

Six-Monthly Financial Report

January to June 2018

Q3

Q2

Q1

On track

2020 strategy

Adjusted EBITDA > increases by 6.4% to €1,141.0 million

Ratings > all EnBW credit ratings back in the A-grade range

Earnings forecast 2018 > reconfirmed at 0% to +5%

Electromobility > ambitious expansion of the nationwide charging network

Performance indicators of the EnBW Group

Financial and strategic performance indicators

in € million	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
External revenue	11,561.8	10,475.8	10.4	21,974.0
Adjusted EBITDA	1,141.0	1,072.6	6.4	2,113.0
TOP Share of adjusted EBITDA accounted for by Sales in € million/in %	159.5/14.0	180.8/16.9	-11.8/-	330.0/15.6
TOP Share of adjusted EBITDA accounted for by Grids in € million/in %	684.9/60.0	610.6/56.9	12.2/-	1,045.9/49.5
TOP Share of adjusted EBITDA accounted for by Renewable Energies in € million/in %	164.8/14.4	152.4/14.2	8.1/-	331.7/15.7
TOP Share of adjusted EBITDA accounted for by Generation and Trading in € million/in %	138.8/12.2	102.3/9.5	35.7/-	377.1/17.8
Share of adjusted EBITDA accounted for by Other/Consolidation in € million/in %	-7.0/-0.6	26.5/2.5	-126.4/-	28.3/1.4
EBITDA	1,184.7	2,639.6	-55.1	3,752.4
Adjusted EBIT	549.4	543.0	1.2	998.8
EBIT	586.8	2,082.6	-71.8	2,504.0
Group net profit ¹	346.2	1,679.3	-79.4	2,054.1
Earnings per share from Group net profit in € ¹	1.28	6.20	-79.4	7.58
Retained cash flow	333.5	1,884.6	-82.3	3,050.3
Retained cash flow II	433.5	881.8	-50.8	1,529.5
Net (cash) investments ²	556.1	449.5	23.7	1,367.1

Non-financial performance indicators³

	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
Customers goal dimension				
TOP EnBW/Yello Customer Satisfaction Index	130/150	139/164	-6.5/-8.5	143/161
TOP SAIDI (electricity) in min/year ²	8	9	-11.1	19
Employees goal dimension				
TOP LTIF ⁴	2.5	3.1	-19.4	3.0

Employees^{5, 6}

	30/06/2018	30/06/2017	Change in %	31/12/2017
Number	21,397	21,324	0.3	21,352
Number of full-time equivalents ⁷	19,999	19,862	0.7	19,939

1 In relation to the profit/loss attributable to the shareholders of EnBW AG.

2 The figures for the previous year have been restated.

3 The values for the key performance indicators Reputation Index, Employee Commitment Index (ECI), "Installed output of renewable energies (RE) in GW and the share of the generation capacity accounted for by RE" and CO₂ intensity will be exclusively collected at the end of the year.

4 Variations in the group of consolidated companies; only those companies controlled by the Group are included.

5 Number of employees excluding apprentices/trainees and inactive employees.

6 The number of employees for the ITOs (ONTRAS Gastransport GmbH, terranets bw GmbH and TransnetBW GmbH) is only updated at the end of the year; for intervals of less than a year, the number of employees from 31/12/2017 is carried forward.

7 Converted into full-time equivalents.

Q2 2018



Dr. Frank Mastiaux

We want to help shape the mobility transition with great conviction. This is why we have made electromobility one of our key themes.

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About the title

On track: We remain on track to achieve our targets defined in the EnBW 2020 strategy and anticipate that we will once again reach the same level of earnings in 2020 as in 2012, this time with a modified business portfolio.

Six-monthly consolidated financial statements

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Trailblazer for sustainable mobility

Simple. Everywhere. Reliable. This should be the customer's experience of electromobility. This is why EnBW is expanding its nationwide charging network for electric vehicles and supplementing the infrastructure with digital solutions. EnBW's own specially developed app – the EnBW mobility+ app – has received several awards and is already bringing electromobility closer to its more than 100,000 users.

A reliable charging infrastructure and easy-to-find charging stations are one part of the solution, while convenient charging, simple payment methods and transparent tariffs will also make electromobility more attractive. An ADAC test has demonstrated the importance EnBW places on these factors. The automobile club observed 50 charging stations in Germany. The best score was achieved by an EnBW station in Sindelfingen. Five other charging stations operated by EnBW in Stuttgart also scored outstandingly. ADAC focussed on, among other things, whether the charging stations could be found in all widely used directories, and that customers registered with other suppliers were able to recharge their vehicles without any problems. The advantage for users of the EnBW mobility+ app is that they can check the price and availability in advance. A hotline also provides assistance seven days a week around the clock if they experience any problems.

For the best possible customer experience

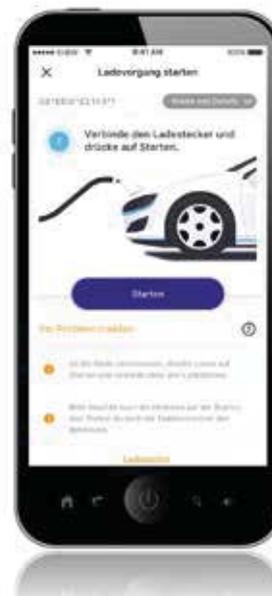
Electromobility needs to be integrated into everyday life. To help achieve this, EnBW provides users with access to a comprehensive charging network covering all suppliers via its EnBW mobility+ app offering more than 16,000 charging points in Germany, Austria and Switzerland. In parallel, the company is greatly expanding its own quick-charging network and is now also the market leader in this area. EnBW aims to operate 1,000 quick-charging stations across the whole of Germany by 2020. The basis for this network will be the around 120 locations with more than 150 quick-charging stations that EnBW already operates at German motorway service stations from Tank & Rast – every third Tank & Rast location thus has an EnBW quick-charging station.

With more than 100,000 downloads, the EnBW mobility+ app is the most successful e-mobility app on the German market.

EnBW has also passed another milestone: In cooperation with OMV, an Austrian mineral oil company, it is expanding the quick-charging network in and around cities in southern Germany. Around 100 OMV locations can be equipped with ultra-quick-charging technology from autumn. This will allow an e-car to be provided with enough energy for 100 km in three minutes. A good and dense charging network is particularly important in urban areas because this is where electromobility is growing the fastest and not every customer is able to charge their car at home.

Targeted expansion of the quick-charging network

The capacities at the OMV filling stations equipped with the new quick-charging technology will be gradually expanded over the next few years to provide up to eight high-speed charging points at each site. This quickly adds up to around 800 charging points at the 100 locations. The latest generation of quick-charging stations has a charging capacity of more than 300 kW and is thus also well prepared for future generations of vehicles.



However, it will not only be possible in future to charge e-cars on long journeys but also while out shopping. For example, EnBW is equipping 50 locations operated by the electronics retailer Euronics with charging solutions. While the customer makes their purchases in the shop in future, their electric vehicle will be charging right outside the shop at the same time. Alongside reliable charging infrastructure from EnBW, the customer will also receive a credit code with every purchase that can be immediately redeemed via the EnBW mobility+ app.

In order to make long-distance journeys possible, the charging network also needs expanding along country roads and in small communities. Therefore, there are plans to develop a core charging network for electric vehicles covering the whole of Baden-Württemberg by the middle of 2019, which EnBW will install in cooperation with 74 municipal utilities and suppliers as well as 3 local authorities. The intention is to ensure that from 2019 the next charging station will only be a maximum of 10 km away. The network will consist of more than 400 charging stations in total. The Federal State of Baden-Württemberg has provided the project SAFE with €2.2 million of funding. This network will be based on "normal" charging stations with a charging capacity of 22 kW, as well as an overlying network of quick-charging stations. A quick-charging infrastructure with a grid size of 20 km will be created as a result. Alongside the State of Baden-Württemberg, the Zweckverband Oberschwäbische Elektrizitätswerke (OEW) is also engaged in the development of the charging infrastructure in its nine administrative districts. It has commissioned EnBW to integrate 54 new charging stations in southern Baden-Württemberg into the core charging network.

More e-mobility in our own ranks:
180 special EnBW editions of the BMW i3 were handed over in June to employees, who are leasing them for one year at a reduced price.



A look ahead to the future. Three questions for Lars Walch.



Lars Walch, responsible for strategy and partnerships in the area of electromobility at EnBW

Question: EnBW is entering into an increasing number of collaborations to expand the charging infrastructure. Why?

We want people to be able to set off in their electric cars without having to worry about how far they can drive and where the next charging station is. This is why we are pushing forward the expansion of a dense charging network – above all in Baden-Württemberg but also in other parts of Germany. Due to our collaborations with broad-based partners such as OMV or Tank & Rast, we are able to quickly and easily expand the number of charging locations. This not only benefits our customers but also us and our partners.

Question: Where is EnBW placing the main focus in the expansion of the charging network?

Alongside a comprehensive infrastructure and flexible payment options, the main focus is on efficient quick-charging stations. They will soon make it possible for us to provide a vehicle with enough energy to cover a range of 100 km in a charging time of just three minutes. The image of and acceptance for electromobility among car drivers will improve as a result.

Question: How is it possible to earn money through charging stations?

A dense, quick-charging network is a decisive prerequisite for the success of electromobility. However, we are not only expanding the charging network but also developing new business models dealing with electrically powered driving at the same time. One example is our fleet solutions for companies – we are able to offer them complete packages from one source. Electromobility is an important part of the Energiewende and needs to be viewed holistically. EnBW helps customers, for example, to intelligently combine a photovoltaic power plant on the roof with their car, which can act as a storage system.

 More on this subject:
www.enbw.com/elektromobilitaet

Interim Group management report

Business activity and strategy

Business activity

As an integrated energy company, EnBW operates in Germany along the entire energy industry value chain in four segments: Sales, Grids, Renewable Energies, and Generation and Trading. It has a diversified business portfolio with once again – following the realignment as part of the Energiewende – an increasingly advantageous risk-return profile.

EnBW has its roots in Baden-Württemberg. We are active here along the entire energy industry value chain and are positioned as a market leader. We also predominately operate throughout Germany and in other European countries. EnBW supplies in total around 5.5 million customers with energy. With its strong brands, EnBW is close to its customers, orientating itself to their needs with efficiency and quality.

EnBW acquired a 74.21% shareholding in VNG-Verbundnetz Gas Aktiengesellschaft, Leipzig, in 2016. Following the full consolidation of the company in May 2017, EnBW has doubled its gas business and become the third-largest supplier on the German gas market. The acquisition of VNG represented an important step in the repositioning and further development of EnBW, both strategically and economically. In 2017, VNG contributed €140 million to the adjusted EBITDA of the Group.

VNG sold the activities in the core business area of Exploration & Production bundled together at VNG Norge AS to Neptune Energy Norge AS with retroactive effect to 1 January 2018. As a result, VNG has optimised its business portfolio as part of the “VNG 2030+” strategy and released funds for the development and expansion of new business fields.

Detailed information on the business model of EnBW can be found in the [Integrated Annual Report 2017](#) from p. 14 onwards.

Strategy

The EnBW 2020 strategy is guided by the principle: “Energiewende. Safe. Hands on.” It combines the two core elements of a digital and innovative customer business with the efficient and safe operation, construction and dismantling of energy supply plants and infrastructure. EnBW aims to more than double the share of its generation capacity accounted for by renewable energies from 19% (based on the reference year of 2012) to more than 40% in 2020. By investing extensively in grid expansion, the EnBW grid companies will be making a substantial contribution to the infrastructure required by the energy system and thus to the security of supply. By 2020, a significant share of our earnings – the target value for adjusted EBITDA is between €2.3 and €2.5 billion – is to be generated through strategic initiatives. At the same time, the overall share of adjusted EBITDA accounted for by the regulated grid business and renewable energies will increase

from around 40% (based on the reference year of 2012) to at least 70% in 2020. EnBW intends to invest €14.1 billion in total by 2020 (based on the reference year of 2012). To obtain the financial headroom required for these extensive investments, we have considerably extended our divestiture programme – involving divestitures and cash flows from participating investment models and the disposal of assets and subsidies – to around €5.1 billion (based on the reference year of 2012).

A detailed presentation of the EnBW Group strategy can be found in the [Integrated Annual Report 2017](#) from p. 24 onwards.

Corporate strategy outlook

EnBW is rigorously and confidently implementing its 2020 strategy. It achieved the turning point in earnings as planned in 2017 and thus not only achieved its forecast but also an adjusted EBITDA of €2.1 billion, which was 9% above the figure in the previous year. The improvements in efficiency and the growth initiatives designed to place the company on new foundations ready for the future have been implemented to a significant extent or are well on track. A good example of the success of the repositioning of the portfolio is the area of wind energy. In the offshore wind sector, EnBW Hohe See and EnBW Albatros in the North Sea are two further major projects following EnBW Baltic 1 and EnBW Baltic 2. Another offshore wind farm – EnBW He Dreiht – is at the planning stage. EnBW He Dreiht is the first offshore wind farm project that does not require EEG subsidies. In the onshore sector, EnBW has now become one of the top project developers and operators of offshore wind farms in Germany. EnBW gave another indication of its aim to tap into selected international growth markets in the area of renewable energies with its entry onto the French and Swedish markets in summer 2018.

We invested around €415 million in the modernisation and expansion of our distribution grids in 2017. Alongside the new construction of substations and power lines, this included, above all, expanding the grid to handle the increasing number of electric cars. Another important part of the repositioning of EnBW is the optimisation of conventional generation and the dismantling of the nuclear power plants. If there is no new and unexpected massive deterioration in the general conditions, EnBW will achieve its targets for 2020 and thus reach one of the most important milestones in the history of the company.

The pace of change on the market is continuing to increase, while new competitors are offering inexpensive and creative solutions and products. In addition, there are trends such as urbanisation, digitalisation and networking. Previously separate and individual systems and infrastructures are converging through digitalisation to form one interactive complete system. The most important prerequisite is the reliable, safe, sustainable and user-friendly operation of the infrastructure.

This is where we see our future role: As a result of our decades of core expertise, we have good prospects for assuming a central role as an infrastructure partner in the future energy world. We want to orientate our strategy even more closely towards the aspect of “critical infrastructure” both within the existing energy business and also beyond. After 2020, EnBW will focus on growth and innovations for the markets of the future, set its sights on new markets and set new priorities.

The first themes have already been identified and are being investigated – for example in the broadband business or the expansion of charging infrastructure (p. 22 ff.) as the basis for electromobility. The aim is to develop a balanced business portfolio that has diverse potential for growth, a high proportion of stable regulated business and an attractive risk-return profile.

In dialogue with our stakeholders

Shares and capital market

The two major shareholders of EnBW AG, the Federal State of Baden-Württemberg (indirectly via NECKARPRI-Beteiligungs-gesellschaft mbH) and OEW Energie-Beteiligungs GmbH, each hold 46.75% of the share capital in the company.

The overall shareholder structure as of 30 June 2018 breaks down as follows:

Shareholders of EnBW

Shares in % ¹	
46.75	OEW Energie-Beteiligungs GmbH
46.75	NECKARPRI-Beteiligungsgesellschaft mbH
2.45	Badische Energieaktionärs-Vereinigung
0.97	Gemeindeelektrizitätsverband Schwarzwald-Donau
0.63	Neckar-Elektrizitätsverband
2.08	EnBW Energie Baden-Württemberg AG
0.39	Other shareholders

¹ The figures do not add up to 100% due to rounding differences.

The shareholder structure of EnBW AG is very stable. There are very limited trading volumes in the shares as a result. The stock market price stood at €30.30 on 30 June 2018.

EnBW engages in continuous and open dialogue with capital market participants in order to ensure investors, analysts and rating agencies maintain their trust in the company at all times. As part of our annual investor updates, discussions were held with investors in Zurich, Frankfurt, Munich, Copenhagen, Helsinki, the Netherlands, Paris, Singapore and Hong Kong in April. In June 2018, numerous representatives from the core banks of EnBW participated in the EnBW Bankers' Day in Stuttgart (www.enbw.com/bankentag). The Capital Market Day will be held at the Stuttgart-Münster waste-to-energy power plant on 17 October 2018. The EnBW Factbook 2018 will be published at the same time.

Society

EnBW is acutely aware of its responsibility towards society. Through its commitment to addressing the concerns and interests of society, it conducts its business in close customer proximity and aligns its activities to the target groups of end customers, business partners and local authorities. It is chiefly involved within its primary business sphere of influence in Baden-Württemberg in this regard. Support for superordinate social issues is concentrated on the core areas of popular sport, education, social issues, the environment, and art and culture.

EnBW has been an official sponsor company of **Foundation 2°** – German Businesses for Climate Protection – since May 2018. The foundation supports long-term corporate engagement in climate protection and is working together with the worlds of academia, society and politics to develop specific, ambitious and efficient solutions. EnBW already signed a declaration by German companies jointly initiated by Foundation 2° back in November 2017 that called for a convincing implementation strategy for the Climate Action Plan 2050 to be taken into consideration during the formation of the new government.

As part of the “We’re making it happen” campaign, EnBW also supported a total of nine social or charitable projects in 2018 with the “**Making it happen**” bus. EnBW employees provide support in the form of manpower, motivation and materials. Upcoming projects include giving a facelift to the outdoor area of the AWO social station in Pfinztal, renovating an old construction trailer to transform it into a green classroom for the Ohmden primary school, constructing a heated guest lounge for the Domiziel social store in Balingen and repairing the paddock fences at the animal sanctuary for old and sick animals in Berghausen. You can find further information on this subject at www.enbw.com/macherbus.

Following on from its initial campaign in 2011, occupational medicine and health management at EnBW held a second **donor recruitment campaign** for the German Bone Marrow Donor Registry (DKMS) at the beginning of 2018. 600 employees primarily from Karlsruhe and Stuttgart registered for the campaign. The DKMS works to identify possible stem cell donors so that people suffering from leukaemia can be given the chance of recovery.

The EnBW City site provides young students in the applied faculties at the Stuttgart State Academy of Art and Design with a spacious platform to present their results and products. “MaterialGestalten” (MaterialForms) was the third exhibition in the series called “**Design now!**” that could be seen in June/July. It was held this time by students and teaching staff from the faculty for design basics and experimental design in the courses “Architecture” and “Industrial Design” who presented experimental sculptural material compositions.

Over the past few years, EnBW has successfully increased its dialogue with representatives from politics, academia, associations and companies. Two players were particularly important in this context: the charitable EnBW Energy & Climate Protection Foundation and the Energiewende blog “Dialog.Energie.Zukunft” (Dialogue.Energy.Future). The foundation highlighted the relationship between the energy industry and climate protection primarily by analogue means, in the context of debate evenings and events. In contrast, the Energiewende blog has promoted dialogue in the digital world on the future of energy and thus also built bridges to critical players. Both communication platforms have now been merged in order to successfully network the analogue and digital worlds. “**Future of energy dialogue**” – this motto is being used with immediate effect by the Energy & Climate Protection Foundation to invite all interested parties to engage in dialogue on the themes of the Energiewende and climate protection on its new online platform www.energie-klimaschutz.de.

EnBW aims to use the new educational concept “**Energy on Tour**” to provide pupils with age-appropriate, interesting and motivating insights into this subject – as part of a science show with physical experiments and interactive exhibits. In the process, the diverse range of career opportunities in this

sector will also be presented and direct links will be established with the educational plans at schools providing general education. “Energy on Tour” (www.energie-auf-tour.de) will carry out week-long campaigns in various regions across Baden-Württemberg over the coming years.

Although the influx of refugees into Europe, especially to Germany, has lessened over the last year, it remains a major social, political and economic challenge. Long-term perspectives for asylum seekers are just as important as short-term humanitarian assistance. EnBW is engaged here on multiple levels: EnBW already developed a training concept for refugees in 2015 with the goal of providing sustainable support with an eye to the future for the people affected and their countries of origin. A multi-stage **career integration programme** has been run by EnBW in Karlsruhe and Netze BW in Stuttgart since 2016. Since the beginning of 2018, around 150 participants have been introduced to technical careers in introductory days and work placements during the first stage. A total of 35 participants will take part in the subsequent second stage from September 2018 to obtain an introductory qualification in which they will be given the required skills and training for a technical apprenticeship. In the third stage from September 2018, 17 participants from last year's programme will learn an IHK-certified technical profession in dual vocational training at EnBW/Netze BW.

Alongside these integration measures, EnBW is continuing to support employees who are voluntarily providing **assistance to refugees** and encouraging them to network with each other in order to coordinate aid measures, exchange experiences and mobilise other helpers. Numerous small aid projects are also being promoted that mainly focus on language training, sport and meaningful leisure activities.

In dialogue with our stakeholders (examples)

Stakeholder	Opportunity for dialogue	Main themes	Further information
 Shareholders/ capital market	Financial reports	Financial and non-financial performance of the company	www.enbw.com/financial-publications
	Annual General Meeting	Dialogue with shareholders	http://hv.enbw.com
	Telephone conferences for analysts and investors	Corporate economic development, positioning on capital market	www.enbw.com/conferencecall www.enbw.com/investor-update
	EnBW Bankers' Day	Latest developments at EnBW and in the energy sector	www.enbw.com/bankersday
 Employees	EnBW aktuell	Two events providing current insights into the themes of digitalisation and the grids business	
	"Making it happen" bus campaign 2018	Four social projects supported by employees of EnBW	www.enbw.com/macherbus Page 5
	"New Mobility" schemes	"DeinBike", "DeinTicket" and handover of 180 BMW "Dein i3" to EnBW employees as part of the "New Mobility" schemes	Page 24
 Customers	i-Mobility Rally	Three EnBW teams participated in the 130 km e-car-rally organised by "auto motor und sport"	
	Yello e-car	Handover of the 300th BMW i3 in the limited Yello E-Mobility Edition to a customer	www.yello.de Page 23
	Platforms for dialogue and discussion with customers	For example: customer parliament, Energy Efficiency Networks Meeting or Committee Days	
	Trade fairs and congresses	For example: Hannover Messe 2018, 12th Contracting Congress or "auto motor und sport" Congress	
 Local authorities/ public utilities	Customer magazine, customer blog and newsletter, local presence	Information on latest news, products, services and events	https://twitter.com/enbw www.facebook.com/enbw www.enbw.com/blog
	Energy Day for local authorities	Under the motto "The future begins now", EnBW presented its products and innovations to around 1,000 representatives from cities and local authorities in Stuttgart	www.enbw.com/kommunaler-energietag
	"Energy on Tour" in Deizisau and Sindelfingen	New educational programme for high schools	www.enbw.com/energie-auf-tour Page 6
 Society/ environment	"Win a boss"	Frank Mastiaux visits the St. Agnes high school in Stuttgart to hold a lesson after a raffle in the Handelsblatt newspaper	www.karriere.de/chefzugewinnen
	Tours and open days	More than 15,000 visitors to the EnBW Information Centres in the first half of the year, around 1,500 visitors to mark 100 years of the Rudolf-Fettweis Plant Forbach and 1,800 participants in the "Long Night of the Museums" in Untertürkheim.	
 Suppliers/ business partners	Biodiversity: funding programme: "Stimuli for Diversity"	Eight protective measures for amphibians and reptiles will be supported in the 2018 funding year	www.enbw.com/biodiversitaet Page 27
	Dialogue on the responsible handling of coal procurement	EnBW delegation visits governmental and non-governmental organisations in Colombia	www.enbw.com/kohlebeschaffung Page 9 f.
	CyberOne Entrepreneurship Roadshow	Event for start-ups and young companies at the Innovation Campus in Karlsruhe	https://twitter.com/InnoCampusKA
 Politics/ media	"Future of energy dialogue"	New online platform from the Energy & Climate Protection Foundation for dialogue on the Energiewende and climate protection	www.energie-klimaschutz.de Page 6
	Discussion events	Urban Climate Talks 2018; "How will we phase out coal?" event in cooperation with the Heinrich Böll Foundation Baden-Württemberg and three debate evenings	www.energie-klimaschutz.de
	Foundation 2° – Business Alliance for Climate Protection	EnBW becomes one of the sponsors of Foundation 2° – German Businesses for Climate Protection	www.stiftung2grad.de Page 5
	Green Innovation and Investment Forum 2018 in Stuttgart	20 international start-ups pitched their green ideas and innovations at the start-up competition to win capital, cooperation partners and awards	www.energie-klimaschutz.de
	#fragMastiaux	The EnBW CEO Frank Mastiaux answers questions on the EnBW Twitter channel	https://twitter.com/enbw
	Active and transparent communication via the media	Alongside traditional media such as newspapers or magazines, also via social media channels such as Twitter or Facebook	https://twitter.com/enbw www.facebook.com/enbw

Research, development and innovation

The goal of **research and development** at EnBW is to identify important trends and technological developments at an early stage and to develop the know-how for subsequent commercial utilisation in pilot and demonstration projects. Therefore, we carry out research projects together with the operational units at EnBW or with customers directly at the site of their subsequent application. This ensures that successful research projects deliver innovations for EnBW.

Electromobility: In research projects, EnBW is developing future-oriented solutions to make it even more convenient for customers to use electromobility in their everyday lives. One project deals with the task of reliably providing customers with a **free charging space** at their destination (see p. 10 and p. 22 f. for other mobility solutions). In cooperation with the KIT, EnBW is also examining **new technologies for the charging infrastructure**: Is it possible to strengthen inductive charging through special physical effects so that cars can be charged in a contactless way via the road during their journey?

Wind energy: Offshore wind power plants with fixed foundations are limited to shallow waters. Floating platforms could be used to exploit the wind power potential in deeper waters. In cooperation with other companies, EnBW is investigating various different concepts for **floating offshore wind projects** that would be suitable for opening up new international offshore wind regions. This includes, for example, floating foundations for wind power plants and substations, as well as dynamic cables.

In addition, EnBW is a member of a consortium headed by the manufacturer Senvion that aims to design a prototype for an **offshore power plant with an output of more than 10 MW** and construct it as a pilot plant with funding from the EU. Larger wind turbines are a prerequisite for further reducing the cost of generating electricity in offshore wind farms. In expectation of these developments, bidders taking part in the latest auctions for wind farms have submitted bids that forgo funding via guaranteed feed-in remuneration. The competitiveness of offshore wind energy on the electricity market has thus increased further.

Furthermore, EnBW is participating in the “SkyPower100” research project, funded by the German Federal Ministry for Economic Affairs and Energy, that aims to develop and test a fully automatic **high-altitude wind power plant** with a nominal output of 100 kW by 2020. Flying systems such as kites could enable higher atmospheric layers with their energy-rich and stable wind speeds to be utilised for generating renewable energies. The high-altitude wind technology could supplement the conventional use of wind energy and reduce the costs of electricity generation even further. In a pilot operation, the consortium first want to gain insights on land into the scaling up of the high-altitude wind technology to the MW class and also further improve efficiency and reliability for future offshore application. EnBW is examining the high-altitude wind potential in the target markets and also the respective approval mechanisms.

Storage systems for commercial customers: EnBW has been cooperating in a demonstration project with the storage system supplier ads-tec, the solar experts from Pohlen Solar and the retail company Aldi Süd since 2017, to find out how the discount store could use even more self-generated solar electricity in their shops (Integrated Annual Report 2017, p. 42). The project has now been successfully concluded and has demonstrated that the shops can increase their own consumption even further using battery storage systems. The challenge is to guarantee the economic efficiency of the system against today’s prices for storage systems and energy. In a new research project in cooperation with the University of Stuttgart, EnBW is developing a new generation of high-performance photovoltaic modules that do not contain any hazardous materials or precious metals and can be inexpensively produced thanks to the use of laser processes (p. 26).

Storage systems for household customers: In autumn 2016, three customer households were fitted with storage systems in order to develop a smart control system that can adapt to the availability of electricity on the grid and postpone the times electricity is drawn from the grid without any loss in comfort (Integrated Annual Report 2017, p. 42). The project ended in June 2018 after running for two years. It has demonstrated that by using batteries many households could significantly shift the times at which they draw electricity. The extent to which the results can be integrated into commercial products is currently being examined.

As part of the EnBW strategy, central **innovation management** is developing new business models outside of its core business. The goal is to identify new sources of revenue for the Group and to successfully establish them on the market. In this process, the development of new skills and working methods within an agile innovative culture plays an important role.

As part of the agreed strategy, the focus of the work by innovation management to develop new business models is being placed on the four business fields of “Urban Infrastructure”, “Networked Mobility”, “Virtual Power Plant” and “Connected Home”. In addition, innovation management has created a further framework through the **Company Builder** for providing additional skills and key resources in order to support the innovation projects during the scaling up process after the market validation phase. The activities being carried out by innovation management are being supplemented by targeted minority shareholdings held by New Ventures GmbH in **early start-ups**. Furthermore, EnBW is making **later-stage acquisitions** in companies with tested business models and a successfully launched range of products and services in order to realise substantial growth.

So far innovation management has been able to turn two mature projects into external spin-offs (WTT CampusONE and LIV-T). The first internal spin-off company has now been established in the form of **SM!GHT**. The aim is to bring mature campus projects to the market profitably within EnBW. The

organisational framework for this is provided by the “Micro Business Unit”. In the case of SM!GHT, this means that it will become its own area autonomous from the campus project and will act as an independent business unit.

Innovation management at EnBW also received external recognition in June: The business magazine Capital and the management consultants Infront Consulting GmbH based in Hamburg selected it as one of the **best innovations labs in Germany**. With innovation management ranked 3rd and 4th place in the “Company Builder” category, EnBW secured one of the leading places in the overall ranking.

Procurement

Purchasing at EnBW views itself as a partner for generating added value within the Group. It ensures the supply of materials and services at the best possible quality/cost ratio and thus strengthens the competitiveness of the company. EnBW places great emphasis on the efficient design of its procurement processes for achieving cost-effective purchasing results, as well as on sustainable procurement taking into account the requirements of national laws, EU law and the Group's internal guidelines. In order to manage the procurement processes, a system using various different performance indicators is used. It continually delivers a realistic picture of the current situation in purchasing and enables a comparison of the target and actual situation, as well as the prompt implementation of control measures.

A large number of suppliers and service providers contribute to the services rendered by EnBW. They play an important role in the company's efforts to achieve a leading position on the energy market. Supplier management promotes successful cooperation between suppliers and EnBW because it makes the performance of the suppliers transparent and also makes continuous optimisation in partnership possible. This is connected with the desire to procure high-quality materials and services that are safe and socially acceptable.

Sustainable procurement begins with the careful selection of business partners. Central purchasing at EnBW AG uses a standardised pre-qualification process for this purpose. Starting from a certain procurement volume, suppliers are required to provide a self-assessment via the EnBW supplier portal about whether they practise sustainable measures in the areas of data protection, quality management, environmental management, the respect for human rights, the fight against corruption and in occupational health and safety. Centralised documenting of certificates enables us to ensure that all the necessary prerequisites for awarding a contract are fulfilled. The information is checked every three years on the basis of a renewed self-assessment.

Procurement plays an important role in the strategically important expansion of the portfolio of power plants in the area of renewable energies. In order to identify potential new sources of supply, such as in Asia, and to expand the supplier

On 13 September 2018, innovation management will organise a Group-wide event at the Innovation Campus for the first time to present innovative projects from EnBW and companies in which it holds an investment. The networking event, to which external partners from business, politics and the start-up scene as well as members of the press have been invited, is focussing on the main theme of “**Urban Innovation – Solutions for the City of Tomorrow**”. External keynote speeches, panels and project presentations will guarantee an exciting supporting programme. More information is available at: www.urbaninnovation-event.de.

portfolio, market analyses on global procurement markets are carried out and meetings with suppliers are held.

Responsible raw materials procurement, particularly in the coal sector, is of major importance to EnBW. Against the background of generally falling import volumes, coal from Russia and the USA accounted for higher shares of the market in Western Europe in the first half of 2018. Due to higher coal prices in the Pacific region and cheaper freight costs, Colombia is also supplying coal to Asia and concentrating on markets in Latin America and the Mediterranean region. This development is also reflected in the volumes of coal delivered to the EnBW power plants.

Origin of coal supplies to EnBW power plants

in millions of tonnes	01/01– 30/06/2018	01/01– 30/06/2017	Change in %
Russia	1.25	1.38	-9.4
Colombia	0.05	0.66	-92.4
USA	0.30	0.40	-25.0
South Africa	0.12	-	-
Germany	0.10	0.03	-
Total	1.82	2.47	-26.3

The total fall in coal deliveries of 26.3% was mainly due to lower consumption in the winter months. More than half of the coal was sourced from supply contracts that were directly concluded with coal producers in Russia and the USA.

EnBW also continued to engage in constructive dialogue with stakeholders on the subject of coal procurement in the first half of 2018. The exchange of information and opinions concentrated on significant governmental and non-governmental players in Germany and Europe on the one hand and those in particular in the source country of Colombia on the other hand. During a visit to Colombia, for example, discussions were held with coal producers and other stakeholder groups in the Cesar region.

The trip to Colombia was also used to collect information for a progress and development report. The purpose of the report is

to analyse the improvements achieved in the working and living conditions in Colombian coal mining – especially with a focus on the engagement of coal importers. The results of the study will be used to derive possible courses of action for EnBW that could act as the basis for further dialogue with coal producers. The aim is to agree a clear roadmap in cooperation

with the coal producers about how the coal producers can fulfil their human rights responsibilities.

The themes covered by the sustainability index – which documents the sustainability performance of EnBW contractual partners – were expanded and updated with all current and potential business partners in the first half of 2018.

General conditions

Cross-segment framework conditions

In the first half of 2018, there were several developments in both the political and economic environments relevant to EnBW that will have far-reaching effects. Due to the drawn out process to form a government after the Bundestag elections in September 2017, there were, however, delays to pending decisions in the German political-regulatory environment. The European Council agreed on **measures to continue and strengthen climate protection** in the first half of 2018. These measures included, amongst other things, a new energy efficiency directive that will define a minimum energy efficiency target of 32.5% for 2030 against current trends and a new version of the renewable energy directive with the target of covering at least 32% of electricity consumption with renewable energies by 2030. In addition, the EU Parliament agreed to the reform of the European emissions trading system, whereby the annual reduction factor will be raised from 1.7% to 2.2% from 2021. A discussion initiated by France on the introduction of a minimum price for CO₂ allowances has not yet received support from a majority within the EU.

On 6 June 2018, the German government agreed to establish a **commission on “Growth, Structural Change and Employment”** to close the gap on achieving the 40% reduction target for emissions, develop measures to achieve the 2030 energy sector targets, develop a plan for the gradual reduction and phase-out of coal-based power generation and develop financial safeguards for the required structural change.

The **General Data Protection Regulation (GDPR)** came into force across the whole of the European Union on 25 May 2018. It creates uniform rules for the protection of personal data. Data protection has a very special relevance for EnBW as an energy supply company that constantly works with large volumes of customer data – even before the GDPR. EnBW has made great efforts over the past 24 months to implement the required measures.

A detailed explanation of the general conditions for the business activities of EnBW can be found in the  Integrated Annual Report 2017 from p. 49 onwards.

Sales segment

The market penetration of **electromobility** is increasingly gathering speed – due, among other things, to the state funding in the form of purchase subsidies, but also as a result of the increased expansion of the charging infrastructure: there were around 63% more new registrations for e-vehicles and plug-in hybrids in 2017 compared to 2016. From the beginning of the year up to the end of May, around 14,600 e-vehicles alone were newly registered – which represents further growth of 83% compared to the same period of the previous year. The Federal State of Baden-Württemberg is promoting the creation of a closely meshed network of charging stations with a comprehensive programme to establish a core charging network for electric vehicles covering the whole of Baden-Württemberg (SAFE). A consortium consisting of EnBW, 74 municipal utilities and suppliers as well as 3 local authorities received its funding subsidy in May and will ensure that in a grid with a mesh size of 10 by 10 kilometres there will be at least one station with at least 22 kW of charging capacity and in a grid with a mesh size of 20 by 20 kilometres there will be at least one quick-charging station with 50 kW of charging capacity. The SAFE charging network will comprise more than 400 charging stations in total. The more than 300 existing charging locations operated by the participating partners will be integrated into the network, which means it will be necessary to erect an additional 48 new quick-charging stations and 94 new “normal” charging stations by April 2019.

Despite the energy efficiency initiatives implemented so far by the German government, energy consumption rose slightly in 2017 in comparison to the previous year. And there was no significant downward trend in the first few months of 2018 compared to the same period of the previous year. As further political efforts are required to achieve the energy and climate policy efficiency targets, the coalition agreement for the German government included their plans to further shape **energy efficiency** into a key pillar of the Energiewende: the aim is to reduce energy consumption by 50% by 2050 in comparison to 2008. There are plans to further develop existing funding programmes to increase energy efficiency during the legislative period. In the medium term, it is expected that the funding of heat sources based exclusively on fossil fuels will be phased out.

Grids segment

Alongside the expansion and restructuring of the electricity and gas transmission grids, there was greater focus placed in the first half of 2018 on the demands facing the electricity distribution grid due to **sector coupling**. In the area of electromobility, our distribution grid operator Netze BW has, for example, started a pilot project in Ostfildern to test the charging behaviour of users and the effects on the electricity grid using the residents in one street.

The Higher Regional Court in Düsseldorf declared on 22 March 2018 that **rates of return on equity** defined by the Federal Network Agency for investments by operators in the electricity and gas grids were too low. The court believes that the defined rates do not take market risks sufficiently into account. It also deemed that the method for calculating the so-called market risk premium was methodologically and legally flawed. The interest rates thus need to be increased. In a resolution from 5 October 2016, the Federal Network Agency had lowered the rates of return on equity for the third regulatory period for new facilities from 9.05% to 6.91% and for old facilities from 7.14% to 5.12%. The Federal Network Agency filed an appeal to the German Federal Court of Justice on 25 April 2018 against the judgement by the Higher Regional Court in Düsseldorf to set aside the interest rates.

The Bundesrat agreed an ordinance for the gradual introduction of uniform **transmission grid fees** across Germany on 8 June 2018. This will allow the transmission grid fees for the four German transmission system operators to be harmonised from 1 January 2019. German legislators had previously stipulated in a law on the modernisation of grid fees (Netzentgeltmodernisierungsgesetz) that the transmission grid fees should be gradually harmonised from 1 January 2019 and totally harmonised by 1 January 2023. The ordinance agreed by the Bundesrat now specifies the regulations in this area more clearly. According to the new regulations in the transmission grid fee ordinance, the fees will be harmonised in five stages each covering 20%.

For the next **Network Development Plan Electricity (NDP Electricity)** for the target year of 2030, the Federal Network Agency defined a new framework scenario on 15 June 2018. It acts as the planning basis for the transmission system operators to help them determine what expansion measures are required for the grids up to 2030. The transmission system operators are required to submit a draft version of NDP Electricity to the Federal Network Agency by 15 April 2019. The assumptions have changed considerably in comparison to the last framework scenario. A major reason for this is the target set in the coalition agreement for the German government to increase the proportion of gross electricity consumption covered by renewable energies to 65% by 2030. In addition, the new framework scenario also includes special auctions for wind power and photovoltaics. In contrast to the last framework scenario, an intermediate scenario for the target year of 2025 has been introduced; it is designed to help the

transmission system operators test measures that can be implemented in the short term to make the best possible use of the existing grids.

Following consultations, the gas transmission system operators submitted the revised draft of the **Network Development Plan Gas (NDP Gas)** 2018 to 2028 to the Federal Network Agency on 29 March 2018. They believe that it is necessary to extend the transmission grid by around 1,400 km and install almost 500 MW of new compressor capacity in order to safeguard the transmission requirements for Germany and Central Europe. Based on the proposed measures, investment of around €7 billion will be needed up to 2028. For the first time, NDP Gas includes its own chapter on the importance of the gas infrastructure to the successful implementation of the Energiewende.

As part of the reform to the **Gas Grid Access Directive (GasNZV)** that was agreed in the middle of 2017, the transmission system operators are obligated to merge the two German gas market areas Netconnect Germany (NCG) and GASPOOL by 1 April 2022 at the latest. At the end of June 2018, the transmission system operators and the Federal Network Agency agreed on the date of 1 October 2021 for the launch of the new German gas market area. This date is also the start of the gas business year and was considered the most suitable choice for all market participants.

According to the Incentive Regulation Ordinance, the general **sectoral productivity factor (Xgen)** has to be recalculated before the start of each regulatory period by the Federal Network Agency from the third regulatory period onwards. In the first two regulatory periods, the level of the Xgen was defined in the incentive regulation (1.25% and 1.50% respectively). The Xgen reflects the difference between cost developments in the efficient operation of electricity and gas grids and the general price trend within the economy. It must be taken into account in the revenue cap for the grid operators. The general sectoral productivity factor for operators of electricity grids has not yet been calculated for the next regulatory period for electricity (2019 to 2024). For the duration of the third regulatory period for gas (2018 bis 2023), the Federal Network Agency has defined an Xgen of 0.49% for the gas grid operators.

Renewable Energies segment

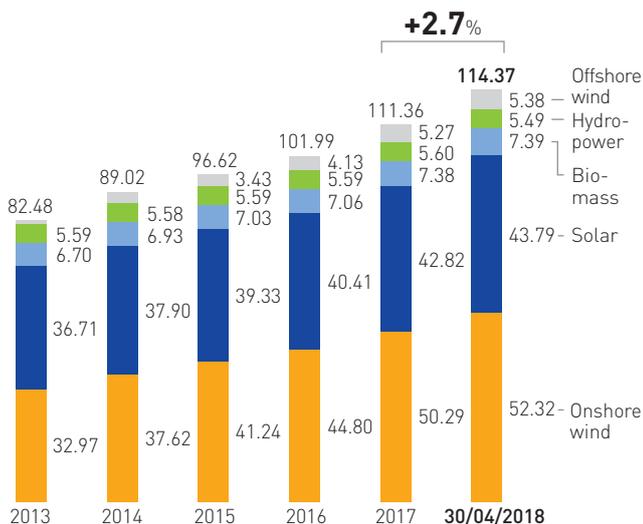
The coalition agreement defined key points for the framework conditions for renewable energies. These include **special auctions** which are designed to ensure that the target set by the German government – 65% of the electricity sector to be accounted for by renewable energies by 2030 – will be achieved. However, these special auctions were not included in the reform of the EEG that was agreed in June 2018. The sector is thus once again faced with uncertainty about the level of the additional auction volumes for renewable energy technologies in Germany that are required to achieve the targets.

The second German **auction for offshore wind power projects** that forms part of the transitional system was held in April 2018. Bids were accepted for a total capacity of 1,610 MW. As was the case in the first auction in April 2017, the bids again included projects that will not require state funding and will generate their revenue exclusively on the market. In view of this development, we expect that the expansion targets for offshore wind power in Germany and other countries will be examined and these targets may even be adjusted upwards.

In both **auctions for onshore wind projects** in February and May 2018, the bid prices increased slightly in comparison to the auctions conducted in 2017. This increase is due to the suspension of some of the privileges previously enjoyed by community energy cooperatives since the start of the year, which has led to shorter realisation deadlines and thus higher costs. The suspension of these privileges was extended until June 2020 in the reform of the EEG that was agreed in June 2018.

Photovoltaic projects had the lowest bid prices for all technologies in the first two auctions. **Photovoltaics** has thus become the cheapest renewable energy technology even in Germany. There have already been significantly higher growth rates worldwide for photovoltaics than for wind power for more than a year, which is attributable to the sharp decrease in costs for solar modules over the past few years. In the first joint auction for photovoltaic and wind energy projects, only those bids for photovoltaic projects were successful.

Installed net output for electricity generation from renewable energies in Germany in GW/year



Source: AGEE, BMWi, Federal Network Agency
As of 30/04/2018

Generation and Trading segment

As a result of a significant increase in the prices of the most important raw materials natural gas and hard coal as well as CO₂ allowances, electricity prices on the wholesale market for the

following year increased in comparison to the first half of 2017 by over €7/MWh.

Electricity wholesale market

The average spot market price in the first half of 2018 stood at the same level as in the same period of the previous year. A series of price-reducing factors (higher availability of the French nuclear power plants, good hydrological conditions in the second quarter in Central Europe, significant increase in installed wind capacity) were offset by the considerably higher prices for coal, gas and CO₂ allowances. The large increase in prices on the forward market can also be attributed to the development of fuel and CO₂ prices. Market participants on the forward market are currently expecting lower electricity prices for 2020/2021. Higher prices are only expected for 2022. This is probably due to the ongoing high level of expansion in renewable energies, which is offset by the gradual change to the composition of the power plant fleet – due to, amongst other things, the phasing out of nuclear power and the establishment of the climate reserve.

Development of prices for electricity (EPEX), base load product

in €/MWh	Average H1 2018	Average H1 2017	Average 2017
Spot	35.74	35.52	34.19
Rolling front year price	37.42	29.98	32.38

Gas market

Long-term gas import contracts form a primary basis of Germany's gas supply. The wholesale markets, such as the Dutch TTF and the trading point of the NetConnect Germany (NCG) market area, are other important sources of natural gas. Prices primarily track the oil price trends with a time lag. As a result of the increased supply of Liquefied Natural Gas (LNG) from the USA and Australia, the dependency of the gas price on the price of oil has, however, fallen in Europe. In addition, the price of gas was influenced above all by the temperatures during the winter half-year. Although the average temperatures in the past winter were close to the long-term average, the cold spell in north-west Europe and Germany from the end of February to the beginning of March led to an increase in prices. The border price index for natural gas published monthly by the German Federal Office of Economics and Export Control (BAFA) stood at €17.97/MWh in April 2018, which was 0.8% below the December 2017 figure (€18.12/MWh) and 8.7% above the figure for the same month in the previous year (€16.53/MWh).

Due to the cold spell, the gas storage levels are very low, which has led to increased demand on the gas storage market. In addition, supplies of LNG to north-west Europe were below the market expectations due to strong demand from the Asian region. In combination with higher oil prices in comparison to the previous year, these factors have resulted in increased prices on the spot and forward markets. Due to the influencing factors described above, we tend to expect gas prices to remain stable over the next few months and to rise as winter approaches due to the demand for heating.

Development of prices for natural gas on the TTF (Dutch wholesale market)

in €/MWh	Average H1 2018	Average H1 2017	Average 2017
Spot	21.23	17.05	17.33
Rolling front year price	18.14	16.71	16.77

Oil market

The caps in production introduced by OPEC and some non-OPEC countries, losses in production in Venezuela, Libya and also to some extent in Canada and the dynamic increase in demand for oil and oil products worldwide has resulted in a decrease in global stock levels. OECD stocks once again fell below the five-year average for the first time from March. Another potential risk of a shortage of supply arose due to the reintroduction of US sanctions against Iran and its oil sector as part of the USA's withdrawal from the international nuclear deal with Iran. These factors led to a further increase in the price of crude oil in the first half of 2018. In order to avoid a critical shortage of supply, OPEC agreed to increase oil production at the end of June 2018. In particular, Saudi Arabia and Russia want to produce significant additional volumes of oil in the second half of 2018 in order to avoid a sharp rise in oil prices. Further price developments will be mainly influenced by the actual extent of the increases in production, developments regarding Iranian oil exports and the continuation of trade disputes between the USA and China.

Development of prices on the oil markets

in US\$/bbl	Average H1 2018	Average H1 2017	Average 2017
Crude oil (Brent), front month (daily quotes)	71.16	52.72	54.75
Crude oil (Brent), rolling front year price (daily quotes)	66.40	53.79	54.87

Coal market

Following a drop in coal prices in the first quarter of 2018 due to low demand in Europe, prices recovered by the end of the second quarter and exceeded the level at the beginning of the year. This was primarily due to a very strong increase in demand from China. In addition, the Chinese regulatory authorities have taken measures to support the domestic coal industry. These measures have caused a significant increase in the price of domestic coal that has also had an impact on international coal markets. Despite further increases in demand, especially in many South East Asian countries and India, market prices for future periods reflect the easing of tension between supply and demand. This has been contributed to by, amongst other things, the renewed increase in the share of electricity generation accounted for by nuclear power in Japan, the increasing supply of LNG and the global expansion of renewable energies.

Development of prices on the coal markets

in US\$/t	Average H1 2018	Average H1 2017	Average 2017
Coal – API #2, spot market price	88.06	78.71	84.52
Coal – API #2 rolling front year price	83.14	66.32	73.70

CO₂ allowances

Under the European emissions trading system, proof must be provided of allowances for CO₂ emissions from power plants. Due to a surplus on the market carried over from previous years, the current supply of EUA allowances exceeds the anticipated demand for the whole of 2018. Nevertheless, the price of EUA certificates increased sharply in the first half of 2018. This development was primarily attributable to speculative demand due to the expectation of further price increases. This is because the reform of the allocation system over the next four years is anticipated to result in a significant reduction in supply. Therefore, further price increases are expected, especially in the next year.

Development of prices for emission allowances/daily quotes

in €/t CO ₂	Average H1 2018	Average H1 2017	Average 2017
EUA, rolling front year price	12.17	4.99	5.77
CER, rolling front year price	0.20	0.26	0.23

Nuclear power

With the formation of the new German government, the nuclear policy for the coming years has been mapped out in the coalition agreement between the Union and SPD. The main targets are the retention of specialist personnel and expertise, quick progress in the search for a final storage site for highly radioactive waste and the rapid commissioning of the final storage site for low and medium-level radioactive waste. Both measures should prevent the intermediate storage at the power plant sites becoming to all intents and purposes the final storage sites. In addition, the German government has implemented the ruling by the German Federal Constitutional Court from 6 December 2016 in the 16th amendment to the German Atomic Power Act. The ruling stated that operators of nuclear power plants should receive limited compensation payments for wasted investment in the period between the decision to extend the lives of the nuclear power plants (28 October 2010) and the reversal of this decision (foreseeable from 16 March 2011), as well as for residual volumes of electricity remaining at power plants that could no longer be distributed. A transparency ordinance from the German Federal Ministry for Economic Affairs and Energy specifies the disclosure obligations of the operators with respect to their provisions for the decommissioning and dismantling of the nuclear power plants and the packaging of radioactive waste. On the basis of the public law contract according to the Act for the Reorganisation of Responsibility in Nuclear Waste Management, EnBW has submitted an application for the approval of the return transport of radioactive waste from the reprocessing centre in France to the Philippsburg nuclear power plant. The return transport will only be carried out when the intermediate storage site has been transferred to the German government; this will not be the case before 1 January 2019.

The EnBW Group

Finance and strategy goal dimensions

Results of operations

Electricity and gas sales increase due to consolidation effects

Electricity sales of the EnBW Group (without Grids)

in billions of kWh 01/01–30/06	Sales		Renewable Energies		Generation and Trading		Total (without Grids)		Change in %
	2018	2017	2018	2017	2018	2017	2018	2017	
Retail and commercial customers (B2C)	7.8	7.9	0.0	0.0	0.0	0.0	7.8	7.9	-1.3
Business and industrial customers (B2B)	9.6	11.8	0.0	0.0	0.0	0.0	9.6	11.8	-18.6
Trade	1.1	0.4	1.3	1.1	45.8	36.1	48.2	37.6	28.2
Total	18.5	20.1	1.3	1.1	45.8	36.1	65.6	57.3	14.5

In the first half of 2018, electricity sales of the EnBW Group were higher than the level in the previous year. It was possible to more than offset the falling sales in the business and industrial customer sector (B2B) through the effects in trade of the full consolidation of VNG-Verbundnetz Gas Aktiengesellschaft and an increase in trading activity. However, the effect

of trading activities on the earnings potential of the company is limited. In a persistently challenging competitive environment, electricity sales in business with retail and commercial customers (B2C) stood at the same level as in the previous year. Adjusted for consolidation effects, electricity sales of the EnBW Group increased by 11.5%.

Gas sales of the EnBW Group (without Grids)

in billions of kWh 01/01–30/06	Sales		Generation and Trading		Total (without Grids)		Change in %
	2018	2017	2018	2017	2018	2017	
Retail and commercial customers (B2C)	10.2	7.8	0.0	0.0	10.2	7.8	30.8
Business and industrial customers (B2B)	21.4	22.3	49.4	16.8	70.8	39.1	81.1
Trade	0.1	0.1	101.4	61.6	101.5	61.7	64.5
Total	31.7	30.2	150.8	78.4	182.5	108.6	68.0

The gas sales of the EnBW Group increased significantly compared to the same period of the previous year. Gas sales in the retail customer business (B2C) were above the level in the previous year due to a slight increase in the number of customers and the full consolidation of VNG. Sales to business and industrial customers (B2B) also benefited from the full consolidation of VNG. The level of trading activity was

significantly higher than in the previous year, which was mainly due to the full consolidation of VNG. However, the effect of the trading activities on the earnings potential of the company is limited. Adjusted for consolidation effects, gas sales of the EnBW Group stood at the same level as in the previous year (-0.6%).

External revenue higher than the previous year due to consolidation effects

External revenue of the EnBW Group by segment

in € million ¹	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
Sales	3,620.0	3,717.4	-2.6	7,354.3
Grids	2,992.2	3,687.8	-18.9	7,471.8
Renewable Energies	285.0	244.5	16.6	507.5
Generation and Trading	4,660.9	2,821.0	65.2	6,631.1
Other/Consolidation	3.7	5.1	-27.5	9.3
Total	11,561.8	10,475.8	10.4	21,974.0

¹ After deduction of electricity and energy taxes.

Adjusted for consolidation effects, external revenue decreased by 5.1% or €625.7 million.

Sales: In the first half of 2018, revenue in the Sales segment was below the figure in the previous year. Adjusted for consolidation effects, this would have been a fall of 7.4% or €290.5 million. This was mainly due to lower sales volumes as a result of the withdrawal from the B2B commodity business under the EnBW and Watt brands.

Grids: Revenue in the Grids segment fell in the reporting period compared to the previous year due to the application of IFRS 15 and the resulting net disclosure of energy industry levies. Adjusted for consolidation effects, this would have been a larger drop of 20.4% or €765.8 million.

Renewable Energies: In the Renewable Energies segment, revenue increased in the first half of 2018 in comparison to the previous year. This growth is mainly due to revenue being shifted between the segments as a result of the application of IFRS 15. Adjusted for consolidation effects, this would have been an increase of 13.5% or €34.0 million.

Generation and Trading: Revenue in the Generation and Trading segment increased significantly in the reporting period in comparison to the same period of the previous year, which was primarily due to the full consolidation of VNG. In addition, the growth in trading activities contributed to the increase in revenue. Even when adjusted for consolidation effects, revenue increased by 9.3% or €397.9 million.

Material developments in the income statement

Revenue and the cost of materials were 10.4% (revenue) and 13.3% (cost of materials) higher than in the previous year, which was due primarily to consolidation effects. This was offset by the net disclosure of energy-industry levies under revenue and cost of materials due to the first-time application of IFRS 15. The balance from other operating income and other operating expenses fell from €1,447.6 million in the same period of the previous year to €-77.7 million in the

reporting period, which was mainly due to the reimbursement of the nuclear fuel rod tax in the same period of the previous year. The financial result deteriorated significantly in the reporting period in comparison to the same period of the previous year by €312.3 million to €-62.2 million (previous year: €250.1 million). This was due primarily to the reimbursement of interest relating to the legal proceedings for the nuclear fuel rod tax in the same period of the previous year and lower earnings from the sale of securities in the reporting period. In the previous year, these securities were sold in preparation for the payment to the “fund for the financing of the disposal of nuclear waste” (disposal fund). Overall, earnings before tax (EBT) totalled €571.9 million in the first half of 2018, compared with €2,424.1 million in the same period of the previous year.

Earnings

The Group net profit/loss attributable to the shareholders of EnBW AG thus fell from €1,679.3 million in the comparative period by €1,333.1 million to €346.2 million in the reporting period. Earnings per share amounted to €1.28 in the reporting period compared to €6.20 for the same period of the previous year.

Adjusted earnings and non-operating result

The sum of the adjusted earnings figures and non-operating figures gives the figures on the income sheet. The non-operating result includes effects that either cannot be predicted or cannot be directly influenced by EnBW and as such are not relevant to the ongoing management of the company. The effects are presented and explained in the section on the non-operating result (p. 17). The business activities relevant to the ongoing management of the company are of particular importance for internal management and for the external communication of the current and future earnings potential of EnBW. We use the adjusted EBITDA – earnings before the investment and financial results, income taxes and amortisation, adjusted for non-operating effects – as the key reporting indicator for disclosing this information.

Adjusted EBITDA of the EnBW Group by segment

in € million	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
Sales	159.5	180.8	-11.8	330.0
Grids	684.9	610.6	12.2	1,045.9
Renewable Energies	164.8	152.4	8.1	331.7
Generation and Trading	138.8	102.3	35.7	377.1
Other/Consolidation	-7.0	26.5	-	28.3
Total	1,141.0	1,072.6	6.4	2,113.0

Share of adjusted EBITDA for the EnBW Group accounted for by the segments

in %	01/01– 30/06/2018	01/01– 30/06/2017	01/01– 31/12/2017
Sales	14.0	16.9	15.6
Grids	60.0	56.9	49.5
Renewable Energies	14.4	14.2	15.7
Generation and Trading	12.2	9.5	17.8
Other/Consolidation	-0.6	2.5	1.4
Total	100.0	100.0	100.0

The adjusted EBITDA of the EnBW Group increased in the first half of 2018 by 6.4% compared to the same period of the previous year and was thus slightly above the forecasted range for the 2018 financial year of between 0% and +5%. Adjusted for consolidation effects, the adjusted EBITDA of the EnBW Group would have stood at the same level as in the previous year (+0.4%).

Sales: The adjusted EBITDA in the Sales segment decreased in the first six months of 2018 by 11.8% in comparison to the same period of the previous year. Adjusted for consolidation effects, there would have been a decrease of 19.0%. This was primarily attributable to the elimination of positive out-of-period effects – such as the reversal of provisions for issues that have since lapsed – which benefited the result in the previous year.

Grids: The adjusted EBITDA in the Grids segment increased in the first half of 2018 by 12.2% in comparison to the same period of the previous year. Adjusted for consolidation effects, there would only have been growth of 4.2%. The earnings performance in this segment was thus significantly impacted by the full consolidation of VNG. In addition, this development was also due to higher earnings from the use of the electricity grids.

Renewable Energies: The adjusted EBITDA in the Renewable Energies segment for the first six months of 2018 was 8.1% higher than the value achieved in the same period of the

previous year. Adjusted for consolidation effects, there would have been growth of 6.7%. This development was due, on the one hand, to the earnings contribution made by the onshore wind farms that were placed into operation during the last twelve months. On the other hand, the earnings performance was also influenced by the fact that more electricity was generated by our run-of-river power plants in comparison to the previous year due to higher water levels. In contrast, the wind energy yield at our offshore wind farms was below the figure in the previous year.

Generation and Trading: In the Generation and Trading segment, the adjusted EBITDA rose in the first half of 2018 by 35.7% compared to the previous year. Adjusted for consolidation effects, there was an increase of 31.2%. This improvement in earnings in comparison to the same period of the previous year is due mainly to the negative impacts of the temporary shutdown of Block 2 of the Philippsburg nuclear power plant (KKP 2) in 2017 due to damaged ventilation system brackets. This meant that the percentage change in earnings for the first half of 2018 was higher than will be the case at the end of the year – after twelve reporting months. It was offset to some extent by lower out-of-period earnings as forecast. Moreover, our electricity deliveries were sold on the forward market at lower wholesale market prices than in the previous year. This negative effect on earnings will increase during the remainder of the year.

Non-operating EBITDA of the EnBW Group

in € million	01/01– 30/06/2018	01/01– 30/06/2017	Change in %
Income/expenses relating to nuclear power	11.6	1,317.8	-99.1
Result from disposals	8.9	272.3	-96.7
Reversals of/additions to the provisions for onerous contracts relating to electricity procurement agreements	32.3	0.0	-
Restructuring	-13.6	-29.2	53.4
Other non-operating result	4.5	6.1	-26.2
Non-operating EBITDA	43.7	1,567.0	-97.2

The non-operating EBITDA and the non-operating EBIT decreased significantly in the reporting period compared to the previous year. This was influenced primarily by the reimbursement of the nuclear fuel rod tax as well as the sale of

49.89% of the shares in EnBW Hohe See GmbH & Co. KG and the revaluation of the remaining shares in the same period of the previous year.

Group net profit of the EnBW Group

in € million	01/01– 30/06/2018	01/01– 30/06/2017	Change in %
Adjusted EBIT	549.4	543.0	1.2
Adjusted EBITDA	(1,141.0)	(1,072.6)	6.4
Scheduled amortisation and depreciation	(-591.6)	(-529.6)	11.7
Non-operating EBIT	37.4	1,539.6	-97.6
Non-operating EBITDA	(43.7)	(1,567.0)	-97.2
Impairment losses	(-6.3)	(-27.4)	-77.0
EBIT	586.8	2,082.6	-71.8
Investment result	47.3	91.4	-48.2
Financial result	-62.2	250.1	-
Income tax	-150.6	-686.0	-78.0
Group net profit	421.3	1,738.1	-75.8
of which profit/loss shares attributable to non-controlling interests	(75.1)	(58.8)	27.7
of which profit/loss shares attributable to the shareholders of EnBW AG	(346.2)	(1,679.3)	-79.4

The decrease in the investment result is due to the net profit/loss of entities accounted for using the equity method, mainly through VNG. The significantly poorer financial result in comparison to the previous year is primarily due to extraordinary effects from the previous year. These include, amongst other things, interest received due to the legal proceedings for the reimbursement of the nuclear fuel rod tax, as well as higher capital gains on the sale of securities in preparation for the payment to the disposal fund. The result of the market valuation of the securities as part of the first-time application of IFRS 9 in the 2018 financial year had a positive effect.

Income tax fell significantly in line with the negative earnings performance in comparison to the previous year.

Financial position**Financing**

In addition to the Group's internal financing capability and its own funds, the EnBW Group has the following instruments at its disposal to cover its overall financing needs (as of 30 June 2018):

- > Debt Issuance Programme (DIP), via which bonds are issued: €3.0 billion of €7.0 billion has been drawn
- > Hybrid bonds: €2.0 billion
- > Commercial paper (CP) programme: €2.0 billion, of which €180 million has been drawn
- > Syndicated credit line: €1.5 billion undrawn with a term until 2021
- > Bilateral free credit lines: €1.4 billion.
- > Project financing and low-interest loans from the European Investment Bank (EIB)

Established issuer on the debt capital market

EnBW has sufficient and flexible access to the capital market at all times. The EnBW bonds have a well-balanced maturity profile. As part of its financing strategy, EnBW constantly assesses capital market trends with regard to the current interest rate environment and to any potentially favourable refinancing costs.

The CHF 100 million bond that was due for repayment on 12 July 2018 has now been repaid. No refinancing was required

in this case. For the senior bond with a volume of €750 million that is due for repayment in November, EnBW is currently examining whether this bond should be repaid without replacement or whether refinancing would be beneficial based on the liquidity requirements in subsequent years and expected developments on the capital markets.

Rating and rating trends

EnBW currently has the following ratings:

- > Moody's: A3
- > Standard & Poor's (S&P): A-
- > Fitch: A-

The outlook at all three rating agencies is stable. The rating agency Moody's re-evaluated EnBW in June 2018 and upgraded its rating from Baa1 to A3. EnBW has thus now received A-grade ratings from all three rating agencies. The reason given by

Moody's for the upgrade was above all the high financial discipline of EnBW, especially with regards to the faster than expected reduction in net debt and the financing of growth investment using its internal financing capability. The increasing proportion of regulated grid business and the expertise acquired by EnBW in the area of renewable energies over the past few years was also positively evaluated. Moody's anticipates that EnBW will continue to rigorously implement its 2020 strategy.

EnBW aims to maintain a solid investment-grade rating. By limiting the cash-relevant net investment to the retained cash flow II, measured by the internal financing capability, EnBW manages the level of net financial debt. The company thus maintains its high level of financial discipline, irrespective of the interest rate-related volatility of the pension and nuclear provisions. EnBW ensures the timely coverage of the pension and nuclear obligations using its asset liability management model.

Investment analysis

Net cash investment of the EnBW Group

in € million ^{1,2}	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
Investments in growth projects	434.7	505.1	-13.9	1,324.2
Investments in existing projects	139.6	149.7	-6.8	446.1
Total investments	574.3	654.8	-12.3	1,770.3
Divestitures ³	-5.5	-222.6	-97.5	-298.5
Participation models	54.4	92.6	-41.3	61.9
Other disposals and subsidiaries	-67.1	-75.3	-10.9	-166.6
Total divestitures	-18.2	-205.3	-91.1	-403.2
Net (cash) investment	556.1	449.5	23.7	1,367.1

¹ The figures for the previous year have been restated. In the same period of the previous year, the investments in growth projects included cash and cash equivalents of €51.0 million relinquished with sale of the shares in EnBW Hohe See GmbH & Co. KG because they will be used for future investments for the realisation of the offshore wind farm.

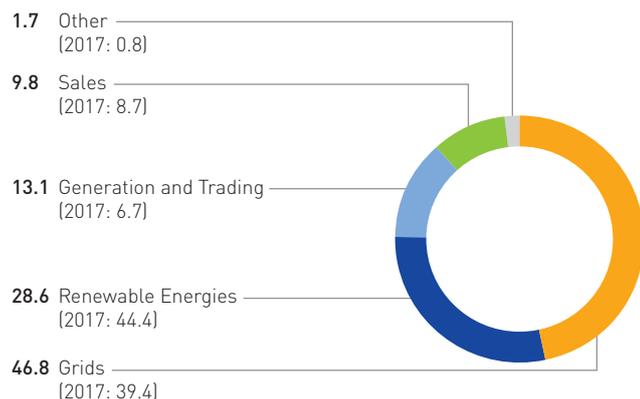
² Excluding investments held as financial assets.

³ Does not include cash and cash equivalents relinquished with the sale of fully consolidated companies. These amounted to €0.0 million in the reporting period (01/01–31/06/2017: €51.0 million, 01/01–31/12/2017: €57.8 million).

Investment by the EnBW Group fell in the first half of 2018 in comparison to the previous year because the investments in the offshore projects EnBW Hohe See and EnBW Albatros will only be made in the subsequent quarters.

Investment by segment

in %



Around 75.7% of overall gross investment was attributable to growth projects; the proportion of investments in existing projects stood at 24.3%.

In the reporting period, €56.5 million was invested in strengthening **Sales**. Investment in this segment was thus at the same level as in the previous year (€56.7 million).

Investment in the **Grids** segment stood at €268.6 million, compared to €258.0 million in the previous year. It was primarily used for the expansion of the transmission and distribution grids.

Investment in the **Renewable Energies** segment of €164.4 million was lower than the figure in the previous year (previous year adjusted: €291.0 million) because the investments in the offshore projects EnBW Hohe See and EnBW Albatros will only be made in the subsequent quarters.

In the first half of 2018, investment in the **Generation and Trading** segment stood at €75.1 million compared to €44.1 million in the

same period of the previous year, and was mainly used for the exploration and production business of VNG.

Other investments of €9.7 million were slightly above the level in the previous year (€5.0 million).

Liquidity analysis

Retained cash flow of the EnBW Group

in € million	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
EBITDA	1,184.7	2,639.6	-55.1	3,752.4
Changes in provisions	-366.1	-237.8	54.0	-472.3
Non-cash-relevant expenses/income	-96.1	-584.3	-83.6	-385.9
Income tax paid/received	-240.6	121.9	-	81.1
Interest and dividends received	143.4	216.6	-33.8	591.7
Interest paid for financing activities	-126.9	-184.1	-31.1	-425.6
Dedicated financial assets contribution	39.1	-57.7	-	-6.4
Funds from operations (FFO)	537.5	1,914.2	-71.9	3,135.0
Dividends paid	-204.0	-29.6	-	-84.7
Retained cash flow	333.5	1,884.6	-82.3	3,050.3
+/- Effects from the reimbursement of the nuclear fuel rod tax	100.0	-1,002.8	-	-1,520.8
Retained cash flow II	433.5	881.8	-50.8	1,529.5

Funds from operations (FFO) fell significantly in comparison to the previous year. This fall was primarily attributable to the partial reimbursement of the nuclear fuel rod tax in the same period of the previous year. In addition, there were income tax payments in the reporting period compared to income tax refunds in the same period of the previous year. Furthermore, interest and dividends received fell. The lower FFO and higher dividends paid in the reporting period thus led to a decrease in the retained cash flow.

The retained cash flow reflects the internal financing capability of EnBW after all stakeholder needs have been

Divestitures reduced significantly in the reporting period compared to the same period of the previous year. In the previous year, they mainly comprised the sale of 49.89% of the shares in EnBW Hohe See GmbH & Co. KG.

settled. It is available to the company for investment without the need to raise additional debt.

The reimbursement of the nuclear fuel rod tax received in 2017 will be used by EnBW to repay debts due in the 2018 financial year and also for future investments. For this reason, the retained cash flow has been translated into the retained cash flow II, which eliminates the reimbursement of the nuclear fuel rod tax in 2017 and distributes it over subsequent years. The reduction in the retained cash flow II compared to the retained cash flow at the end of 2017 will result in an increase in retained cash flow II from 2018 to 2020; the increase for the whole of 2018 will be €200.0 million.

Free cash flow of the EnBW Group

in € million	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
Funds from operations (FFO)	537.5	1,914.2	-71.9	3,135.0
Change in assets and liabilities from operating activities	-155.4	-51.2	-	-4,671.4
Capital expenditure on intangible assets and property, plant and equipment	-434.6	-486.1	-10.6	-1,419.2
Disposals of intangible assets and property, plant and equipment	39.1	42.2	-7.3	52.8
Cash received from subsidies for construction costs and investments, and tax refunds from recognised exploration expenditure	28.0	33.1	-15.4	113.8
Free cash flow	14.6	1,452.2	-99.0	-2,789.0

Free cash flow fell significantly in comparison to the same period of the previous year. This was primarily due to the decrease in FFO. In addition, the net balance of assets and liabilities from operating activities increased significantly

compared to the same period of the previous year, mainly due to factors relating to the EEG. Overall, free cash flow fell in comparison to the same period of the previous year by €1,437.6 million.

Condensed cash flow statement of the EnBW Group

in € million	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
Cash flow from operating activities	326.5	1,888.2	-82.7	-1,696.1
Cash flow from investing activities	-230.9	2,744.4	-	2,160.7
Cash flow from financing activities	-371.1	-1,339.5	-72.3	-1,541.3
Net change in cash and cash equivalents	-275.5	3,293.1	-	-1,076.7
Change in cash and cash equivalents due to changes in the consolidated companies	0.9	289.1	-99.7	300.3
Net foreign exchange difference	0.0	-2.0	-100.0	-1.9
Risk provisions	0.1	0.0	-	0.0
Change in cash and cash equivalents	-274.5	3,580.2	-	-778.3

The substantial decrease in operating cash flow in comparison to the previous year was mainly due to the reimbursement of the nuclear fuel rod tax in 2017. In addition, there were income tax payments in the reporting year compared to income tax refunds in the previous year.

Cash flow from investing activities returned an outflow of cash in the reporting period, while in the previous year there was a

significantly higher inflow of cash. This inflow of cash in the previous year was due primarily to higher sales of securities to finance the payment made to the disposal fund in July 2017.

Cash outflow from financing activities decreased significantly in comparison to the previous year. This was mainly due to the repayment of a hybrid bond in the same period of the previous year.

Net assets

Condensed balance sheet of the EnBW Group

in € million	30/06/2018	31/12/2017	Change in %
Non-current assets	26,323.7	26,766.6	-1.7
Current assets	14,540.3	12,015.3	21.0
Assets held for sale	567.9	3.0	-
Assets	41,431.9	38,784.9	6.8
Equity	6,467.3	5,862.9	10.3
Non-current liabilities	21,174.6	21,919.7	-3.4
Current liabilities	13,503.1	11,002.3	22.7
Liabilities directly associated with assets classified as held for sale	286.9	0.0	-
Equity and liabilities	41,431.9	38,784.9	6.8

As of 30 June 2018, the total assets held by the EnBW Group was higher than the level at the end of the previous year. Current assets increased by €2,525.0 million. This change was mainly caused by the increase in derivatives due to the market valuation, as well as to increased trade receivables in the trading business. The increase in assets held for sale by €564.9 million was primarily due to the reclassification of VNG Norge AS and its subsidiary VNG Danmark ApS.

The equity held by the EnBW Group increased by €604.4 million as of the reporting date of 30 June 2018. This was due mainly to the increase in revenue reserves as a result of the IFRS implementation project and the positive result. The

equity ratio increased from 15.1% at the end of 2017 to 15.6% as a result. Non-current liabilities decreased by €745.1 million. This was mainly due to the first-time application of IFRS 15 in the 2018 financial year and the reclassification of VNG Norge AS and its subsidiary VNG Danmark ApS into liabilities directly associated with assets classified as held for sale. Current liabilities increased by €2,500.8 million. This increase was primarily attributable to the increase in derivatives from the market valuation and the increase in trade payables in the trading business. The increase in liabilities directly associated with assets classified as held for sale of €286.9 million results from reclassification of VNG Norge AS and its subsidiary VNG Danmark ApS.

Net debt

Net debt of the EnBW Group

in € million	30/06/2018	31/12/2017	Change in %
Cash and cash equivalents available to the operating business	-2,528.2	-2,954.7	-14.4
Current financial assets available to the operating business	-104.8	-277.0	-62.2
Long-term securities available to the operating business	-1.1	-4.3	-74.4
Bonds	4,950.4	4,934.3	0.3
Liabilities to banks	1,556.9	1,705.6	-8.7
Other financial liabilities	779.8	618.9	26.0
Valuation effects from interest-induced hedging transactions	-84.7	-96.4	-12.1
Restatement of 50% of the nominal amount of the hybrid bonds ¹	-996.3	-996.3	0.0
Other	-79.7	-12.3	-
Net financial debt	3,492.3	2,917.8	19.7
Provisions for pensions and similar obligations ²	6,334.9	6,341.2	-0.1
Provisions relating to nuclear power	5,655.1	5,802.7	-2.5
Pension and nuclear obligations	11,990.0	12,143.9	-1.3
Long-term securities and loans to cover the pension and nuclear obligations ³	-5,410.8	-5,487.6	-1.4
Cash and cash equivalents to cover the pension and nuclear obligations	-335.8	-258.6	29.9
Current financial assets to cover the pension and nuclear obligations	-505.9	-307.2	64.7
Surplus cover from benefit entitlements	-312.0	-179.3	74.0
Dedicated financial assets	-6,564.5	-6,232.7	5.3
Receivables relating to nuclear obligations	-327.0	-369.5	-11.5
Net debt relating to pension and nuclear obligations	5,098.5	5,541.7	-8.0
Net debt	8,590.8	8,459.5	1.6

1 The structural characteristics of our hybrid bonds meet the criteria for half of the bond to be classified as equity, and half as debt, by the rating agencies Moody's and Standard & Poor's.

2 Less the market value of the plan assets of €1,063.6 million (31/12/2017: €1,047.3 million).

3 Includes investments held as financial assets.

As of 30 June 2018, net debt increased slightly by €131.3 million compared to the figure posted at the end of 2017. One reason for this increase was our investment in growth projects.

Related parties

Relationships with related parties (entities and individuals) are disclosed – insofar as they have changed significantly in comparison to the reporting date of 31 December 2017 – in the notes and explanations of the six-monthly consolidated financial statements.

Customers and society goal dimension

We report on the non-financial goal dimensions of EnBW in the areas of customers and society, employees and the environment at the six-month stage on the basis of the key non-financial performance indicators presented in the Group management report 2017 (Integrated Annual Report 2017 from p. 69 onwards). Exceptions are the Reputation Index in the customers and society goal dimension, the Employee Commitment Index (ECI) in the employees goal dimension and the key performance indicators of “installed output of renewable energies (RE) in GW and the share of the generation capacity accounted for by RE” in the environment goal dimension as well as the CO₂ intensity. The values for these key indicators will be exclusively collected at the end of the year.

Customer proximity

Customer Satisfaction Index

Key performance indicator

	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
Customer Satisfaction Index for EnBW/Yello	130/150	139/164	-6.5 / -8.5	143/161

The **satisfaction of EnBW customers** fell in the first half of 2018 both in comparison with the same period of the previous year and also with the figure posted for the full year of 2017. However, it is still at a good level and also within the forecasted range for 2018 (128–138). In comparison to the very good value in the previous year, customer satisfaction suffered from the effect of the price adjustments experienced by a large proportion of the electricity customers in early 2018. In addition, the product and service portfolio is being expanded especially to include additional offers with tangible benefits. The satisfaction of customers of EnBW should thus recover again during the course of the second half of 2018 and the index value should move towards the upper end of the forecasted range.

EnBW has been continuing with its image campaign under the motto “We’re making it happen” since May 2018, whereby the main focus is being placed on the areas of electromobility and solar and wind power. In the area of brand attractiveness, around 16% more members of the general public in Baden-Württemberg remembered the campaign on average than did not remember the campaign in the first half of 2018.

Although the **satisfaction of Yello customers** in the first half of 2018 was still at a high level and within the forecast for the full year (148–159), it nevertheless fell noticeably compared to the value in the previous year. Although Yello did not make any adjustments to electricity prices itself, the brand was not able to totally insulate itself from the generally prevailing trend in the sector. In addition, the advertising activities in 2018 concentrated on sales-related themes, while a diverse range of measures were carried out with high intensity in 2017 in combination with the market relaunch. The aim for the remainder of the year is to stabilise customer satisfaction at the high level already achieved or even to improve it. To this end, digital services will be expanded and optimised, while more intensive marketing measures are once again planned for the fourth quarter.

Current developments

Electromobility is a strategic growth field with the highest priority for EnBW. Accordingly, the Group’s activities in this area are numerous, diverse and forward-looking.

In the Baden-Württemberg-Pavillon at the **Hannover Messe**, for example, EnBW is presenting its broad range of charging solutions and services for a networked energy system of the future under the motto: “Simple, Everywhere. Reliable.” – from intelligent mobility concepts and offers for fleet operators through to smart systems that link together energy supply

and electromobility within holistic solutions. The EnBW mobility+ charging solution for private customers and companies and the award-winning EnBW mobility+ app mean that customers no longer have to worry about making long journeys because the next charging station is not only quick and easy to find, but they can also pay directly using the app. EnBW makes quick charging simple, reliable and possible throughout Germany: Charging stations are available at every third Tank & Rast motorway service station thanks to the 120 EnBW quick-charging stations. There will also be 1,000 EnBW quick-charging stations available in cities by 2020. It will be possible to pay a uniform and transparent tariff at all charging stations. Overall, the roaming network will provide access to more than 16,000 charging points in Germany, Austria and Switzerland. More than 85% of all freely accessible charging points in these three countries will be covered by the end of 2018.

Charging solutions for companies and local authorities open up new sales opportunities for **EnBW mobility+**. As e-cars are becoming increasingly attractive in terms of technology and price, the demand for charging facilities amongst end customers is also growing, which offers an additional opportunity for acquiring customers and offering services to companies and local authorities. The complete package for charging infrastructure includes comprehensive advice on the choice of site, installation, commissioning, operation and servicing of the facilities.

In May, EnBW took another important step towards achieving its target of operating 1,000 EnBW quick-charging stations by 2020. In cooperation with the Austrian mineral oil company OMV, it will install and operate the latest generation of **quick-charging stations** with a charging capacity of more than 300 kW at 100 OMV sites in southern Germany – largely in Baden-Württemberg, Bavaria and Hesse – by the end of 2019. Drivers of electric cars will then be able to charge their vehicles with enough electricity to cover the next 100 km in just three minutes. In addition, the charging capacity will be gradually increased over the next few years to provide up to eight high-speed charging points at each site.

The **EnBW mobility+ Wallbox** enables safe and easy charging at home with a charging capacity of up to 11 kW. Three different installation packages, for example including the moving of an existing high-voltage electrical connection, and three mounting options are available. Customers configure and order their package online and receive a €50 starting credit, while experienced fitters complete the turnkey installation – providing a convenient alternative to the public charging of electric cars.

With the solar solution **EnBW solar+**, customers themselves can become energy producers. The future-oriented solar power plant including storage system enables customers to produce their own solar electricity and then store it for use later on. As a member of an energy community, EnBW customers can also sell surplus electricity to other members or buy electricity at especially cheap prices when they require more. Financing the purchase of an EnBW solar+ power plant has also recently become even easier. This is possible with the convenient financing plan offered by the SKG BANK – a partner of EnBW. The special feature: the convenient financing plan has already been adapted to all of the steps required for the EnBW solar+ power plant. The whole process thus runs smoothly right through to the installation. In addition, EnBW took an important step towards offering a full range of energy solutions for the home by acquiring Deutsche Energieversorgung GmbH (DEV). DEV has sold more than 10,000 electricity storage systems with energy management functions under the name SENEK and is one of the top 3 suppliers on the German home electricity storage market. The expertise, systems and contacts held by DEV will also give additional impetus to EnBW solar+.

Yello is “More than you think”: Since the beginning of the year, Yello has been offering the photovoltaic product **Yello Solar** that enables customers to lease a photovoltaic power plant tailored to their own requirements and produce their own solar electricity – for their own use or for feeding into the grid. In November 2017, Yello and Sixt Neuwagen offered a joint leasing product with the latest BMW i3 in the Yello E-Mobility Edition. The limited edition of the BMW i3 with full Yello branding was already sold out after one day. The three hundredth **Yello e-car** was handed over to a customer at the end of May 2018. The product range for the **Yello Plus tariff** has also grown. Alongside the washing machine Samsung AddWash™, the Plus portfolio now also includes, for example, a Philips LED TV, the Nespresso Expert & Milk, a Siemens tumble dryer and the Amazon Echo. The additions to the Plus family will help Yello to successfully acquire new customers. Yello will continue this bundling strategy to create new incentives for customers to sign a contract and also to provide sustainable support for the positioning of the brand.

EnBW has won the **Contracting Award 2018** – this is the second time EnBW has won this award after its earlier success in 2010. The award is presented by the Energy Efficiency Association for Heating, Cooling and Combined Heat and Power (AGFW) and the magazine “Energie & Management”. The project realised by EnBW for a combined energy solution in Waldbronn, near Karlsruhe, comprised supplying two industrial companies and two local authority facilities with heating, cooling, cooling water and electricity. The use of combined heat and power technology and the utilisation of waste heat not only result in cheaper generation costs but also avoid 680 t CO₂ emissions per year.

The City of Schwaigern has signed a ten year **contracting** agreement with EnBW. EnBW will renovate the existing heating plant in the Leintal school and implement and finance the already planned modernisation work as part of an energy

supply contracting agreement. It will then operate the plant over the term of the contract. Key elements of the modernisation work are a new combined heat and power plant unit, a condensing and low-temperature boiler including the necessary pipes and modern, superordinate measurement, control and management technology. By networking all of the individual components into a new energy supply centre, additional energy consumers can now also be connected up. The modernisation work is expected to be completed in October 2018. This successful project is an example of how the various different areas at EnBW cooperate in a good and networked manner.

In another contracting project, EnBW is supplying heating and electricity to the school, town hall and event hall in the municipality of Neuhausen ob Eck for the next ten years. EnBW is investing around €1.5 million in modernising and networking the power plants. The municipality is saving around a quarter of its energy costs and reducing its CO₂ emissions by half at the same time. It will also be possible for other buildings or charging stations for electric cars to be supplied with energy in the future.

The product “**EnBW Hausstrom**” (EnBW Home Electricity) enables customers in the housing sector to use energy supply solutions more easily. So-called “tenant electricity” is produced, for example, in combined heat and power plant units in the cellar of an apartment building and is supplied to residents of this building without entering the grid. The unused, surplus electricity will be fed into the grid and reimbursed accordingly. The latest project of this type comprises 74 residential units in Backnang; a combined heat and power plant unit with an output of 64 kW provides the heating and electricity.

EnBW helps local authority associations to meet future energy industry and infrastructural challenges faced in the region. The RegioENERGIE association in the Karlsruhe region that covers various administrative districts provides a good example. The association commissioned EnBW to both found and organise the network and also to develop a comprehensive **electromobility concept**. The ten local authorities directly bordering each other place great importance on a holistic approach to the areas of mobility, infrastructure and energy efficiency. On the basis of the concept, the local authorities can make more targeted investments. Public participation and cooperation with local companies also help to develop comprehensive mobility solutions to meet any specific requirements and to achieve a higher level of electrification of mobility within the local authorities. EnBW supports local authority energy-efficiency networks with a series of specific modules and aims to expand these activities further.

In the northern region of the area around Lake Constance, five municipalities have joined together with EnBW and the utility company Stadtwerk am See to form **Seeallianz**. EnBW has a major stake in the foundation of the company with a 33% shareholding. The EnBW subsidiary Netze BW transferred the electricity grids within the region covered by the five municipalities to this electricity grid company and will

continue to operate them for Seeallianz as the leaseholder. The local authorities in this alliance are now co-owners of the electricity grids and will have a significant influence on shaping their development in the future. The EnBW subsidiary Netze BW guarantees the security of supply in time-honoured fashion and is a leader in innovations for developing future-oriented smart grids.

In the area of **smart meters**, EnBW is carrying out so-called ALC (Assurance Class Life Cycle) tests with various equipment manufacturers and is thus at the final test stage before roll-out. The tests are being carried out in accordance with the rules issued by the Federal Office for Information Security (BSI) and form an important step on the path towards the roll-out of the smart meters.

Supply reliability

TOP SAIDI

Key performance indicator

	01/01– 30/06/2018	01/01– 30/06/2017 ¹	Change in %	01/01– 31/12/2017
SAIDI (electricity) in min/year	8	9	-11.1	19

¹ The figure for the previous year has been restated.

The reliability of the energy supply is given a high priority by the EnBW grid operators. The key performance indicator SAIDI – measured by the average length of supply interruptions experienced annually by each connected customer – for the grid areas operated by EnBW companies remained at a good level in the first half of 2018.

Employees goal dimension

The Employers Association for Electricity Power Plants in Baden-Württemberg and the service trade union ver.di have reached a **collective bargaining agreement** after intensive negotiations. Remuneration will increase by 3.0% from 1 February 2018 as a result. Holiday pay under the collective agreement will be increased by 9.0%. Monthly remuneration for apprentices in all year groups will rise by €70. Notice on the new collective bargaining agreement can be given on 28 February 2019 at the earliest. The collective bargaining agreement at our subsidiary Pražská energetika (PRE) in the Czech Republic was extended by two years at the beginning of 2018. The agreed increase in remuneration was above the guaranteed minimum increase in the previous collective bargaining agreement due to the challenges on the Czech labour market.

A **strategy dialogue** will be conducted again in 2018 as in 2017. The dialogue will be held across all departments and managerial levels – initially in 59 workshops in Karlsruhe and Stuttgart and then at other EnBW sites. The focus this year is being placed on how EnBW can achieve its ambitious targets set out in the 2025 growth strategy. How will we work and

In cooperation with the company Minol, EnBW presented the product **Immo digital+** – a solution for consumption billing in the housing industry based on digital metering – at the E-world trade fair in Essen. The solution should allow the billing process to be completed more easily and promptly. The market launch of the product is planned for the second half of 2018.

In the promising **broadband business**, the company RBS wave, a subsidiary of Netze BW, secured the contract in a Europe-wide tender process in July 2018 to develop a broadband network for the Rastatt administrative district as the general planner. In the largest project to date in the history of the company, RBS wave will plan the fibre-optic backbone network and the connections to local areas of expansion/industrial estates, public facilities and all schools in the administrative district. The company is involved in all stages of the project through to completion and will thus have an active presence in all local authorities.

organise ourselves in the future? How can we reach decisions quickly and become better networked, independent of organisational and hierarchical levels? The following principle applies to the strategy dialogue: Don't overanalyse but quickly identify initial solutions. A total of 26 workshops with around 550 participants from the management team and other employees in leadership positions have already been held. An additional 33 workshops for team leaders and employees with space for a further 850 participants will now follow.

As part of the EnBW programme "**New Mobility**", employees were able to apply between 21 February and 6 March 2018 to lease an EnBW mobility+ Edition of the BMW i3. A total of 180 BMW i3 cars were offered. As the interest was greater than the number of available cars, a draw was held to select the recipients. The first new mobility schemes were already launched in January with "DeinBike" (YourBike) and "DeinTicket" (YourTicket). Although the campaign started in the cold season, more than 215 company bicycles have already been ordered. The subsidised Jobticket (local public transport ticket) has also attracted great interest and more than 275 applications have now been submitted. Despite this good reception at the beginning, we want to continue to raise awareness amongst colleagues for these schemes and their benefits. Information events with the transport associations of Karlsruhe and Stuttgart and "Bike Campaign Days" with our service provider Bikeleasing Service have already been organised at various different locations, so that the many undecided colleagues will also have the opportunity to try out a pedelec themselves.

What Facebook is to private life, **Yammer** will become to employees of EnBW in the future: The new communication platform at EnBW offers a diverse range of possibilities for exchanging ideas, sharing experiences and working on themes together. Yammer replaces Teamblog, which was introduced as the first dialogue medium within the Group at the end of 2014. Every employee can use the new platform to write

articles, start small surveys and exchange ideas and information within public and closed groups. These groups are not tied to the departments but can be directly set up by all employees. The decision to launch Yammer as the official communication channel is the result of a joint project by IT and internal communication in close cooperation with the works council.

Further performance indicators for employees

Employees of the EnBW Group¹

	30/06/2018	31/12/2017	Change in %
Sales	3,398	3,331	2.0
Grids ²	8,853	8,858	-0.1
Renewable Energies	1,090	1,050	3.8
Generation and Trading	5,459	5,457	0.0
Other	2,597	2,656	-2.2
Total	21,397	21,352	0.2
Number of full-time equivalents ³	19,999	19,939	0.3

1 Number of employees excluding apprentices/trainees and inactive employees.

2 The number of employees for the ITOs (ONTRAS Gastransport GmbH, terranets bw GmbH and TransnetBW GmbH) is only updated at the end of the year; for intervals of less than a year, the number of employees from 31/12/2017 is carried forward.

3 Converted into full-time equivalents.

As of 30 June 2018, the EnBW Group had 21,397 employees. As new appointments are only being made in strategic growth fields, the number of employees stands at almost the same level as at the end of 2017. There was an increase in the number of employees in the Sales segment, which was primarily due to the movement of employees as part of the restructuring within Energiedienst Holding AG. This was offset by the closure of the B2B business under the EnBW and Watt brands and the reduction in employees in the operating areas of EnBW AG. The number of employees in the Grids segment

remained almost unchanged compared to the previous year's reporting date. This was due to two conflicting developments: on the one hand the movement of employees to the Sales and Renewable Energies segments due to the previously described restructuring within Energiedienst Holding AG and on the other an increase in the number of employees due to the growing importance of the regulated business. The reduction in the number of employees in Other was mainly attributable to the movement of employees to the Sales segment due to restructuring within EnBW AG.

Occupational safety

TOP LTIF

Key performance indicator

	01/01– 30/06/2018	01/01– 30/06/2017	Change in %	01/01– 31/12/2017
LTIF ¹	2.5	3.1	-19.4	3.0

1 Variations in the group of consolidated companies; only those companies controlled by the Group are included.

The key performance indicator LTIF (Lost Time Injury Frequency) fell significantly in the first six months of 2018 in comparison to the same period of the previous year. The days of absence per accident also fell from 16.1 days to 14.0 days.

EnBW works continuously on minimising danger in the workplace, which could result in accidents or work-related illnesses, through training and a programme of measures. The introduction of the new EcoWebDesk (EWD) software is

progressing as planned. Important elements of the EWD are the documentation of risk assessments and hazardous substance management. A uniform hazardous substance register is gradually being collated from various sources that have been in existence for years. The Grids segment is continuously reinforcing its safety culture with a series of campaigns. In the area of conventional and renewable generation, the successful "100 days without accidents" campaign is also being continued in 2018.

Environment goal dimension

As a large energy company, EnBW shares responsibility for our environment and climate protection. Supplying our customers with energy causes emissions, above all through the operation of power plants, and uses natural resources and space. Environmental and climate protection form an integral part of the EnBW corporate strategy.

The long-term success of an energy supply company's activities hinges on acceptance by society. EnBW strives to achieve a credible balance between respecting the environment and achieving its corporate, political and social goals, and underpins this commitment with a diverse range of activities.

The **installed output** from renewable energies at the EnBW Group stood at 3.4 GW at the end of 2017. Further onshore wind farms with a capacity of around 70 MW were added in the first half of 2018. EnBW is well on track to achieve its objectives in the environment goal dimension by 2020.

The Austrian company Illwerke VKW placed the first machine for the newly constructed pumped storage power plant "Obervermuntwerk II" (OVW II) into test operation in July 2018 following a four-year construction period. The second machine will be placed into operation by the end of 2018. Each of the two turbines and pumps has an output of 180 MW. The pumped storage power plant has been designed to supply peak load and balancing energy in the future. EnBW AG is also participating together with Illwerke VKW in the project. It has secured 50% of the storage and balancing energy from the Illwerke power plants as a result. The contracts between the two energy companies run until 2041.

EnBW is pushing forward its planning work for the **expansion of the Rudolf-Fettweis Plant in Forbach** into a modern and powerful pumped storage power plant. At the beginning of the year, the application to approve the construction of a new lower-level reservoir was submitted to the regional council in Karlsruhe for full examination. The Rudolf-Fettweis Plant (RFW) in the northern Black Forest has a total output of around 71 MW and consists of four individual power plant units. The main components are the Schwarzenbachtal Dam with a storage volume of 14 million m³, the machine house and the reservoirs in Forbach and Kirschbaumwasen. The water is funnelled via tunnels and pressure pipes to the RFW that lies 150 m or 357 m lower down where it is then used to produce electricity. The new lower-level reservoir will be formed from the existing compensating reservoir in Forbach and this will be expanded to include a new underground cavern reservoir in the neighbouring mountain. The Schwarzenbachtal Dam will continue to act as the upper reservoir. All of the power plant technology will be housed in the power plant cavern under the mountain. The RFW – which is currently primarily a run-of-river and storage power plant – will thus be able to function also as a pure pumped storage power plant in the future. It will then make another important contribution to the stability of the entire energy system, especially against the background of further increases in feed-ins of electricity from fluctuating renewable energies.

EnBW and the University of Stuttgart are jointly developing a new generation of **high-performance photovoltaic modules**. The aim is to use laser technology in the production process to make the modules more efficient and durable. The new process not only excludes the use of environmentally hazardous substances and heavy metals, such as lead or cadmium, but also promises to be less expensive. The Institute for Photovoltaics at the University of Stuttgart can currently achieve a cell efficiency of greater than 23% with small cells and greater than 22.5% with large cells, which was previously only possible when using complex technologies such as lithography. The joint research project is being funded by the German Federal Ministry for Economic Affairs and Energy and co-financed by EnBW and is due to be completed in early 2020. The company EnPV GmbH that was founded in December 2017 and in which EnBW has a majority shareholding will be responsible for the further development and exploitation of the new technologies.

In the first joint auction for onshore wind power plants and solar power plants that was held this year by the Federal Network Agency, EnBW had bids for three **solar parks** accepted. The three solar projects comprise a generation output of 18 MW. They are located in Inzigkofen (Baden-Württemberg), Birkenfeld (Bavaria) and Lindendorf (Brandenburg) and are due to be erected by the middle of 2019. Only bids for solar parks were successful in the auction. In total, bids for 32 solar projects were accepted and three of the four bids submitted by EnBW were successful. The auction received bids for double the available capacity. As the auction was for a total capacity of 200 MW, the successful bids from EnBW thus accounted for 9% (📄 p. 12) of the total.

In the second auction for **onshore wind energy** that was held this year by the Federal Network Agency, EnBW had bids accepted at the quoted prices for a total of three onshore wind projects in Baden-Württemberg and Brandenburg with a total output of around 19 MW. EnBW believes that this validates its competitiveness in the area of project development (📄 p. 12).

Netze BW is using new approaches to **protect birds** on its overhead cables. The company is the first in Germany to install so-called fireflies on the medium-voltage cables spanning a lake, using a drone. They reflect the daylight in a similar way to cat's eyes and also glow in the dark and in fog. In March 2018, around 50 fireflies were installed alternating between the three transmission cables across the more than 400 m long stretch of cable at the endangered bird sanctuary near Krauchenwies (Sigmaringen region).

In Nördlingen (administrative district of Donau-Ries), Netze BW and Netzgesellschaft Ostwürttemberg DonauRies GmbH placed their **refurbished substation** into operation. The general contractor Siemens fitted its new outdoor circuit breakers that use vacuum switching technology and combined voltage and current transformers with so-called clean air insulation technology during the refurbishment – the first time anywhere in the world that they have been fitted to a 110 kV high-voltage grid. The circuit breakers and measuring transformers do not need to use the switching and insulating

gas sulphur hexafluoride (SF₆), which has been commonly used worldwide for decades but is harmful to the environment due to its high global warming potential.

In order to produce even more environmentally friendly and efficient heating for the district heating network in Stuttgart in the future, the **Stuttgart-Gaisburg combined heat and power plant** will be fundamentally modernised over the next few years. A significantly smaller, more efficient and lower-emission gas-fired heat and power plant will replace the current – mainly coal-fired – combined heat and power plant and will perform important peak load and reserve functions for the Stuttgart/Central Neckar district heating region. District heating and electricity will only be generated using gas from the next heating period onwards – initially via two gas boilers at the old plant and then later in the newly constructed combined heat and power plant. The changeover from coal to gas will

significantly ease the burden on the environment and climate: It will reduce carbon dioxide emissions by around 60,000 t per year and also eliminate the emission of particulates, heavy metals and sulphur dioxide to a large extent.

The EnBW funding programme “**Stimuli for Diversity**” has been successfully supporting social engagement in Baden-Württemberg for the protection of amphibians since 2011 and the protection of reptiles since 2016. The funding programme was jointly launched by the LUBW (Baden-Württemberg State Institute for the Environment) and EnBW. The application period for the 2018 funding year ended in May 2018. Many well-founded and interesting project applications were submitted. The specialist jury selected nine projects for improving the living conditions and preserving the habitats of amphibians and reptiles in Baden-Württemberg, which will now be funded by EnBW and realised in the period from October to December 2018.

Forecast

In the following forecast, we take a look at the expected future development of EnBW in the current financial year. It should be noted that the present conditions increase the level of uncertainty with which predictions about the future

development of the company can be made, as the assumptions upon which they are based can quickly become outdated.

TOP Adjusted EBITDA and the share of the adjusted EBITDA accounted for by the segments

Expected development of earnings in 2018 compared to the previous year

	Adjusted EBITDA		Share of adjusted EBITDA for the Group accounted for by the segments	
	H1 2018	2017	H1 2018	2017
Sales	-5% to -15%	-5% to -15%	10% to 15%	10% to 15%
Grids	+5% to +15%	+5% to +15%	45% to 60%	45% to 60%
Renewable Energies	+10% to +20%	+10% to +20%	15% to 20%	15% to 20%
Generation and Trading	0% to -10%	0% to -10%	15% to 20%	15% to 20%
Other/Consolidation	-	-	-	-
Adjusted EBITDA, Group	0% to +5%	0% to +5%		

The earnings forecast for the entire Group and the individual segments for the whole 2018 financial year remains unchanged from that given in the Group management report 2017 [\[4\]](#) Integrated Annual Report 2017, p. 87 ff.).

In the **Sales** segment, we expect earnings in 2018 to fall below the figure in the previous year. This is due to the elimination of out-of-period effects such as the reversal of provisions for issues that have since lapsed, which benefited the result in the previous year. However, this fall will be compensated for to some extent by the full-year earnings contribution of VNG-Verbundnetz Gas Aktiengesellschaft. Therefore, we expect a slight decrease in the share of the adjusted EBITDA for the Group accounted for by this segment.

The adjusted EBITDA for the **Grids** segment will increase further in 2018. It will continue to be the segment with the

highest earnings. On the one hand, there is the positive effect of the full-year earnings contribution of VNG and, on the other hand, we anticipate higher revenues from grid user charges. The share of the adjusted EBITDA for the Group accounted for by this segment is expected to remain stable or increase slightly.

The adjusted EBITDA for the **Renewable Energies** segment will increase further in 2018. This is due, on the one hand, to the higher water levels for the run-of-river power plants expected in comparison to the previous year because our forecast is based on the long-term average. This will be offset to some extent by a negative effect from the electricity deliveries for 2018 from our run-of-river power plants already placed on the forward market: The margins achieved were slightly lower than those for 2017. In addition, the onshore wind farms already realised in 2017 and the planned expansion of onshore

wind farms in 2018 will have a positive effect on earnings. The wind yield forecasts are based on the long-term average. As the wind conditions in 2017 were higher than in the previous year but still below the long-term average, this alone will result in slightly higher earnings in 2018 in comparison to 2017. However, the level of improvement is dependent on the actual wind strength. In the first half of 2018, the wind energy yield was below the long-term average, especially at the offshore wind farms. We continue to stand by our forecast and expect a stable or a slight increase in the share of the adjusted EBITDA for the Group accounted for by this segment.

The adjusted EBITDA for the **Generation and Trading** segment will once again fall slightly in 2018. This is due to the fact that we have already placed most of the electricity deliveries for 2018 on the forward market at lower margins than in 2017. In addition, we anticipate lower out-of-period earnings compared to the previous year because 2017 was influenced by positive effects, such as from decentralised feed-ins. The full-year earnings contribution of VNG will mitigate to some extent the negative earnings performance in comparison to the previous

year. We expect a slight decrease in the share of the adjusted EBITDA for the Group accounted for by this segment.

The **adjusted EBITDA** for the EnBW Group in 2018 will increase further and be between 0% and +5% above the level in 2017. This will be due primarily to the areas of growth in the Grids and Renewable Energies segments, as well as the year-round full consolidation of VNG. In the Sales and Generation and Trading segments, we expect a weaker performance because the positive out-of-period effects from the previous year no longer exist.

Expected trends in non-financial key performance indicators

After the end of the first half of 2018, there are no significant changes to the non-financial performance indicators compared to the expectations formulated for the 2018 financial year in the Integrated Annual Report 2017 [\[L\]](#) Integrated Annual Report 2017, p. 89 f.).

Report on opportunities and risks

In comparison to the report issued at the end of 2017, the risks faced by the EnBW Group remained largely unchanged in the first six months of 2018. No risks currently exist that might jeopardise the EnBW Group as a going concern.

Using the report on risks in the Group management report 2017 as a basis, only the significant opportunities or risks which have changed, arisen or ceased to exist in the reporting period are described in this Six-Monthly Financial Report January to June 2018. Regarding non-financial aspects, there were no material changes to the opportunities and risks in comparison to the report issued at the end of 2017. A detailed presentation of the opportunity and risk position can be found in the [\[L\]](#) Integrated Annual Report 2017 from p. 91 onwards.

Cross-segment opportunities and risks

Liquidity planning: Due to unforeseeable developments, especially margin payments, unused project funds or tax issues as well as financial market crashes, the Group's liquidity planning is subject to uncertainty that could lead to deviations between the actual payments and planned payments. In general, there is also a risk of additional liquidity requirements if the rating agencies downgrade the credit rating of EnBW. Overall, these effects could have a positive impact in the high double-digit million euro range and a negative impact in the low three-digit million euro range on the key performance indicator ROCE in 2018. We currently identify a low level of opportunity and an increased level of risk in this area.

Fluctuations in wind energy yield: There is a general opportunity or risk for wind power plants due to wind fluctuations because the amounts of electricity generated by them are subject to fluctuations in the mean annual wind speed. In order to take these wind fluctuations into account in our planning, wind reports are created. Nevertheless, wind fluctuations could by their nature have a negative effect on the key performance indicator adjusted EBITDA and on the key performance indicator internal financing capability in the low single-digit to mid double-digit million euro range in 2018. We currently identify a generally lower level of opportunity and an increased level of risk in this area.

Generation and Trading segment

Operation and dismantling of nuclear power plants: At the two power plant blocks GKN I and KKP 1, there is a possibility of delays and additional costs due to an increase in complexity and expenses during the dismantling and disposal process. Deadlines and costs are being permanently monitored and controlled within a strategic dismantling project. Nevertheless, increased costs could have a negative effect in the low three-digit million euro range on the development of the net debt in 2018. We currently identify a relatively low level of risk in this area.

Six-monthly consolidated financial statements

Income statement

in € million	01/04 – 30/06/2018	01/04 – 30/06/2017	01/01 – 30/06/2018	01/01 – 30/06/2017
Revenue including electricity and energy taxes	5,352.4	5,458.4	11,874.7	10,813.4
Electricity and energy taxes	-138.0	-154.4	-312.9	-337.6
Revenue	5,214.4	5,304.0	11,561.8	10,475.8
Changes in inventories	19.6	31.4	40.1	57.6
Other own work capitalised	191.2	22.2	209.3	40.3
Other operating income	242.1	1,678.8	433.7	1,994.1
Cost of materials	-4,444.0	-4,337.5	-9,664.2	-8,532.6
Personnel expenses	-455.7	-451.0	-884.6	-849.1
Other operating expenses	-270.7	-381.4	-511.4	-546.5
EBITDA	496.9	1,866.5	1,184.7	2,639.6
Amortisation and depreciation	-303.4	-316.6	-597.9	-557.0
Earnings before interest and taxes (EBIT)	193.5	1,549.9	586.8	2,082.6
Investment result	32.2	69.1	47.3	91.4
of which net profit/loss from entities accounted for using the equity method	(-4.0)	(14.6)	(2.8)	(30.2)
of which other profit/loss from investments	(36.2)	(54.5)	(44.5)	(61.2)
Financial result	71.8	239.8	-62.2	250.1
of which finance income	(138.0)	(370.5)	(212.7)	(504.2)
of which finance costs	(-66.2)	(-130.7)	(-274.9)	(-254.1)
Earnings before tax (EBT)	297.5	1,858.8	571.9	2,424.1
Income tax	-63.2	-538.7	-150.6	-686.0
Group net profit	234.3	1,320.1	421.3	1,738.1
of which profit/loss shares attributable to non-controlling interests	(25.6)	(21.4)	(75.1)	(58.8)
of which profit/loss shares attributable to the shareholders of EnBW AG	(208.7)	(1,298.7)	(346.2)	(1,679.3)
EnBW AG shares outstanding (million), weighted average	270.855	270.855	270.855	270.855
Earnings per share from Group net profit (€)¹	0.77	4.79	1.28	6.20

¹ Diluted and basic; in relation to profit/loss attributable to the shareholders of EnBW AG.

Statement of comprehensive income

in € million	01/04 – 30/06/2018	01/04 – 30/06/2017	01/01 – 30/06/2018	01/01 – 30/06/2017
Group net profit	234.3	1,320.1	421.3	1,738.1
Revaluation of pensions and similar obligations	6.5	178.2	129.7	284.4
Income taxes on other comprehensive income	-2.0	-51.1	-38.0	-81.9
Total of other comprehensive income and expenses without future reclassifications impacting earnings	4.5	127.1	91.7	202.5
Currency translation differences	-16.3	17.9	-6.4	16.8
Cash flow hedge	-15.6	-5.9	-25.5	33.2
Financial assets at fair value in equity	-6.1	-77.5	-7.5	-21.1
Entities accounted for using the equity method	-0.2	-6.2	-0.2	-4.6
Income taxes on other comprehensive income	15.1	10.3	23.7	16.8
Total of other comprehensive income and expenses with future reclassifications impacting earnings	-23.1	-61.4	-15.9	41.1
Total other comprehensive income	-18.6	65.7	75.8	243.6
Total comprehensive income	215.7	1,385.8	497.1	1,981.7
of which profit/loss shares attributable to non-controlling interests	(25.9)	(28.9)	(78.4)	(65.2)
of which profit/loss shares attributable to the shareholders of EnBW AG	(189.8)	(1,356.9)	(418.7)	(1,916.5)

Balance sheet

in € million	30/06/2018	31/12/2017
Assets		
Non-current assets		
Intangible assets	1,753.6	1,905.9
Property, plant and equipment	15,231.2	15,597.4
Entities accounted for using the equity method	1,483.5	1,388.6
Other financial assets	5,962.3	5,985.7
Trade receivables	278.6	320.9
Other non-current assets	938.2	611.7
Deferred taxes	676.3	956.4
	26,323.7	26,766.6
Current assets		
Inventories	946.7	958.1
Financial assets	619.1	588.1
Trade receivables	5,090.1	4,408.7
Other current assets	5,020.4	2,847.1
Cash and cash equivalents	2,864.0	3,213.3
	14,540.3	12,015.3
Assets held for sale	567.9	3.0
	15,108.2	12,018.3
	41,431.9	38,784.9
Equity and liabilities		
Equity		
Shares of the shareholders of EnBW AG		
Subscribed capital	708.1	708.1
Capital reserve	774.2	774.2
Revenue reserves	4,690.7	3,636.6
Treasury shares	-204.1	-204.1
Other comprehensive income	-1,754.3	-1,367.4
	4,214.6	3,547.4
Non-controlling interests	2,252.7	2,315.5
	6,467.3	5,862.9
Non-current liabilities		
Provisions	12,732.8	13,124.5
Deferred taxes	856.6	799.4
Financial liabilities	5,900.8	5,952.0
Other liabilities and subsidies	1,684.4	2,043.8
	21,174.6	21,919.7
Current liabilities		
Provisions	1,431.7	1,598.7
Financial liabilities	1,386.3	1,306.8
Trade payables	5,535.5	4,838.1
Other liabilities and subsidies	5,149.6	3,258.7
	13,503.1	11,002.3
Liabilities directly associated with assets classified as held for sale	286.9	0.0
	13,790.0	11,002.3
	41,431.9	38,784.9

Cash flow statement

in € million	01/01 – 30/06/2018	01/01 – 30/06/2017
1. Operating activities		
EBITDA	1,184.7	2,639.6
Changes in provisions	-366.1	-237.8
Result from disposals	-8.3	-272.4
Other non-cash-relevant expenses/income	-87.8	-311.9
Change in assets and liabilities from operating activities	-155.4	-51.2
Inventories	(-13.0)	(-120.4)
Net balance of trade receivables and payables	(71.4)	(348.9)
Net balance of other assets and liabilities	(-213.8)	(-279.7)
Income tax paid/received	-240.6	121.9
Cash flow from operating activities	326.5	1,888.2
2. Investing activities		
Capital expenditure on intangible assets and property, plant and equipment	-434.6	-486.1
Disposals of intangible assets and property, plant and equipment	39.1	42.2
Cash received from subsidies for construction costs and investments, and tax refunds from recognised exploration expenditure	28.0	33.1
Acquisition/sale of subsidiaries, entities accounted for using the equity method and interests in joint operations	-89.5	74.6
Changes in securities and financial investments	82.7	2,864.0
Interest received	62.2	150.0
Dividends received	81.2	66.6
Cash flow from investing activities	-230.9	2,744.4
3. Financing activities		
Interest paid for financing activities	-126.9	-184.1
Dividends paid	-204.0	-29.6
Increase in financial liabilities	207.9	17.1
Repayment of financial liabilities	-200.4	-1,056.5
Payments from alterations of capital in non-controlling interests	-47.7	-86.4
Cash flow from financing activities	-371.1	-1,339.5
Net change in cash and cash equivalents	-275.5	3,293.1
Change in cash and cash equivalents due to changes in the consolidated companies	0.9	289.1
Net foreign exchange difference	0.0	-2.0
Risk provisions in cash and cash equivalents	0.1	0.0
Change in cash and cash equivalents	-274.5	3,580.2
Cash and cash equivalents at the beginning of the period ¹	3,212.8	3,991.6
Cash and cash equivalents at the end of the period	2,938.3	7,571.8
of which cash and cash equivalents in current assets	(2,864.0)	(7,571.8)
of which cash and cash equivalents in assets held for sale	(74.3)	(0.0)

¹ Explanation in the accounting policies.

Statement of changes in equity

in € million	Other comprehensive income ¹										Total
	Subscribed capital and capital reserve	Revenue reserves	Treasury shares	Revaluation of pensions and similar obligations	Currency translation differences	Cash flow hedge	Financial assets at fair value in equity	Entities accounted for using the equity method	Shares of the shareholders of EnBW AG	Non-controlling interests ¹	
As of 01/01/2017	1,482.3	1,582.5	-204.1	-1,784.6	-48.2	-97.7	383.1	4.4	1,317.7	1,898.5	3,216.2
Other comprehensive income				201.1	13.2	35.4	-7.9	-4.6	237.2	6.4	243.6
Group net profit		1,679.3							1,679.3	58.8	1,738.1
Total comprehensive income	0.0	1,679.3	0.0	201.1	13.2	35.4	-7.9	-4.6	1,916.5	65.2	1,981.7
Dividends									0.0	-29.6	-29.6
Other changes									0.0	332.6	332.6
As of 30/06/2017	1,482.3	3,261.8	-204.1	-1,583.5	-35.0	-62.3	375.2	-0.2	3,234.2	2,266.7	5,500.9
As of 01/01/2018	1,482.3	3,636.6	-204.1	-1,716.9	-12.0	-109.2	470.4	0.3	3,547.4	2,315.5	5,862.9
Changes in accounting policies		843.3					-459.4		383.9	16.9	400.8
As of 01/01/2018 following the changes in accounting policies	1,482.3	4,479.9	-204.1	-1,716.9	-12.0	-109.2	11.0	0.3	3,931.3	2,332.4	6,263.7
Other comprehensive income				92.1	-5.8	-8.5	-5.1	-0.2	72.5	3.3	75.8
Group net profit		346.2							346.2	75.1	421.3
Total comprehensive income	0.0	346.2	0.0	92.1	-5.8	-8.5	-5.1	-0.2	418.7	78.4	497.1
Dividends		-135.4							-135.4	-108.4	-243.8
Other changes									0.0	-49.7	-49.7
As of 30/06/2018	1,482.3	4,690.7	-204.1	-1,624.8	-17.8	-117.7	5.9	0.1	4,214.6	2,252.7	6,467.3

¹ Of which other comprehensive income directly associated with the assets held for sale as of 30/06/2018 to the amount of €12.8 million (01/01/2018: €0.0 million, 30/06/2017: €0.0 million, 01/01/2017: €0.0 million). Of which attributable to the shareholders of EnBW AG: €9.5 million (01/01/2018: €0.0 million, 30/06/2017: €0.0 million, 01/01/2017: €0.0 million). Of which attributable to non-controlling interests: €3.3 million (01/01/2018: €0.0 million, 30/06/2017: €0.0 million, 01/01/2017: €0.0 million).

Notes and explanations

Accounting policies

The six-monthly financial statements of the EnBW Group are prepared according to the International Financial Reporting Standards (IFRS), the adoption of which is mandatory in the EU as of the reporting date. In addition, the related interpretations (IFRIC/SIC) are observed. Standards and interpretations that have not yet come into force have not been adopted.

The accounting policies applied for the six-monthly consolidated financial statements as of 30 June 2018, as well as the evaluation methods and input parameters for measuring fair value, are the same as those used for the consolidated financial statements as of 31 December 2017 with the exception of the new policies described below.

In accordance with IAS 34, the form of reporting chosen for the presentation of the consolidated financial statements of EnBW AG as of 30 June 2018 was shortened in comparison with that used for the consolidated financial statements as of 31 December 2017.

In addition to the income statement, the statement of comprehensive income, balance sheet, condensed cash flow statement and statement of changes in equity for the EnBW Group are presented separately.

Significant events in the reporting period, as well as detailed descriptions of the segments and financial result and changes in the assets held for sale, are given in the EnBW Group section of the management report.

Changes in accounting policies

The International Accounting Standards Board (IASB) and the IFRS Interpretation Committee (IFRS IC) have adopted the following new standards and amendments to existing standards whose application is mandatory from the 2018 financial year:

- > IFRIC 22 "Foreign Currency Transactions and Advance Considerations"
- > Amendments to IAS 40 (2016) "Transfers of Investment Property"
- > Amendments to IFRS 2 (2016) "Classification and Measurement of Share-based Payment Transactions"
- > Amendments to IFRS 4 (2016) "Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts"
- > Collective standard for the amendment of various IFRS (2016) "Improvements to the IFRS Cycle 2014–2016"
- >

These new rules have no material impact on the EnBW consolidated financial statements.

First-time adoption of amended accounting standards

In addition, the IASB has adopted the following new standards whose application is mandatory from the 2018 financial year:

- > **IFRS 15 "Revenue from Contracts with Customers" and "Amendments (2016) Clarifications to IFRS 15 Revenue from Contracts with Customers"**: IFRS 15 replaces the previous rules in IAS 18 "Revenue", IAS 11 "Construction contracts" and their associated interpretations and contains a five-step model for recognising revenue from contracts with customers. In terms of the transition method, EnBW is utilising the modified retrospective approach, where the standard only needs to be used for the latest reporting period presented in the financial statements (2018 financial year). The 2017 comparative period will thus still be presented using the old rules. Detailed information on the effects on the EnBW Group is given below. Further information is presented in the section "Revenue". The following table presents the effects of applying IFRS 15 for the first time:

in € million	01/01/2018
Revenue reserves	365.0
Non-controlling interests	5.2

The following table summarises the effects of the application of IFRS 15 on the consolidated balance sheet and the consolidated income statement. There are no corresponding effects on the consolidated cash flow statement.

in € million	01/01 – 30/06/2018 Applying IFRS 15	Adjustment	01/01 – 30/06/2018 Without applying IFRS 15
Revenue	11,561.8	982.8	12,544.6
Changes in inventories/Other own work capitalised	249.4	0.0	249.4
Other operating income	433.7	0.3	434.0
Cost of materials	-9,664.2	-980.0	-10,644.2
Personnel expenses	-884.6	0.0	-884.6
Other operating expenses	-511.4	-2.9	-514.3
EBITDA	1,184.7	0.2	1,184.9
Amortisation and depreciation	-597.9	0.0	-597.9
EBIT	586.8	0.2	587.0
Investment and financial result	-14.9	0.0	-14.9
EBT	571.9	0.2	572.1
Income tax	-150.6	-0.1	-150.7
Group net profit	421.3	0.1	421.4
of which profit/loss shares attributable to non-controlling interests	(75.1)	(0.0)	(75.1)
of which profit/loss shares attributable to the shareholders of EnBW AG	(346.2)	(0.1)	(346.3)

in € million	30/06/2018 Applying IFRS 15	Adjustment	30/06/2018 Without applying IFRS 15
Non-current assets	26,323.7	-10.5	26,313.2
Current assets	14,540.3	-9.7	14,530.6
Assets held for sale	567.9	0.0	567.9
Assets	41,431.9	-20.2	41,411.7
Equity	6,467.3	-370.1	6,097.2
of which revenue reserves	(4,690.7)	(-364.9)	(4,325.8)
of which non-controlling interests	(2,252.7)	(-5.2)	(2,247.5)
Non-current liabilities	21,174.6	349.9	21,524.5
Current liabilities	13,503.1	0.0	13,503.1
Liabilities directly associated with assets classified as held for sale	286.9	0.0	286.9
Equity and liabilities	41,431.9	-20.2	41,411.7

The adjustments are primarily due to the following changes. Especially in the Sales segment, the costs for acquiring contracts, which were directly recognised as an expense up to now, will be capitalised under other assets and reversed over the expected term of the contract as other operational expenses. In the case of regulatory levies and duties, the application of IFRS 15 will result in lower revenue and correspondingly a lower cost of materials being reported. The causes of this reporting change are the revised and supplemented criteria for checking the “principal” or “agent” relationships. In addition, the period of release for subsidies for construction costs in the regulated sector for electricity and gas was reduced to 20 years.

- > **IFRS 9 “Financial Instruments”:** The rules for the accounting of financial instruments in the accounting standard IFRS 9 “Financial Instruments” have been applied within the EnBW Group since 1 January 2018. The previous-year figures have not been retroactively restated. IFRS 9 results in changes to hedge accounting, the classification and valuation of financial instruments and the impairment of financial assets. Detailed information on the effects of these changes on the EnBW Group are described below. All effects on the second quarter of 2018 in comparison to the same quarter of the previous year are presented in the relevant sections of this six-monthly consolidated financial statement.

The effects of the transition to IFRS 9 on the opening balance sheet items result in an increase in revenue reserves of €478.3 million and minority interests of €11.7 million. They also result in deferred tax effects of €1.8 million.

Classification and valuation of financial statements

Due to the adoption of IFRS 9, financial assets will be allocated to the following measurement categories during the first-time application: “Debt instruments measured at amortised cost”, “Debt instruments measured at fair value in equity”, “Debt instruments measured at fair value through profit or loss”, “Equity instruments measured at fair value through profit or loss”. It is also possible to measure equity instruments at fair value in equity without recycling, although the EnBW Group does not make use of this option at this point in time.

The following table and the descriptions below explain the original measurement categories according to IAS 39 as of 31 December 2017 and the new measurement categories according to IFRS 9 as of 1 January 2018 for each category of financial assets in the EnBW Group. The effects of the application of IFRS 9 on the carrying amounts of the financial assets as of 1 January 2018 relate to the new impairment rules and the fair value measurements of other investments < 20%.

Carrying amounts and fair value of financial instruments

in € million	31/12/2017		
	Fair value	Not within the scope of application	Carrying amount
Financial assets	6,523.5	50.3	6,573.8
Held for trading	(57.3)		(57.3)
Available for sale	(6,108.0)		(6,108.0)
Loans and receivables	(358.2)		(358.2)
Trade receivables	4,729.6		4,729.6
Other assets	2,861.6	597.2	3,458.8
Held for trading	(2,105.5)		(2,105.5)
Loans and receivables	(606.8)		(606.8)
Derivatives designated as hedging instruments	(123.5)		(123.5)
Carrying amount in accordance with IAS 17	(25.8)		(25.8)
Cash and cash equivalents	3,213.3		3,213.3
Assets held for sale	0.0	3.0	3.0
Total	17,328.0	650.5	17,978.5

Carrying amounts and fair value of financial instruments

in € million	01/01/2018		
	Fair value	Not within the scope of application	Carrying amount
Financial assets	6,037.9	572.5	6,610.4
Debt instruments measured through profit or loss	(1,822.7)		(1,822.7)
Debt instruments measured in equity	(1,538.7)		(1,538.7)
Debt instruments measured at amortised cost	(358.0)		(358.0)
Equity instruments measured through profit or loss	(2,318.5)		(2,318.5)
Trade receivables	4,722.5		4,722.5
Other assets	2,861.4	597.2	3,458.6
Debt instruments measured through profit or loss	(2,105.5)		(2,105.5)
Debt instruments measured at amortised cost	(606.7)		(606.7)
Derivatives designated as hedging instruments	(123.5)		(123.5)
Carrying amount in accordance with IAS 17	(25.7)		(25.7)
Cash and cash equivalents	3,212.8		3,212.8
Debt instruments measured at amortised cost	(3,212.8)		(3,212.8)
Assets held for sale	0.0	3.0	3.0
Total	16,834.6	1,172.7	18,007.3

Stock, fixed-income and other fund shares assigned to the dedicated financial assets as well as securities that do not pass the cash flow characteristics test are allocated to the item "Debt instruments measured at fair value through profit or loss". The securities that do pass the cash flow characteristics test are summarised under the item "Debt instruments measured at fair value in equity". Loans are allocated under the item "Debt instruments measured at amortised cost". Shares, investments in private equity companies and other investments < 20% are summarised under the item "Equity instruments measured at fair value through profit or loss".

Impairment of financial assets

The impairment model according to IFRS 9 is applied to debt instruments measured at amortised cost or at fair value in equity, lease receivables, trade receivables, contractual assets, as well as loan commitments and financial guarantees that are not measured at fair value through profit or loss.

For the initial recognition of financial instruments and for financial instruments whose credit risk has not increased significantly since initial recognition, a risk provision is recognised in the amount of the expected credit losses within the next twelve months (12-month ECL). For financial instruments whose credit risk has increased significantly since initial recognition, a risk provision is recognised in the amount of the expected credit losses over the remaining lifetime of the instrument (lifetime ECL).

In order to evaluate whether there has been a significant change in the credit risk, any actual or expected significant changes are examined taking into account, amongst other things, the following factors:

- > external or internal credit rating of the financial instrument
- > business/financial or economic framework conditions
- > operating result of the borrower
- > regulatory/economic or technological environment of the borrower
- > financial support from a parent company
- > payment history
- > quality of the guarantees provided by a shareholder
- > information on delayed payments

It can be assumed in this process that a financial instrument has a “low credit risk” (assigned to level 1) if it is consistent with the global credit rating definition of “investment grade”. In addition, there is a rebuttable presumption of a significant increase in the risk of default if payments are more than 30 days past due (assigned to level 2).

Loss events that indicate that a financial asset has been impaired essentially correspond to the loss events that have been used for the valuation model according to IAS 39 (e.g. significant financial difficulty of the issuer/borrower, default event, breach of contract). There is a rebuttable presumption that financial instruments more than 90 days past due are classified as “defaulted” (assigned to level 3).

The simplified approach is used for the application of the impairment model to trade receivables and lease receivables. According to the simplified approach, a company does not need to track changes in the credit risk. Instead, the company has to recognise a risk provision in the amount of the expected credit losses over the whole lifetime of the instrument at initial recognition and also at every subsequent reporting date.

As of 1 January 2018, the application of the impairment rules according to IFRS 9 resulted in an additional impairment of €8.7 million which mainly related to trade receivables.

The expected credit losses for trade receivables are calculated based on the actual historical credit loss experience over the past few years.

Hedge accounting

IFRS 9 has removed the previous restrictions on hedge accounting according to IAS 39 which has opened up a greater selection of underlying and hedge transactions. In the EnBW Group, the new hedge accounting rules according to IFRS 9 will be applied to existing hedges. No cases have been identified where these rules would need to be applied to other hedging relationships.

Effects of new accounting standards that are not yet mandatory

The IASB and IFRS IC have already published the following standards and interpretations whose adoption is not yet mandatory for the 2018 financial year. Their application in the future is subject to their endorsement by the EU into European law.

- > **IFRS 16 “Leases”:** The standard replaces the current standard for accounting for leases IAS 17 and the associated interpretations. The new standard introduces a uniform accounting model, whereby leases are recognised on the balance sheet of the lessee. The lessee recognises a right-of-use to the underlying asset and a lease liability that represents its obligation to make lease payments. There are exemptions for short-term leases and leases where the asset has a low value. EnBW has started its first assessment of the possible effects on the consolidated financial statements. Accounting for expenses for operating leases on a straight-line basis according to IAS 17 will be replaced by depreciation of the right-of-use assets and interest expenses for the liabilities from the lease. EnBW will probably utilise the exemptions for short-term leases and leases where the underlying asset has a low value. In terms of transition relief, the Group will utilise the modified retrospective approach as a lessee. It is not possible to estimate the effects on the assets and liabilities at this point in time because, amongst other things, there is uncertainty about potential further leases. The standard must be applied for financial years beginning on or after 1 January 2019. The option of early application will not be utilised and the standard will be applied for the first time in the EnBW Group in the 2019 financial year.

Exercise of judgement and estimates when applying accounting policies

In the second quarter, EnBW reevaluated its expectations with respect to the energy industry framework conditions and the medium and long-term price developments on the relevant procurement and sales markets. This did not have any impact on the value of the power plants and led to reduction in the onerous contracts for long-term electricity procurement agreements.

Heubeck AG published its new mortality tables 2018 G on 20 July 2018. As of 30 June 2018, EnBW had not adopted the new tables because the tests to determine whether the new mortality tables were suitable for general application had not yet been concluded. If the mortality tables are suitable for general application, the pension obligations would increase with no effect on profit or loss.

Consolidated companies

All subsidiaries under the control of the Group are included in the consolidated financial statements in accordance with the full consolidation method. The equity method is used when there is a joint arrangement in the form of a joint venture or a significant influence may be exercised over the business policy of the associated company, but the entity does not qualify as a subsidiary. Joint arrangements that are classified as joint operations are reported based on the proportion of the assets, liabilities, income and expenses which are attributable to the parent company in compliance with the respective applicable IFRS.

There are no reciprocal shareholdings in the EnBW Group as defined by section 19 (1) German Companies Act (AktG).

The consolidated companies are as follows:

Type of consolidation	30/06/2018	31/12/2017	30/06/2017
Number			
Fully consolidated companies	155	146	143
Entities accounted for using the equity method	23	22	21
Joint operations	3	3	3

Revenue

Alongside revenue from contracts with customers, there is other revenue from ordinary business activities. This is how they break down:

in € million	01/01 – 30/06/2018
Revenue from contracts with customers	11,481.1
Other revenue	80.7
Total	11,561.8

The change in revenue is explained in more detail in the section “The EnBW Group” and mainly relates to revenue from contracts with customers.

The following tables break down the revenue according to region, products and the time at which the revenue was recognised.

External revenue by region

in € million 01/01–30/06/2018	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
Revenue from contracts with customers by region						
Germany	3,618.1	2,913.4	285.0	4,660.9	3.7	11,481.1
European currency zone excluding Germany	(3,244.8)	(2,825.0)	(193.6)	(3,747.3)	(3.6)	(10,014.3)
Rest of Europe	(13.7)	(2.3)	(3.6)	(754.9)	(0.0)	(774.5)
Rest of world	(359.6)	(86.1)	(87.8)	(158.7)	(0.0)	(692.2)
Other revenue	(0.0)	(0.0)	(0.0)	(0.0)	(0.1)	(0.1)
Other revenue	1.9	78.8	0.0	0.0	0.0	80.7
Total	3,620.0	2,992.2	285.0	4,660.9	3.7	11,561.8

External revenue by product

in € million 01/01–30/06/2018	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
Revenue from contracts with customers by product						
Electricity	3,618.1	2,913.4	285.0	4,660.9	3.7	11,481.1
Gas	(2,634.4)	(2,417.4)	(263.7)	(1,747.1)	(0.0)	(7,062.6)
Energy and environmental services/other	(923.9)	(270.9)	(3.6)	(2,670.9)	(0.0)	(3,869.3)
Other revenue	(59.8)	(225.1)	(17.7)	(242.9)	(3.7)	(549.2)
Other revenue	1.9	78.8	0.0	0.0	0.0	80.7
Total	3,620.0	2,992.2	285.0	4,660.9	3.7	11,561.8

External revenue by product

in € million 01/01–30/06/2017	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
Electricity	2,816.0	3,279.3	226.4	1,306.3	0.0	7,628.0
Gas	865.2	186.3	0.0	1,265.9	0.0	2,317.4
Energy and environmental services/other	36.2	222.2	18.1	248.8	5.1	530.4
Total	3,717.4	3,687.8	244.5	2,821.0	5.1	10,475.8

External revenue by date of revenue recognition

in € million 01/01-30/06/2018	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
Revenue from contracts with customers according to date/time period	3,618.1	2,913.4	285.0	4,660.9	3.7	11,481.1
Goods/services transferred on a particular date	(25.5)	(705.9)	(20.9)	(73.7)	(0.0)	(826.0)
Goods/services transferred over a particular time period	(3,592.6)	(2,207.5)	(264.1)	(4,587.2)	(3.7)	(10,655.1)
Other revenue	1.9	78.8	0.0	0.0	0.0	80.7
Total	3,620.0	2,992.2	285.0	4,660.9	3.7	11,561.8

Assets held for sale and liabilities directly associated with assets classified as held for sale

The assets held for sale and liabilities directly associated with assets classified as held for sale in the reporting period mainly concern VNG Norge AS and its subsidiary VNG Danmark ApS. Due to the agreement between VNG and Neptune Energy Norge AS for the transfer of all shares in VNG Norge AS and its subsidiary, the shares were reclassified under assets classified as held for sale and liabilities directly associated with assets classified as held for sale. The transaction is expected to be completed in the fourth quarter of 2018. VNG Norge AS and VNG Danmark ApS are responsible for oil and gas exploration and production. They are allocated in the segment reporting under Generation and Trading.

Dividends

On 8 May 2018, the Annual General Meeting of EnBW AG approved the proposal by the Board of Management and the Supervisory Board to distribute a dividend of €0.50 per share for the 2017 financial year. This corresponds to a dividend payment of €135.4 million.

Contingent liabilities and other financial commitments

Compared to 31 December 2017, contingent liabilities and other financial commitments decreased by €548.6 million to €37,088.8 million. This fall was mainly due to lower purchase obligations in the electricity and gas sector.

Notes relating to fair value

The fair value and carrying amounts of the financial assets and financial liabilities under the individual balance sheet items are shown below.

Carrying amounts and fair value of financial instruments

in € million	30/06/2018		
	Fair value	Not within the scope of application	Carrying amount
Financial assets	6,088.2	493.2	6,581.4
Debt instruments measured through profit or loss	(1,528.5)		(1,528.5)
Debt instruments measured in equity	(1,664.9)		(1,664.9)
Debt instruments measured at amortised cost	(233.1)		(233.1)
Equity instruments measured through profit or loss ¹	(2,661.7)		(2,661.7)
Trade receivables	5,368.7		5,368.7
Other assets	5,063.1	895.5	5,958.6
Debt instruments measured through profit or loss	(4,075.5)		(4,075.5)
Debt instruments measured at amortised cost	(838.1)		(838.1)
Derivatives designated as hedging instruments	(131.7)		(131.7)
Carrying amount in accordance with IAS 17	(17.8)		(17.8)
Cash and cash equivalents	2,864.0		2,864.0
Assets held for sale ²	108.5	459.4	567.9
Total	19,492.5	1,848.1	21,340.6
Financial liabilities	7,878.0		7,287.1
Measured at amortised cost ^{3, 4}	(7,776.6)		(7,185.7)
Carrying amount in accordance with IAS 17	(101.4)		(101.4)
Trade payables	3,300.1	2,235.4	5,535.5
Other liabilities and subsidies	5,004.9	1,829.1	6,834.0
Held for trading	(4,177.7)		(4,177.7)
Measured at amortised cost	(759.3)		(759.3)
Derivatives designated as hedging instruments	(67.9)		(67.9)
Liabilities directly associated with assets classified as held for sale ⁵	71.0	205.2	276.2
Total	16,254.0	4,269.7	19,932.7

1 This includes equity instruments of €34.2 million, for which the amortised cost represents the best assessment of the fair value.

2 The assets held for sale include trade receivables measured at amortised cost of €34.2 million and cash and cash equivalents of €74.3 million.

3 Of the financial liabilities measured at amortised cost, an amount of €455.8 million is part of a fair value hedge.

4 This includes financial liabilities measured at fair value through profit or loss of €7,278.2 million.

5 The liabilities directly associated with assets classified as held for sale include trade payables measured at amortised cost of €71.0 million and other liabilities of €10.7 million.

Carrying amounts and fair value of financial instruments

in € million			31/12/2017
	Fair value	Not within the scope of application	Carrying amount
Financial assets	6,523.5	50.3	6,573.8
Held for trading	(57.3)		(57.3)
Available for sale ¹	(6,108.0)		(6,108.0)
Loans and receivables	(358.2)		(358.2)
Trade receivables	4,729.6		4,729.6
Other assets	2,861.6	597.2	3,458.8
Held for trading ²	(2,105.5)		(2,105.5)
Loans and receivables	(606.8)		(606.8)
Derivatives designated as hedging instruments	(123.5)		(123.5)
Carrying amount in accordance with IAS 17	(25.8)		(25.8)
Cash and cash equivalents	3,213.3		3,213.3
Assets held for sale ³	0.0	3.0	3.0
Total	17,328.0	650.5	17,978.5
Financial liabilities	8,145.9		7,258.8
Measured at amortised cost ^{4,5}	(8,042.2)		(7,155.1)
Carrying amount in accordance with IAS 17	(103.7)		(103.7)
Trade payables	747.2	4,090.9	4,838.1
Other liabilities and subsidies	2,799.9	2,502.6	5,302.5
Held for trading	(2,170.9)		(2,170.9)
Measured at amortised cost	(533.5)		(533.5)
Derivatives designated as hedging instruments	(95.5)		(95.5)
Total	11,693.0	6,593.5	17,399.4

1 This includes equity instruments measured at amortised cost of €473.7 million whose fair value cannot be reliably determined.

2 Of which €1.6 million measured at fair value through profit or loss at initial recognition.

3 This refers to a non-recurring measurement of the fair value due to the application of IFRS 5.

4 Of the financial liabilities measured at amortised cost, an amount of €459.7 million is part of a fair value hedge.

5 This includes financial liabilities measured at fair value through profit or loss of €7,527.2 million.

Counterparty default risk is taken into account when measuring the fair value of derivative financial instruments. Default risk with respect to an individual counterparty is calculated on the basis of the net risk position.

Hierarchy of input data

in € million	30/06/2018		
	Level 1	Level 2	Level 3
Financial assets	3,969.8	212.7	1,638.3
Debt instruments measured through profit or loss	(1,523.1)	(5.4)	
Debt instruments measured in equity	(1,486.1)	(178.8)	
Equity instruments measured through profit or loss	(960.6)	(28.5)	(1,638.3)
Other assets	1,040.9	3,166.3	
Debt instruments measured through profit or loss	(1,036.9)	(3,038.6)	
Derivatives designated as hedging instruments	(4.0)	(127.7)	
Total	5,010.7	3,379.0	1,638.3
Financial liabilities	5,713.9	1,564.3	0.0
Measured at amortised cost	(5,713.9)	(1,564.3)	
Other liabilities and subsidies	1,110.4	3,135.3	0.0
Held for trading	(1,110.1)	(3,067.7)	
Derivatives designated as hedging instruments	(0.3)	(67.6)	
Total	6,824.3	4,699.6	0.0

Hierarchy of input data

in € million	31/12/2017		
	Level 1	Level 2	Level 3
Financial assets	450.7	3,664.4	1,576.5
Held for trading	(57.3)		
Available for sale	(393.4)	(3,664.4)	(1,576.5)
Other assets	389.2	1,839.8	0.0
Held for trading	(371.4)	(1,734.1)	
Derivatives designated as hedging instruments	(17.8)	(105.7)	
Total	839.9	5,504.2	1,576.5
Financial liabilities	5,813.1	1,714.1	0.0
Measured at amortised cost	(5,813.1)	(1,714.1)	
Other liabilities and subsidies	439.7	1,826.7	0.0
Held for trading	(439.7)	(1,731.2)	
Derivatives designated as hedging instruments		(95.5)	
Total	6,252.8	3,540.8	0.0

The following table shows the development of the financial instruments to be accounted for at fair value in accordance with Level 3:

in € million ¹	As of 01/01/2018	Changes through profit or loss	Additions	Disposals	Other	As of 30/06/2018
Financial assets	1,607.2	67.9	50.7	-89.5	2.0	1,638.3

¹ The figures for the previous year have been restated.

In the first six months of the year, gains from Level 3 financial instruments were recognised in the investment result or financial result in the amount of €46.3 million (previous year: €14.5 million), of which €46.3 million (previous year: €14.5 million) is accounted for by financial instruments still held on the reporting date.

Segment reporting

01/01–30/06/2018

in € million	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
External revenue	3,620.0	2,992.2	285.0	4,660.9	3.7	11,561.8
Internal revenue	346.5	1,205.0	135.0	1,313.5	-3,000.0	0.0
Total revenue	3,966.5	4,197.2	420.0	5,974.4	-2,996.3	11,561.8
Adjusted EBITDA	159.5	684.9	164.8	138.8	-7.0	1,141.0
EBITDA	160.3	690.4	167.0	174.0	-7.0	1,184.7
Adjusted EBIT	125.8	460.3	80.9	-97.5	-20.1	549.4
EBIT	126.6	465.8	83.1	-67.5	-21.2	586.8
Scheduled amortisation and depreciation	-33.7	-224.6	-83.9	-236.3	-13.1	-591.6
Impairment losses	0.0	0.0	0.0	-5.2	-1.1	-6.3
Capital employed as of 30/06/2018	1,043.5	7,187.1	3,676.6	2,069.5	2,163.8	16,140.5

01/01–30/06/2017

in € million	Sales	Grids	Renewable Energies	Generation and Trading	Other/ Consolidation	Total
External revenue	3,717.4	3,687.8	244.5	2,821.0	5.1	10,475.8
Internal revenue	509.6	1,307.3	135.2	1,428.8	-3,380.9	0.0
Total revenue	4,227.0	4,995.1	379.7	4,249.8	-3,375.8	10,475.8
Adjusted EBITDA	180.8	610.6	152.4	102.3	26.5	1,072.6
EBITDA	162.4	621.1	407.7	1,414.0	34.4	2,639.6
Adjusted EBIT	150.2	407.1	73.1	-100.2	12.8	543.0
EBIT	127.9	417.6	328.4	1,188.0	20.7	2,082.6
Scheduled amortisation and depreciation	-30.6	-203.5	-79.3	-202.5	-13.7	-529.6
Impairment losses	-3.9	0.0	0.0	-23.5	0.0	-27.4
Capital employed as of 31/12/2017	1,004.6	6,534.8	3,501.9	2,293.0	2,062.2	15,396.5

Adjusted EBITDA is one of the key internal performance indicators. Adjusted EBITDA is an earnings ratio before the investment and financial results, income taxes and amortisation, adjusted for non-operating effects, which accurately reflects the development of results of operations. In the management report, the performance of the segments is explained with the aid of adjusted EBITDA. Adjusted EBITDA can be reconciled to earnings before taxes (EBT) as follows:

in € million	01/01– 30/06/2018	01/01– 30/06/2017
Adjusted EBITDA	1,141.0	1,072.6
Non-operating EBITDA	43.7	1,567.0
EBITDA	1,184.7	2,639.6
Amortisation and depreciation	-597.9	-557.0
Earnings before interest and taxes (EBIT)	586.8	2,082.6
Investment result	47.3	91.4
Financial result	-62.2	250.1
Earnings before tax (EBT)	571.9	2,424.1

Segment reporting is based on internal reporting.

Sales of electricity and gas, as well as the provision of services related to the energy industry, such as billing services, energy supply and energy-saving contracting or new energy solutions, are summarised in the Sales segment. The Grids segment encompasses the value-added stages of transmission and distribution of electricity and gas. In addition, the provision of grid-related services and the supply of water is reported in the Grids segment. Activities in the area of power generation using renewable energies are presented in their own segment. This includes the project development, construction and operation of power plants based on renewable energies. In addition to the generation of electricity, the exploration, production and storage of gas and the trading of gas and electricity, the Generation and Trading segment also comprises the provision of system services, gas midstream operations, district heating, environmental services and the area dealing with the dismantling of nuclear power plants. All activities which cannot be attributed to the separately presented activities of the segments are disclosed together with eliminations between the segments under Other/Consolidation.

The segment figures have been determined in accordance with the accounting policies used in the consolidated financial statements. Internal revenue shows the level of sales between Group companies. Sales between the segments were made at market prices.

Significant events after the reporting date

At its meeting on 12 July 2018, the Supervisory Board passed a resolution that Colette Rückert-Hennen would assume responsibility for the areas of personnel, law and compliance, auditing and equity investment management as the successor to Dr. Bernhard Beck on the Board of Management of EnBW at the earliest possible date, although by the middle of 2019 at the latest.

Certification following auditor's review

To EnBW Energie Baden-Württemberg AG, Karlsruhe

We have reviewed the interim condensed consolidated financial statements, comprising the income statement, statement of comprehensive income, balance sheet, condensed cash flow statement, statement of changes in equity and selected explanatory notes, together with the interim Group management report of EnBW Energie Baden-Württemberg AG, Karlsruhe, for the period from 1 January to 30 June 2018, which are part of the six-monthly financial report pursuant to section 115 German Securities Trading Act (WpHG). The preparation of the interim condensed consolidated financial statements in accordance with the International Financial Reporting Standards (IFRS) on interim financial reporting as adopted by the EU and of the interim Group management report in accordance with the requirements of the WpHG applicable to interim Group management reports is the responsibility of the company's Board of Management. Our responsibility is to issue a report on the interim condensed consolidated financial statements and the interim Group management report based on our review.

We conducted our review of the interim condensed consolidated financial statements and the interim Group management report in accordance with German generally accepted standards for the review 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 review to obtain a certain level of assurance in our critical appraisal to preclude that the interim condensed consolidated financial statements have not been prepared, in all material respects, in accordance with the IFRS on interim financial reporting as adopted by the EU and that the interim Group management report has not been prepared, in all material respects, in accordance with the applicable provisions of the WpHG. A review is limited primarily to making inquiries of company personnel and applying analytical procedures and thus does not provide the assurance obtainable from an audit of financial statements. In accordance with our engagement, we have not performed an audit and, accordingly, we do not express an audit opinion.

Based on our review, nothing has come to our attention that causes us to believe that the interim condensed consolidated financial statements have not been prepared, in all material respects, in accordance with the IFRS on interim financial reporting as adopted by the EU and that the interim Group management report has not been prepared, in all material respects, in accordance with the provisions of the WpHG applicable to interim Group management reports.

Frankfurt am Main, 25 July 2018

KPMG AG
Wirtschaftsprüfungsgesellschaft

Janz

Stratmann

German Public Auditor

German Public Auditor

Declaration of the legal representatives

We assure to the best of our knowledge that, in accordance with the accounting principles applicable for six-monthly financial reporting, the six-monthly consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group and that the interim Group management report gives a true and fair view of the business development including the result and situation of the Group and also describes the significant opportunities and risks relating to the anticipated development of the Group in the remaining financial year.

Karlsruhe, 25 July 2018

EnBW Energie Baden-Württemberg AG



Dr. Mastiaux



Dr. Beck



Kusterer



Dr. Zimmer

Important notes

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Forward-looking statements

This report contains forward-looking statements which are based on current assumptions, plans, estimates and forecasts made by the management of EnBW. Forward-looking statements of this kind are therefore only valid at the time they were first published. Forward-looking statements are indicated by the context, but may also be identified by the use of the words "can", "will", "should", "plans", "intends", "expects", "thinks", "estimates", "forecasts", "potential", "continued" and similar expressions. By nature, forward-looking statements are subject to risks and uncertainties that cannot be controlled or accurately predicted by EnBW. Actual events, future results, the financial position, development or performance of EnBW and the companies of the EnBW Group may therefore diverge considerably from the forward-looking statements made in this report. Therefore, it cannot be guaranteed nor can any liability otherwise be assumed that these forward-looking statements will prove complete, correct or precise, or that expected and forecast results will actually occur in the future.

No obligation to update the information

EnBW assumes no obligation of any kind to update the information contained in this report or to adjust or otherwise update forward-looking statements to future events or developments. This Six-Monthly Financial Report can also be downloaded from the Internet in German or English. In cases of doubt, the German version shall be authoritative.

Financial calendar

26 July 2018

Publication of the Six-Monthly Financial Report
January to June 2018

17 October 2018

Capital Market Day

12 November 2018

Publication of the Quarterly Statement
January to September 2018

28 March 2019

Publication of the
Integrated Annual Report 2018

8 May 2019

Annual General Meeting 2019

10 May 2019

Publication of the Quarterly Statement
January to March 2019

25 July 2019

Publication of the Six-Monthly Financial Report
January to June 2019

8 November 2019

Publication of the Quarterly Statement
January to September 2019

