	9,456
	–	–	–	–	–
	1,700	2,313	–	–	–
	7,759	7,356	–	–	–
	1,429	2,106	–	–	–
	54	54	53	55	55
	1,835	1,762	1,599	1,550	1,409
	5,919	6,059	6,037	5,873	6,355
	5,278	5,444	5,457	5,311	5,267
	641	615	580	562	1,088
	5,085	5,181	5,171	4,936	5,168

1 Since 2015 financial year: Ingolstadt subgroup no longer recognised proportionately, but included in consolidated financial statements at equity (figures for 2014 financial year adjusted)
2 Since 2007 financial year: excluding non-operating measurement items for financial derivatives; since 2009 financial year: also excluding restructuring expenses; since 2011 financial year: also including interest income from finance leases; since 2013 financial year: also excluding structural adjustments for part-time early retirement
4 Previous year's figure adjusted

Glossary

B

Base load electricity

Base load is the term used to describe that level of electricity demand that may not be undercut even in times of very weak requirements. As the volumes of electricity fed into the electricity grid and consumed may not vary to any significant extent, due account has to be taken of consumers' different levels of demand over the course of a day. To this end, there are power plants for base load electricity production and plants that are only added when demand is higher. The price of base load electricity on the energy exchange has been falling since the 2nd quarter of 2011. Please also see ▸ **Page 72.**

Biogas

Biogas is gas obtained from biomass by way of fermentation in the absence of oxygen (i.e. anaerobic fermentation). The raw materials used for this purpose are organic waste or sewage sludge, farm fertilisers, such as slurry and manure, and plant remains. Deliberately cultivated energy plants – so-called regenerative fuels – can also be used for biogas production. Biogas is used in the decentralised generation of electricity and heating energy or is refined into biomethane.

Biomass

The renewable fuel of biomass is used in solid, liquid and gaseous state to generate electricity and heating energy. The biomass power plants, biomass heating energy plants and biomass combined heat and power plants at MVV Energie are mostly fuelled by waste timber, residual forest timber and green cuttings.

Biomethane

Biogas has to be refined before it can be put to use in ways largely similar to regular natural gas. This process involves rinsing out a majority of the incombustible and corrosive components of biogas. The end product is referred to as biomethane, which satisfies quality standards similar to those for natural gas. Biomethane may be fed into the natural gas grid, for example, and thus transported over long distances. It is mostly used to produce electricity and heating energy at combined heat and power (CHP) units or as vehicle fuel.

C

Clean dark spread (CDS)

The clean dark spread, corresponding to the margin achieved from generating electricity from hard coal, portrays the difference between the electricity price on the one hand and prices for fuel (coal, including transport), the price of CO_2 emission rights and the Euro/USD exchange rate on the other.

CO_2 emissions: Scope 1, 2 and 3

For recording purposes, CO_2 emissions are subdivided into three classes (scopes). Scope 1 includes a company's direct emissions, such as those arising at proprietary plants. Indirect emissions arising outside the company are recorded as Scope 2 and 3; Scope 2 includes energy-related emissions associated with externally procured energy and Scope 3 covers those emissions resulting from services and upstream products acquired.

CO_2 emission rights

Greenhouse gases, above all carbon dioxide (CO_2), are seen as the causes of global warming. To reduce emissions of this gas harmful to the climate, a market has been created for CO_2 emission rights. Emission right trading has given rise to a market-based instrument aimed at protecting the environment, one that offers participating companies an incentive to reduce their CO_2 emissions at minimum cost to the overall economy. This is how it works: An industrial company must demonstrate a corresponding right (certificate) for every tonne of CO_2 it intends to emit. This certificate can be traded, with the price being set on the energy exchange in Leipzig, for example. Issuers can either purchase rights or reduce their emissions by investing in climate-friendly technology and then sell the rights no longer required as a result. Please also see ▸ **Page 103.**

Combined heat and power (CHP) generation
Combined heat and power (CHP) generation is the term used to describe the simultaneous generation of both electrical energy and heating energy usable for heating purposes (district heating) or production processes (process heat). Compared with the separate generation of electricity (in condensation power plants, please also see ▸ **Page 76**) and heating energy (at heating power plants), CHP generation reduces the volume of primary energy required for production, and thus also the volume of CO_2 emissions. As an efficient generation technology, CHP thus has an indispensable role to play in the conversion of the energy supply.

Commodity
Designation for a standardised tradable good, such as electricity, gas, coal or CO_2 emission rights.

Contracting
A distinction is made between energy supply contracting (e.g. supply of heating energy by building and operating a heating energy plant tailored to the customer's needs and remaining in contractor ownership), operations contracting (the contractor operates the customer's plant and ensures optimal operations) and savings contracting (the contractor guarantees energy savings and may possibly take over the necessary investments in the plant or application technology). The objective of contracting is to achieve economic and ecological benefits by optimising processes. Please also see ▸ **Pages 50, 56 and 107.**

D

Degree day figures
Degree day figures are a weather indicator used to assess heating energy requirements. According to VDI Guideline 4710, the calculation of degree day figures is based on the difference between an indoor room temperature of 20 degrees Celsius and the average daily outdoor temperature below the so-called heating threshold of 15 degrees Celsius. This is the temperature below which heating is required according to the degree day method. Please also see ▸ **Page 74.**

Direct marketing
Term used to designate the direct sale of electricity from renewable energy sources on the energy exchange (e.g. the EEX in Leipzig) or to large customers. One direct marketing instrument on the energy exchange is the market premium model. In this, the operators of renewable energies plants receive the regular market price, which is less than fixed EEG compensation. This is supplemented by the market premium. In the absence of direct marketing, operators of renewable energies plants sell their electricity to the relevant regional grid operator, which in turn makes it available to the energy exchange. Please also see ▸ **Pages 55, 71 and 73.**

E

EEX
The European Energy Exchange (EEX) in Leipzig is the marketplace for electricity, natural gas, CO_2 emission rights and coal. Admission to the exchange enables companies to trade in all products on the spot and futures market of the EEX.

Efficiency
The efficiency of an energy generation plant represents the volume of energy made available for use over a specified time period as a percentage of the energy input. Please also see ▸ **Pages 21, 32 and 61.**

ETS
ETS = Emission Trading System. Power and heating energy plants that are subject to emission trading requirements are referred to as ETS plants. These include plants generating electricity, steam, warm water, process heating energy or heated flue gases by using fuel in an incineration plant (such as a power plant, combined heat and power plant, heating energy plant, gas turbine plant, combustion plant, other firing facility) which in terms of emission trading in all cases require approval to emit greenhouse gases. Please also see ▸ **Page 69.**

F

Fuel cell

Fuel cells are suitable for the decentralised generation of energy in buildings or at industrial locations. They are also used in mobile applications. The technology is characterised by a high efficiency level and low emissions. The core component of a fuel cell is a so-called galvanic cell in which the chemical energy of a fuel, such as hydrogen, methane (natural gas) or methanol, is directly converted into electricity and heating energy by means of an electrochemical reaction involving oxygen. Please also see ▸ **Page 61.**

I

Investments

In the investments referred to in this Annual Report in the overview of key figures, combined management report and segment report, a distinction is made between investments in intangible assets, property, plant and equipment and investment property, investments in the acquisition of fully consolidated companies and investments in other financial assets (excluding additions to securities and loans). Both cash-effective and non-cash-effective investments are included. We also distinguish between growth investments and investments in our existing business. In the cash flow statement, only the outgoing payments for investments are recorded. Please also see ▸ **Pages 85 and 115.**

M

Materials flow management

Systematic process intended to continually optimise input and output waste flows. The aim is to achieve maximum efficiency in terms of satisfying specific plant capacities with the best materials composition, for example in terms of calorific value and waste properties. The term also denotes cross-regional concepts to supply waste to the appropriate disposal plants based on individual customers' requirements and the different types of waste involved. Please also see ▸ **Page 105.**

R

Repowering

Term used to describe the replacement of first-generation wind turbines with modern turbines. This offers many benefits. Halving the number of turbines and simultaneously doubling capacity by making more efficient use of locations can treble the yield. Modern wind turbines make better use of the available wind, thus minimising wind power generation costs. They can also be integrated far better into the electricity grid. Please also see ▸ **Pages 68 and 71.**

S

Smart grid

By working with the latest innovative technologies and new services, smart grids offer the possibility of actively and flexibly adjusting generation, grid control, storage and consumption to the constantly changing needs of the energy markets. Please also see ▸ **Pages 27, 50, 59 and 61.**

Smart meter

An instrument linking energy generation and energy demand in line with requirements and consumption. A smart meter system comprises a digital electricity meter and a communications unit – the smart meter gateway. This gateway enables meters to be integrated into the smart electricity grid in line with data protection and security requirements. Smart meters make consumption transparent for consumers and can also be used for electronic data transmission or automatic appliance management. Please also see ▸ **Pages 60 and 69.**

Index of Keywords

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G4 Reference to a sentence or paragraph that contains disclosures in accordance with the Sustainability Reporting Guidelines of the Global Reporting Initiative

G4 If underlined, the reference indicates a section.

Reference to information audited by PricewaterhouseCoopers Wirtschaftsprüfungsgesellschaft (PwC) within the ISAE 3000 audit

Financial Calendar

13 December 2016

Annual Report
2016 Financial Year

13 December 2016

Annual Results Press Conference and Analysts' Conference
2016 Financial Year

15 February 2017

Q1 Quarterly Statement
2017 Financial Year

10 March 2017

Annual General Meeting

12 May 2017

H1 Interim Report
2017 Financial Year

15 August 2017

9M Quarterly Statement
2017 Financial Year

12 December 2017

Annual Report
2017 Financial Year

12 December 2017

Annual Results Press Conference and Analysts' Conference
2017 Financial Year

The dates of analysts' conference calls to be held during the financial year will be announced in good time.

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