# 1.1 STRATEGY AND STRUCTURE

**The European energy sector is undergoing fundamental change and only utilities that evolve will survive over the long term. Such a change has occurred at RWE – in both organisational and strategic terms. We started by strengthening our renewable energy, grid and retail operations by pooling them in the new subsidiary innogy, which we listed on the stock exchange. Then we explored how to position ourselves in conventional electricity generation and energy trading over the long term. Our mission statement is to ensure security of supply in times of increasingly volatile feed-ins of electricity from renewable sources. We are accomplishing this primarily with our flexible power plants. Furthermore, we intend to take advantage of the opportunities that will arise due to the progress made in electricity storage technologies.**

**RWE in a nutshell.** The RWE Group is one of the leading suppliers of electricity and gas in Europe. Through its companies – including innogy – it covers all stages of the energy value chain, running the gamut from lignite production and electricity generation from gas, coal, nuclear and renewables, to energy trading and the operation of distribution networks as well as the supply of electricity, gas and innovative energy solutions. In fiscal 2017, the Group recorded revenue of €44.6 billion. The Group's major markets are Germany, the United Kingdom, the Benelux region and Eastern Europe. In electricity generation from renewables, its regional footprint is larger, including countries such as Spain and Italy, and in the future the USA. A detailed presentation of the Group's structure and the segments' operating activities can be found on page 20 et seqq.

**New demands placed on energy utilities.** The traditional business model for energy utilities is increasingly coming under pressure. With the continuing expansion of renewables, the focus of conventional power generation in Europe is shifting away from maximising the production of electricity and moving towards providing adequate capacities which can smooth out the fluctuations in solar and wind feed-ins. As a result of this, revenue streams for power plants are heading in the direction of market-oriented capacity payments for security of supply. This trend has progressed quite a long way in some European markets, such as the United Kingdom for example. In Germany, however, politicians have decided not to introduce a capacity market for the time being. A further challenge is integrating the rising volume of decentralised electricity feed-ins from renewables into the network. This makes the grid business more complex technologically. In the retail business, one of the main trends is that customers want to use energy more efficiently and take advantage of the opportunities opened up by digitisation. Furthermore, households and businesses are producing more of their own electricity and sometimes taking on the role of energy managers who sell their power generation independently.

**One Group – two future-oriented companies.** We are convinced that we will be best placed to rise to the challenges of the changing energy sector if we reflect the various aspects of these challenges in our organisational structure. Therefore, we pooled the renewables, grid and supply businesses in a new subsidiary called innogy SE and listed it on the stock market. As part of the initial public offering, 73.4 million innogy shares from RWE AG's holding and another 55.6 million shares from a capital increase by innogy SE were placed with a wide range of investors. As a result, RWE AG's interest in innogy dropped to 76.8 %. Additional information on this can be found on page 37 et seq. of the 2016 Annual Report.

With its mix of renewables, smart grids and innovative retail solutions, innogy has excellent business potential and the tools to be a driving force in transforming the energy sector. Its listing has advantages in accessing financing on the capital market. The proceeds of €2.0 billion from the capital increase will mainly be used for growth projects. RWE AG also benefits from this reorganisation, because it has given the company additional financial flexibility. RWE AG used the proceeds of €2.6 billion from the sale of innogy shares to finance the new German nuclear energy fund (see page 35).

As a result of the reorganisation, RWE AG's operating focus now lies on conventional electricity generation and energy trading. innogy is included in the consolidated financial statements as a fully consolidated company, but in practice, the company is held as a pure financial investment. A comprehensive agreement guarantees innogy that it can act independently in business matters and that RWE AG will only exercise its influence as the majority owner by way of the legally mandated bodies of the Supervisory Board and the Annual General Meeting. Accordingly, innogy also decides independently on its strategy. Our subsidiary provides more detailed information on this in its latest annual report. We also address this in this chapter, but mainly focus on the business activities for which RWE AG is responsible in operating terms.

**Framework conditions for power plants remain difficult.** The reliable supply of electricity continues to be taken for granted in our main generation markets, i. e. Germany, the United Kingdom and the Benelux region. However, this is increasingly being called into question by the progressive expansion of renewable energy: electricity feed-ins dependent on the weather and time of day have risen considerably as a result of mounting wind and solar power capacity, whereas the utilisation and profitability of conventional power stations has tended to decrease. In Germany and the Netherlands in particular, numerous power plants have already been shut down temporarily or definitively because they can no longer cover their operating costs. This trend has slowed somewhat recently. However, over the long term, conventional generation assets will certainly have much fewer load hours than before with which to cover their fixed costs.

Political guidelines are another reason for the declining amount of reliable generation capacity. The German government accelerated the country's nuclear phase-out after the reactor accident at Fukushima in March 2011. At present, seven nuclear power plants are in operation in Germany, with a combined net capacity of 9.5 GW. Pursuant to the German Nuclear Energy Act, they must be shut down successively by the end of 2022. Electricity generation from coal is also on the decline, as a result of the ambitious climate protection goals in our core markets. For example, the new Dutch government sets out in its coalition agreement its intention to exit from coal completely by 2030. The United Kingdom aims to achieve the same goal in the middle of the next decade. Germany is also in the process of reducing electricity generation from coal, even though the room for manoeuvre is limited due to the nuclear phase-out. In 2015, it was decided to take eight German lignite-fired power plants with a total net installed capacity of 2.7 GW off the market. The stations – including five owned by RWE – are successively being decommissioned from 2016 to 2019, after which they will be on standby to ensure security of supply for a period of four years each, before being shut down for good. It cannot be ruled out that the new German government will accelerate the exit from coal and force us to shut down further stations.

According to surveys conducted by the German Association of Energy and Water Industries (BDEW), conventional power stations in Germany with over 20 GW in total installed net capacity will have stopped operating by the end of 2022. The German Network Agency also expects the number of power stations to decrease substantially. Renewable generation capacity is set to continue rising, but wind turbines and solar panels cannot guarantee security of supply due to the significant fluctuation in their utilisation. Electricity storage technologies also rapidly reach their limits – at least at present. It is impossible to predict if and when they will meet the technical and commercial requirements needed in order to make a major contribution to security of supply.

**RWE's strategic mission: we stand for security of energy supply.** Owing to the developments outlined above, the reliability of electricity supply will become a critical factor in the success of the energy transition. This is the basis of our business model: we consider ourselves the backbone of security of supply in our key regions. We express this with our motto 'Powering. Reliable. Future.' This means that, in the long run, our contribution to the supply of energy will consist less of producing kilowatt hours and increasingly of providing generation capacity when needed. We expect that the security we provide will be compensated appropriately sooner or later. This is already the case in the United Kingdom, where a general capacity market was introduced on 1 October 2017. In addition to revenue from electricity sales, UK power plant operators receive a payment for making their capacity available and therefore contributing to security of supply. So far, German politicians have not adopted the UK model, concentrating instead on improving the functionality of the existing market. They believe that phases of tight supply will result in price spikes that are high enough to keep the required amount of generation capacity on the market. Experts from the Federation of German Industries (BDI) estimate that, in the long run, back-up capacity of more than 80 GW will be needed to ensure security of supply in Germany. We intend to cover a portion of this primarily with our flexible power stations to begin with, supplemented later by the increased use of storage technologies to the extent that it is technically possible and economically feasible to do so.

**Group structure with three operating segments and the financial investment innogy.** RWE AG reorganised its core business following the IPO of innogy SE. Since 2017, it has consisted of three instead of the former two operating segments (divisions). The former 'Conventional Power Generation' Division has been split into the 'Lignite & Nuclear' and 'European Power' Divisions. To ensure comparability between 2017 and 2016 figures, we also present the prior-year figures according to the new structure. The third operating segment is 'Supply & Trading' (formerly 'Trading/Gas Midstream'). This is only a change in name and does not affect the nature of the business. The segment structure is rounded off by innogy as the fourth division, which operates independently. We state individual activities outside the segments in the item 'other, consolidation'. In particular, this item currently includes RWE AG and its 25.1 % stake in the transmission system operator Amprion.

We present the RWE Group's four segments in more detail below.

**(1) Lignite & Nuclear.** This is where we report our German electricity generation from lignite and nuclear energy as well as lignite production in the Rhineland. These activities are overseen by RWE Power. This segment also includes our 50.9 % stake which we are about to sell in the Hungarian company Mátra, which produces lignite and generates electricity from this energy source. It also comprises our interests in the Dutch nuclear power plant operator EPZ (30 %) and in Germany-based URANIT (50 %), which holds a 33 % interest in the uranium enrichment specialist Urenco.

Due to their relatively low and stable fuel costs, lignite-fired and nuclear power stations are primarily used for base load. The significant decline in German wholesale electricity prices seen from the middle of 2008 to the beginning of 2016 caused these assets to become much less profitable. By reducing costs significantly, we managed to limit the earnings shortfalls. We are continuing our austerity policy although wholesale electricity prices have picked up again since then. We want to reduce annual expenditure in the Lignite & Nuclear segment by about €200 million until 2019 compared to 2016 with our current efficiency-enhancement programme. We have already achieved a large part of this goal.

Lignite-fired and nuclear power stations will become a less important part of our generation portfolio although their earnings prospects are brighter now. This is largely due to the framework established by energy policy in Germany. The nuclear energy sector is on a legal phase-out schedule with firm dates by which the stations have to be taken offline. Accordingly, Unit B of our Gundremmingen nuclear power plant was forced to stop producing electricity as of 31 December 2017. Since then, two RWE nuclear power stations remain in operation: Gundremmingen C and Emsland. We have permission to operate these stations until the end of 2021 and the end of 2022, respectively, after which they must also be shut down.

There is also a time limit on the use of lignite to generate electricity. This is a result of European and national climate protection goals. Germany aims to reduce greenhouse gas emissions by between 80 % and 95 % by 2050 compared to 1990. Our strategy is in line with this very ambitious plan: it envisages a complete exit from lignite-based power generation by the middle of the century. The early shutdown of our five lignite units mentioned earlier is a first step in this direction. On 1 October 2017, units P and Q at Frimmersdorf were put on standby, with units E and F at Niederaussem to follow twelve months from then and unit C at Neurath to follow another twelve months thereafter. Our carbon dioxide emissions in the Rhenish lignite mining region will therefore fall by some 15 % below the level seen in 2015. We intend to increase this ratio to between 40 % and 50 % by the end of the next decade, as coal reserves in the opencast mine in Inden will have been depleted by then and we will shut down the Weisweiler power station, among other things. Thereafter, falling capacity utilisation levels and closures of additional lignite-fired units will lead to further declines in carbon dioxide emissions before our most modern lignite-fired power plants are taken offline when opencast mining comes to an end at Hambach and Garzweiler.

**(2) European Power.** Our electricity generation from gas, hard coal and biomass is subsumed under this segment. Here, the geographic focus is on Germany, the United Kingdom and the Benelux region. The segment also contains our 70 % stake in the Denizli gas-fired power station in Turkey, some hydroelectric power plants in Germany and Luxembourg and RWE Technology International, which specialises in project management and engineering services. All of these activities are overseen by RWE Generation.

The economic and political environment is also challenging for our gas and hard coal-fired power stations, which usually cover medium and peak loads. The rapid expansion of renewable energy in Germany has resulted in a significant decline in the use of these assets compared to the beginning of the decade. In some cases, their margins are far below the levels common at that time. We have temporarily taken some German and Dutch gas-fired power plants offline that can no longer cover their fixed operating costs. The stations have been mothballed and can come back online as soon as market conditions allow. Furthermore, we have shut down several hard coal-fired power stations. The most recent examples are the Voerde A/B units on the Lower Rhine, which were taken offline as of 1 April 2017. RWE held a 25 % stake in them and marketed their electricity. Besides temporary and permanent power plant closures, we have taken additional measures to cut costs and will also do so in the future. Within the scope of our ongoing efficiency-enhancement programme, we aim to reduce costs in the European Power segment by about €100 million by 2019 compared to the 2016 level. We have made good progress in this respect.

Despite the persistent pressure from consolidation, we believe the European Power segment has long-term growth prospects. We expect that our stations will become more profitable as secured generation capacity becomes tight. In the long run, this should benefit gas-fired power stations in particular. As their margins have already recovered somewhat, we were able to bring some mothballed stations back online, for example Unit G of the Gersteinwerk power station in Werne (Westphalia). Due to the German nuclear phase-out and the closure of additional coal-fired units, gas will become an increasingly important energy source in the coming years in order to secure electricity supply. Gas-fired power stations emit less carbon dioxide than coal-fired power plants and are therefore accepted more by the public as a partner to renewable energy.

In terms of power plant capacity, gas is already our most important fuel, and its share of our generation portfolio will continue to rise. For example, we are planning to build a combined-cycle gas turbine power plant with an installed capacity of up to 2,500 MW and/or an open-cycle gas turbine with a capacity of up to 300 MW at our site at Tilbury in the UK. Our investment decision will depend in part on whether we manage to secure the compensation we need for the project in the UK capacity market auctions. We have identified growth options consisting of acquiring existing assets in Germany and the Benelux region, which to date do not have capacity markets. Building new generation capacity is usually unprofitable in these regions, unless the assets receive compensation under the German Combined Heat and Power Act or as back-up power stations. We currently plan to build an open-cycle gas turbine at Gundremmingen, our Bavarian nuclear site, which would be used to stabilise the grid. One prerequisite is that we place the winning bid in the call for tenders for the project by the transmission system operator in charge.

We do not plan to build new hard coal-fired power plants. Besides this being unprofitable, political considerations also play a role. In the Netherlands, where exiting from coal is at the very top of the energy policy agenda, we want to convert our Amer 9 and Eemshaven hard coal-fired power stations for increased biomass co-firing. This will give us two advantages: it will enable us to improve our carbon footprint significantly and increase the acceptance of the power stations among the public and political decision-makers.

We intend to make more use of storage technologies, with a view to supplying people with energy reliably. Investing in storage is usually unprofitable at present. One reason for this is that the scarcity premiums obtainable on the market are still too low and the available technologies are still too costly because they are not mature. Nevertheless, we are preparing to expand storage capacity by conducting pilot projects. One example is the new 6 MW battery storage unit, which we installed next to the Herdecke pumped storage power station on the Ruhr river. The unit is used to maintain grid stability. Above and beyond that, we are exploring how to bridge extended periods of oversupply and shortages of electricity. A promising option is the use of excess wind and solar power to generate heat. The saved fuel (e. g. gas) would then be available to produce electricity during later periods of scarcity. We are also looking into recyclable batteries that can be used to cover brief periods of extreme shortage.

**(3) Energy Trading.** This segment encompasses the multi-faceted activities of RWE Supply & Trading, which acts as the commercial centre for the RWE Group. Its core business, energy trading, forms the economic link between the elements of our value chain, the regional markets and the various energy commodities. RWE Supply & Trading concentrates on trading in electricity, natural gas, coal, oil, $CO_2$ certificates and biomass. It increasingly conducts these activities outside of Europe, for example in New York, Singapore and Mumbai. The company is also responsible for sourcing the fuel needed to produce electricity and heat and marketing the electricity generated by RWE power plants. One objective is to limit price risks. On top of that, the segment generates added value by the commercial optimisation of our power plant dispatch. The resulting earnings are reported under the Lignite & Nuclear and European Power segments. RWE Supply & Trading also markets its expertise to major European customers outside of the RWE Group, offering services ranging from traditional energy supply contracts and comprehensive energy management solutions to complex risk management concepts.

Another focal point of RWE Supply & Trading's activities is the gas business. We enter into long-term supply agreements with producers, organise gas transportation by booking pipelines and optimise the timing of our deliveries using leased gas storage facilities. We also conclude transactions involving liquefied natural gas (LNG). The objective is to tap into synergies between the pipeline-bound gas business and overseas LNG trading. RWE Supply & Trading intends to establish itself as one of Europe's leading gas intermediaries. To this end, the company also looks at markets outside of RWE's core regions. The principle underlying this approach is, the greater the size and diversification of the procurement and supply portfolios, the greater the chances to commercially optimise them.

RWE Supply & Trading also leverages its know-how to make short to medium-term investments in energy assets or energy companies, for which value-enhancing measures can be taken in order to fetch high returns upon resale (referred to as principal investments). At the end of 2017, RWE Supply & Trading had a portfolio of nine investments in a variety of activities, a large portion of which was in the USA. They range from the coal mine operator Blackhawk Mining and the developer of renewable energy projects Walden Green Energy to the specialist for energy storage solutions Stem. The attractiveness of principal investments was proven by our investment in the Lynemouth hard coal-fired power station in the north of England: we purchased the plant in 2012 and then established the basis for its conversion to biomass firing using state subsidies. In early 2016, the power station was sold on to an investor for a profit.

**(4) innogy.** Our subsidiary innogy is responsible for business involving renewable energy, distribution networks and retail. Its strategy is designed to spur structural change in the energy sector.

- **Renewables.** innogy plans, builds and operates facilities for the generation of electricity from renewable sources. In terms of generation capacity, the company's strongest presence is currently in Germany and the United Kingdom, followed by Spain, the Netherlands and Poland. In terms of energy sources, the focus is on onshore and offshore wind, as well as hydroelectric power. innogy further expanded its generation capacity last year: milestones were the inauguration of the Dutch wind farm Zuidwester (90 MW) and the commissioning of the Nordsee One offshore wind farm (332 MW) north of the Isle of Juist, in which innogy holds a 13.5 % stake. Furthermore, our subsidiary has set the stage for the continued expansion of its wind power capacity by acquiring a project portfolio with over 2 GW in the USA and securing a state subsidy contract for the Triton Knoll offshore wind project in the UK. Moreover, by acquiring Belectric Solar & Battery at the beginning of 2017, innogy has become a global player in the supply of ground-mounted solar farms and battery storage units. Belectric built one of Germany's largest battery storage facilities in Chemnitz, which was officially inaugurated in August 2017, and is currently constructing Israel's most powerful solar farm together with a local partner. We report on some of the projects mentioned here in detail on page 38 et seq.

- **Grid & Infrastructure.** Networks are the backbone of the energy transition, and their operators can generally earn stable returns. innogy manages electricity distribution networks in Germany, Hungary, Poland and Slovakia. Moreover, it is active in the gas distribution network business in Germany, the Czech Republic and Croatia. Conditions in its home market Germany pose the greatest challenge: rising volumes of electricity feed-ins from renewables, which are dependent on the weather and time of day, and an increasing number of small, decentralised generation facilities are making network operation an increasingly complex technical feat, but at the same time, are also opening up growth opportunities. In order to ensure a reliable supply of electricity in this environment, innogy must invest in maintaining and expanding network infrastructure. The company is developing new control technologies and testing them in field trials so that networks can be used more effectively and flexibly. A trailblazing

project in relation to engineering and testing such technologies is the 'Designetz' project that was launched in 2017 and is the result of innogy joining forces with a number of partners in order to work on a blueprint for the energy network of the future (see page 27). A co-operative venture with Deutsche Telekom also aims to develop new business models relating to the grid: the two companies want to use synergies through the joint expansion of the energy and fibre-optic network in rural areas. Furthermore, innogy took a 17.5 % interest in eluminocity, a startup with headquarters in Munich and Denver, which specialises in intelligent street lighting, smart city sensor technology and high-quality charging stations for electric vehicles.

- **Retail.** At the end of last year, innogy supplied 15.9 million customers with electricity and around 6.6 million with gas in eleven European markets. Our subsidiary is one of the largest suppliers of electricity and gas in Germany, the Netherlands and the United Kingdom. It has a leading position in at least one of these products in several other European markets. In the long run, it intends to focus on markets with attractive framework conditions, in which it can rank among the three leading suppliers. These requirements are not met in the United Kingdom. Against this backdrop, innogy agreed with its competitor SSE to merge its UK retail business with a large portion of the retail activities of SSE to form an independent company listed on the stock exchange (see page 38). Challenges and opportunities also result from changes in customer needs. Increasing numbers of households and businesses want to use energy more efficiently and profit from the opportunities of digitisation. Therefore, innogy does not limit itself to the traditional supply of electricity and gas. Instead, the company also develops innovative products and services enabling its customers to use energy intelligently while taking advantage of the newest technologies. This also involves entering into partnerships. One example is the long-term co-operation with the leading consumer electronics manufacturer Medion initiated in the middle of 2017 that consists of combining innogy's software platform with Medion's smart home products. E-mobility is another of innogy's important business fields. One of the activities in this area is building charging infrastructure. This often involves our subsidiary forging partnerships with private enterprises. For example, the company agreed with Tank & Rast to set up and operate over 100 fast charging stations at the company's motorway restaurants and service stations. The German Ministry of Transportation and Digital Infrastructure granted innogy about €3 million in subsidies for the installation of over 1,000 new charging stations.

**RWE AG's management system.** Ensuring sustainable growth in shareholder value is at the heart of our business policy. To manage the Group companies, RWE AG deploys a groupwide planning and controlling system, which ensures that resources are used efficiently, and provides timely, detailed insight into the current and prospective development of the company's assets, financial position and net worth. Based on the targets set by RWE's Executive Board and our expectations regarding the development of the business, once a year we formulate our medium-term plan, in which we forecast the development of key financial indicators. This plan contains the budget figures for the next fiscal year and planned figures for the following years. The Executive Board submits the plan to the Supervisory Board, which reviews and approves it. The Supervisory Board occasionally requests adjustments to be made prior to giving its approval. During the fiscal year, we produce internal forecasts linked to the budget. The Executive Boards of RWE AG and the main operating units meet regularly to analyse the interim and annual financial statements and update the forecasts. In the event that the updated forecast figures deviate significantly from the budget figures, the underlying reasons are analysed and countermeasures are taken if necessary. We also immediately notify the capital market in the event that published forecasts need to be modified.

Some of the key indicators we use in managing our operational business and assessing the financial situation are adjusted EBITDA, adjusted EBIT, adjusted net income and net debt. Adjusted EBITDA is defined as earnings before interest, taxes, depreciation and amortisation. In order to improve its explanatory power in relation to the development of ordinary activities, we remove non-operating or aperiodic effects, which are shown in the non-operating result. Capital gains or losses, temporary effects from the fair valuation of derivatives, impairments and other material special items are filtered out. Subtracting operating depreciation and amortisation from adjusted EBITDA yields the adjusted EBIT, the development of which has a significant influence on the variable compensation of our employees. Adjusted net income is another key operating indicator. We calculate this by correcting net income for all major special items (including the entire non-operating result) along with the related income taxes. Since 2016, we have used this indicator as a factor in determining the share-based payment of our senior management.

We primarily use the internal rate of return as a yield indicator for assessing investment projects. The Group's financial position is analysed using cash flows from operating activities, amongst others. We also attach special importance to the development of free cash flow, the definition of which we changed in 2017. It is the result of deducting capital expenditure from cash flows from operating activities and adding to them proceeds from divestments and asset disposals. Net debt is another indicator of RWE's financial strength. Essentially, it consists of net financial debt together with provisions for pensions and similar obligations, for nuclear waste management, for mining damage (e. g. the recultivation of opencast mining sites) and for the dismantling of wind farms. One half of the liabilities from hybrid bonds is recognised in net debt.

In compliance with International Financial Reporting Standards, we recognise innogy as a fully consolidated company in the consolidated financial statements. In other words, the Group figures include our subsidiary's revenue, expenses, cash flows, assets, debt, etc. However, this approach only reflects innogy's operating independence to a limited extent. Therefore, for management purposes, we also use key figures in which our subsidiary is subsumed as a pure financial investment under 'other financial assets'. Further details on this can be found on page 60.

**Sustainability – a standard we hold ourselves to.** We can only succeed over the long term if we ensure society's acceptance by embracing our corporate responsibility (CR). In order to focus on the various aspects of this responsibility, we maintain a dialogue with all our stakeholder groups, such as shareholders, employees, customers, politicians, associations and non-governmental organisations. Since the reorganisation of the Group, RWE AG has defined its main task as ensuring security of supply. We also give great importance to environmental management and occupational safety. We have already achieved very high standards in these areas and we intend to maintain these. Other key areas for us include ensuring compliance with the Code of Conduct and the compliance regulations of RWE and making sure that our suppliers adhere to internationally recognised environmental and social standards.

We face particular challenges in relation to climate protection, especially since high carbon dioxide emissions also involve high business risks. By expanding its activities in renewables, the RWE Group is making an important contribution to electricity generation that is gentle on the environment. Furthermore, our new-build power plant programme completed in 2015 has established the basis to replace old, emission-intensive assets with cutting-edge generation capacity. The carbon dioxide emissions of our power stations have dropped steadily in the last five years. We expect this trend to continue, above all due to the decommissioning of coal-fired power plants. Based on current planning, our emissions in our core markets Germany, the United Kingdom and the Benelux region will decrease by between 55 million and 65 million metric tons of carbon dioxide by 2030 compared to 2015 (141 million metric tons). These figures relate to our current generation portfolio and are in line with long-term European and national climate protection goals.

Further information on our strategy and our measures in relation to CR can be found in our separate non-financial report on the Group in accordance with Section 315b, Paragraph 3 of the German Commercial Code, which will be published as part of our CR Report and does not form part of the combined review of operations. The CR Report is entitled 'Our responsibility' and can be accessed on the internet at www.rwe.com/cr-report.

# 1.2 INNOVATION

**Innovation is the key to long-term commercial success. This holds true more than ever for energy utilities like RWE. In numerous research and development projects, we look for technical solutions to make opencast mines more profitable, power plants less emissions-intensive, and grids more intelligent. We are also innovative with regard to the development of new business models that satisfy customers' future needs and expand our offering beyond the sale of electricity and gas. In our daily operations, we benefit from the ingenuity and entrepreneurial spirit of our employees. Once again they had thousands of good ideas in 2017, which will allow us to achieve millions of euros in savings.**

**With around 490 inventions, we are in the vanguard of Europe's utilities.** The RWE Group is innovative in many ways. Our main motivation is to remain competitive over the long term in a dramatically changing environment as well as to be a driving force behind this transformation. With a groupwide tally of around 1,480 patents and patent registrations, based on roughly 490 inventions, we are in the vanguard of Europe's most innovative utilities. Last year, we worked on more than 320 research and development (R&D) projects and filed patent applications for 76 inventions. Our R&D projects frequently involve co-operating with external partners from the engineering and chemical industries, or with research institutions. As a result of this, we usually only have to bear a portion of the project costs. The RWE Group's operating R&D spending amounted to €182 million in 2017 (previous year: €165 million). A total of about 550 of our employees were solely or partially dedicated to R&D activities.

**RWE AG: solutions for more economic opencast mining, lower emissions and new ways of using carbon dioxide.** The reorganisation of the RWE Group changed the responsibilities for research and development: innovation in the areas of renewable energy, grids and retail is now in the hands of our subsidiary innogy. RWE AG is responsible for the R&D activities of the areas of the Group under its management. Its measures are primarily dedicated to conventional electricity generation. They aim to make the operation of our opencast mines and power stations more profitable and reduce emissions. Another major area of research is the use of lignite and carbon dioxide through conversion to fuel or starting materials for the chemical industry. We will present a small selection of RWE AG's important R&D projects, followed by a brief insight into the innovative work done by innogy and ending with an employee's idea, which is representative of many others.

**Opencast mining: more efficient processes thanks to digital control.** In the Hambach opencast mine, we explored the options offered by digitisation to make lignite production more profitable. This was done in a four-year EU research project in which we co-operated with Delft University of Technology (Netherlands). Controlling opencast mines digitally is as complex as mining the lignite itself as it also involves many steps that dovetail each other: huge bucket-wheel excavators in the terraced opencast mines scoop up the coal and its covering layers and place it on conveyor belts on which it is transported to a distributor. This is where the loads are sent off on various transport routes: the lignite is either placed in interim storage in a coal bunker or supplied directly to the surrounding power stations and processing plants – either via belt conveyor systems or the works railway, depending on the distance. The overburden often travels several kilometres on conveyor belts before it reaches the spent side of the mine where it is used to refill the pits resulting from mining. To ensure that this process runs with clockwork precision, the heavy equipment and material flows must be dispatched accurately. Numerous influences and effects must be considered when making every single decision. Our research project has demonstrated how this can be done with digital support. It was completed successfully in October 2017. Now RWE is working on turning the methods designed within the scope of the project into dispatch aids applicable to the operation of opencast mines. Our goal is to have a software module by 2020 with which our mining engineers can optimise processes in opencast mines working either on their office computers or using tablets on site.

**For the reliable operation of power stations: coal analysis 'on the fly'.** Operating lignite-fired power plants as smoothly as possible requires us to have precise knowledge of the composition of the coal that we use. Not all coal is the same, as it can contain various degrees of trace elements such as iron, calcium and magnesium. Unfavourable mixtures of these can leave deposits in the furnace during combustion, forcing the lignite unit to be shut down temporarily for cleaning. To prevent this, we analyse the composition of the coal before it reaches the power plant. This involves regularly taking samples from the conveyor belt, preparing and analysing

them – a process that is fully automated. We are currently testing a new device in the Fortuna coal bunker of the Garzweiler opencast mine based on an alternative method: Germany's first online coal analyser featuring innovative radiometric measuring technology. The apparatus analyses the quality of the coal in real time, i. e. as it passes the analyser on the conveyor belt – up to 10,000 metric tons per hour. If the new online coal analyser proves itself in continuous operation, it may be used in our opencast lignite mines. We expect this to reduce maintenance costs while improving the availability of our power plants.

**Reducing emissions: flue gas with less mercury thanks to rotary hearth furnace coke.** We aim to operate all of our power stations in the most environmentally friendly manner. The legislator already imposes strict requirements on us in this regard, for example in relation to mercury emissions. The introduction of new EU-wide limits makes the framework conditions for operating our lignite-fired power plants even tighter. Today, we already manage to remove and capture most of the mercury from flue gases. As a result, our stations are far below the currently applicable threshold values. Independently of that, for years we have been conducting in-depth research into ways to further decrease mercury emissions on a large scale and at reasonable cost. We are focusing primarily on a method using rotary hearth furnace coke from Rhenish lignite produced by RWE. We already use this substance as a mercury separator, albeit only in our processing plants, in which we convert lignite into briquettes or powdered lignite for the cement and lime industry. Now we are testing whether and how rotary hearth furnace coke can be used to lower the emissions of power stations. We are doing this with the help of a pilot plant in the Coal Innovation Centre at the Niederaussem power station, which has been running since October 2017. This involves very finely ground rotary hearth furnace coke being mixed with water and introduced into the power plant's flue gas ducts, which are much larger than those of the processing facilities. We will make use of the findings to design a demonstration plant for permanent operation, which we will start building at Niederaussem in 2018.

**New uses for carbon dioxide: from $CO_2$ to diesel.** We have been working on a method for removing carbon dioxide from flue gases in power stations for a long time. We have developed one of the world's leading technologies in this field in co-operation with BASF and Linde in the Coal Innovation Centre at Niederaussem. It was tested in a pilot plant that has put in more than 60,000 operating hours since 2009 and has proven its efficiency, delivering carbon dioxide separation rates of over 90 %. Within the scope of three EU subsidy projects, we are now going one step further: we plan to use the carbon dioxide from the pilot plant, water and electricity to produce fuel and starting materials for the chemical industry in various test facilities at the Niederaussem site. In every production method, the carbon dioxide is used to create a replacement for fossil fuels such as oil and gas. The projects are called OCEAN, LOTER.$CO_2$M and ALIGN-CCUS and differ from one another mainly by virtue of their target products. In OCEAN, oxalic acid, a basis for high-quality chemical products, is obtained from carbon dioxide. In LOTER.$CO_2$M, the focus lies on the simple and efficient production of methanol, a starting material for a variety of chemical products and one of the most produced chemicals worldwide. Last but not least, the ALIGN-CCUS project is dedicated to the production of dimethyl ether (DME), which is of interest particularly as a replacement for diesel. It burns nearly soot-free and does not produce much nitrous oxide. DME can be used in vehicle engines and power units. The latter can be used to cover peak loads during low levels of electricity feed-ins from renewable energy (e. g. in the event of lulls). Furthermore, DME can be used to chemically store excess electricity over extended periods of time while taking up little space. We have set ourselves the goal for 2020 of running a power unit's diesel engine on DME produced by our test plant. The unit will initially be configured to generate 240 kW and be as large as a freight container. However, it is modular and therefore expandable. It can be used to supply electricity decentrally, for instance to bridge periods until networks are expanded. In the projects described above, we work with a variety of renowned industrial and scientific partners, including RWTH Aachen, the Universities of Duisburg-Essen and Genoa, Mitsubishi Hitachi Power Systems Europe, the independent engineering service provider for internal combustion engines and vehicle technology FEV, and the Jülich Research Centre. The projects receive approximately €3 million in EU subsidies and are scheduled to run for a maximum of four years.

More detailed information on this and RWE AG's other R & D projects can be found at www.rwe.com/innovation.

**innogy SE: focus on renewable energy, smart grids and new retail products.** The RWE Group is also pushing forward with innovation in renewables, distribution networks and supply. Our subsidiary innogy has a wide range of innovative undertakings which are presented in detail at www.innogy.com/innovation. Some of them enable it to make valuable contributions to the success of the energy transition, e. g. the 'Designetz' project. Spearheaded by innogy, a research consortium aims to develop a sustainable concept for integrating renewable energy into the supply system. The main challenge consists of finding a way to network the large number of decentralised electricity generators and users in both rural and urban areas intelligently. The consortium partners include municipal utilities, renowned research institutes and large technology firms. Designetz is scheduled to be rolled out in North Rhine-Westphalia, Rhineland-Palatinate and Saarland. These states, in which over a quarter of Germany's population lives, are ideally suited to conducting field trials for the decentralised energy landscape of the future, as they are home to areas with very high levels of electricity from renewables as well as heavily industrialised areas of consumption. Designetz is part of the 'Intelligent Energy Showcase – Digital Agenda for the Energy Transition' (SINTEG) subsidy programme of the German Federal Ministry for Economic Affairs and Energy. The Ministry attaches such high importance to Designetz that it has provided it with about €30 million in subsidies.

**Innovation Hub at innogy: a platform for the development of new business models.** Companies seeking to survive over the long term in a market undergoing dynamic change must ensure today that they have compelling offers to satisfy the customer needs of the future. At the Innovation Hub, a platform created in 2014, trailblazing ideas and business models concerning all things energy and beyond are developed. Special attention is paid to the possibilities offered by digitisation. The ambition is to bring products and services to market maturity which allow customers to use energy more efficiently and improve their quality of life. An example of this is 'Fresh Energy', a new solution consisting of a smart meter and a smartphone app. The smart meter records the energy consumption of all household appliances. The data is presented in a manner that is easy to understand, enabling the user to identify 'power hungry' appliances. Moreover, customers are only invoiced for the electricity they have actually used, without any advance or back payments.

**Savings thanks to the experience and knowledge of our employees.** Day-to-day operations are a fertile breeding ground for good ideas. Many of our employees harness their experience to help move the company forward with innovation. Last year, Group employees submitted around 2,300 suggestions for improvements to the idea managers at their respective companies. We estimate the economic benefit of their suggestions amounts to about €8 million in the first year of implementation. For example, an employee of RWE Power discovered that bulldozer performance in the Garzweiler opencast mine can be increased by making small adjustments to the blade. The bulldozer uses the blade to push material in order to level paths for heavy equipment, among other things. The employee realised that loose and muddy material often failed to stick to the front of the blade, falling off to the sides instead. The employee's idea was to fit big 'ears' made of thick-walled sheet metal to the sides of the blade in order to do a better job of keeping the bulldozed material in front of it. This put the ball in the court of RWE Power's Equipment Department, which upgraded one of our vehicles to these specifications. A test with the modified blade demonstrated that a third more material could be moved. The first step will involve upgrading four of the bulldozers used in the Garzweiler opencast mine. We estimate that associated costs will total just under €11,000 – money well spent, as this can result in over €80,000 in annual savings based on approximately 5,000 hours of bulldozing work carried out every year.

# 1.3 ECONOMIC ENVIRONMENT

**The market prospects of our power stations improved somewhat in 2017. Buoyed by rising hard coal quotations, wholesale electricity prices continued the course for recovery on which they embarked at the beginning of 2016. Purchases of base-load power made in 2017 for the following calendar year cost an average of €32 per MWh, €5 more than in 2016. However, this will only affect our earnings in the future. We had sold forward most of our electricity generation for 2017 in earlier years. The realised margins were significantly down on 2016. However, the profit margins of our Continental European gas-fired power stations improved.**

**Economic upturn continues.** Based on initial estimates, worldwide economic output was some 3 % higher last year than in 2016. The Eurozone is estimated to have recorded more than 2 % growth. Germany's gross domestic product (GDP) is likely to have risen by about the same percentage. Stimulus came primarily from consumer spending. GDP in the Netherlands rose by approximately 3 %. By contrast, Belgium posted growth of just under 2 %. The same applies to the United Kingdom, our most important market outside of the currency union, which benefited from the expanding service sector, but felt the adverse effects of the impending exit from the EU. The economies of our major Central Eastern European markets displayed much more dynamic development. Available data indicates that GDP increased by over 4 % in Poland and the Czech Republic, with Hungary and Slovakia recording a gain of more than 3 %.

**Temperatures slightly above average.** Whereas the economic trend significantly affects the energy needs of industrial enterprises, residential energy consumption is influenced more by weather conditions. The lower the outside temperature, the more gas and electricity is needed for heating purposes. Meteorological data for 2017 shows that weather conditions were relatively mild throughout the whole of Europe. Average temperatures were mostly slightly higher than the relevant ten-year average, despite the very cold weather in January. The comparison to the previous year is varied: overall, it was slightly warmer than in 2016 in the United Kingdom and the Netherlands, whereas it was colder in large parts of Eastern Europe. The average temperature for the year measured in Germany was on a par with the previous year.

**Wind conditions more favourable than in 2016.** In addition to energy consumption, the generation of electricity – particularly from wind farms – is also subject to weather-related influences. On the whole, wind levels at innogy's generation sites were slightly less favourable than the long-term average. However, they improved over the prior year in nearly all countries, with the exception of Spain. Run-of-river power stations are also subject to weather conditions. Their electricity production depends on precipitation and melt water volumes. In Germany, where most of the RWE Group's hydroelectric power plants are located, these volumes were relatively low in 2017, when compared to the long-term average and the preceding year.

**Higher energy consumption in RWE's core markets.** The economic growth stimulated energy consumption in our core markets, whereas the trend towards saving energy had a dampening effect. Based on preliminary calculations by the Federal Association of the German Energy and Water Industries (BDEW), German demand for electricity in 2017 was 0.7 % up year on year. Estimates indicate a rise of about 1 % in the Netherlands. Electricity consumption is likely to have advanced by between 2 % and 3 % in Poland, Slovakia and Hungary, whereas it dropped by some 2 % in the United Kingdom.

In relation to gas, volume increases in our Continental European markets were contrasted by a decline in the United Kingdom. Based on pro-forma BDEW figures, gas consumption rose by 6 % year on year in Germany, in part because the market conditions for gas-fired power plants improved, allowing these stations to be used more. According to estimates, gas consumption was up 2 % in the Netherlands, and 1 % in the Czech Republic. By contrast, gas demand in the United Kingdom decreased by approximately 2 % compared to 2016, in part due to the relatively mild weather.

**One-year forward prices of gas on the TTF wholesale market**
€/MWh (average weekly figures)


Source: RWE Supply & Trading.

**Stabilisation of TTF wholesale gas quotations.** Following a lengthy decline, wholesale gas prices recovered somewhat in Western Europe. Averaged for the year, spot prices at the important Dutch Title Transfer Facility (TTF) amounted to €17 per MWh, €3 more than in 2016. In TTF forward trading, contracts for delivery in the following calendar year (2018 forward) were also settled for an average of €17 per MWh. By comparison, in 2016 the price paid for the 2017 forward was €15.

Residential tariffs typically react to developments on the wholesale market with a time lag. They were still significantly marked by the slump of earlier years. Based on available data, gas became 3 % and 1 % cheaper for German and UK households, respectively. In the Czech Republic, residential customer tariffs were essentially unchanged, whereas they were up 2 % year on year in the Netherlands. Developments affecting industrial customers were as follows: prices were up 1 % in Germany, 5 % in the Netherlands and 6 % in the United Kingdom. This was contrasted by a 7 % decline in tariffs in the Czech Republic.

**One-year forward prices of coal deliveries to Amsterdam/Rotterdam/Antwerp**
US$/metric ton of coal (average weekly figures)


Source: RWE Supply & Trading.

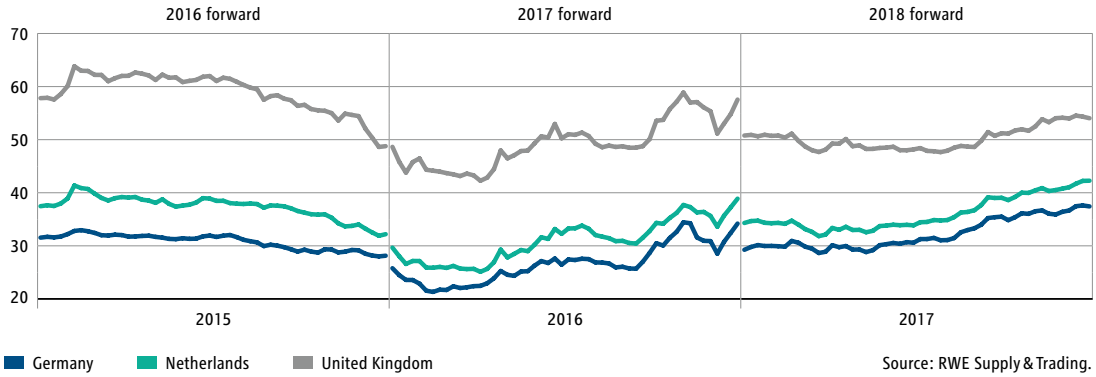
**Hard coal much more expensive than in 2016.** Quotations in international hard coal trading bottomed out at the beginning of 2016, after which they rose considerably. In 2017, coal imports including freight and insurance via the ARA ports (Amsterdam/Rotterdam/Antwerp) were quoted at an average of US$84 (€75) per metric ton in spot trading, up US$24 compared to 2016. The 2018 forward (API 2 Index) traded at US$74 (€65) per metric ton, US$20 higher than the comparable figure for the previous year. This is in part due to robust Chinese economic activity and its revitalising impact on the country's demand for coal. In 2016, Beijing had curbed domestic coal production through regulatory intervention. However, the restrictions were loosened after a while. Freight rates, i. e. overseas shipping costs, are an important price component in international hard coal trading. They also displayed a clear upward trend. In 2017, the standard route from South Africa to Rotterdam cost an average of just under US$7 per metric ton, compared to slightly more than US$4 in the previous year. The rise in fuel costs had a price-increasing effect. Furthermore, excess ocean freight capacity built up in the past decreased somewhat.

**Forward prices of $CO_2$ emission allowances (EU Allowances)**
€/metric ton of $CO_2$ (average weekly figures)


Source: RWE Supply & Trading.

**Reform of European Emissions Trading System (ETS) gives rise to speculation over $CO_2$ certificates.** Prices in European trading of carbon dioxide emission allowances also increased. Last year, a European Union Allowance (EUA), which confers the right to emit a metric ton of $CO_2$, was quoted at an average of €6. This information relates to forward contracts which fall due in December 2018. By comparison, in 2016, an EUA in contracts for December 2017 cost slightly more than €5. There are still many more emission allowances on the market than companies need to cover their carbon dioxide emissions, but the EU Parliament and the European Council have initiated a package of measures that puts the EU in a position to reduce the surplus of certificates substantially (see page 34). In the last rounds of negotiation on this package in the second half of 2017, EUAs rose in price considerably, reaching the €8 mark at the end of the year. However, the measures adopted by the EU will not come to bear until after 2018. Furthermore, Brexit brings with it risks: it is still unclear if and when the United Kingdom will leave the ETS. In the event of an early withdrawal, industrial enterprises with a local domicile will put large numbers of emission allowances they no longer require on the market, thereby increasing the oversupply. The possibility of such a scenario had a dampening effect on EUA prices in 2017.

**One-year forward prices of base-load electricity on the wholesale market**
€/MWh (average weekly figures)



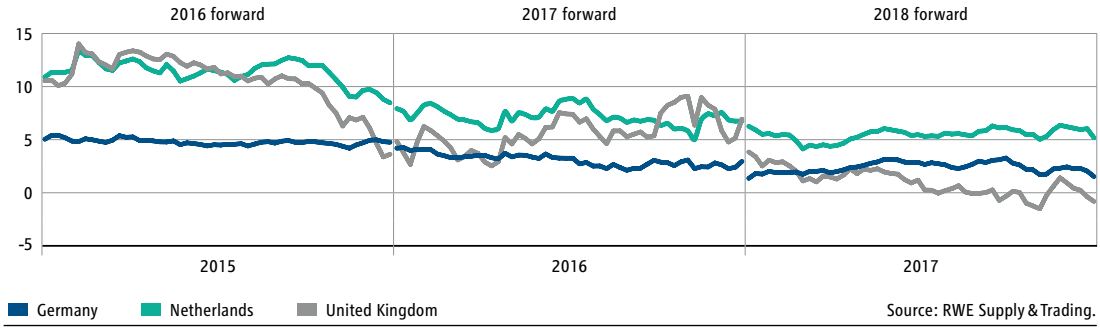

Source: RWE Supply & Trading.

**Wholesale electricity prices markedly up year on year.** In our major generation markets, wholesale electricity prices continued the upward trend on which they had embarked in 2016. The recovery of hard coal quotations played an important role. Hard coal-fired power plants set the prices on the electricity market for many hours during the year, especially in Germany. If their fuel costs rise, this has a knock-on effect on electricity prices. In Germany, the average spot price of base-load power was €34 per MWh in 2017, €5 more than in the previous year. Prices also rose in forward trading. Last year, the 2018 base-load forward cost an average of €32 per MWh. By comparison, the 2017 forward traded for €27 per MWh in 2016.

In the United Kingdom, our second-largest generation market, wholesale electricity quotations are typically much higher than in Germany. The average spot price of base-load electricity amounted to £45 (€52) per MWh, up £5 on the level witnessed in 2016. The 2018 forward traded for £44 (€50) per MWh, £3 higher than the previous year's comparable figure.

In the Netherlands, where we have our third-largest generation position, base-load power traded for an average of €39 per MWh on the spot market. Relative to 2016, it rose in price by €7. Forward contracts for 2018 were quoted at €36 per MWh, €5 more than what was paid for the 2017 forward in the prior-year period.

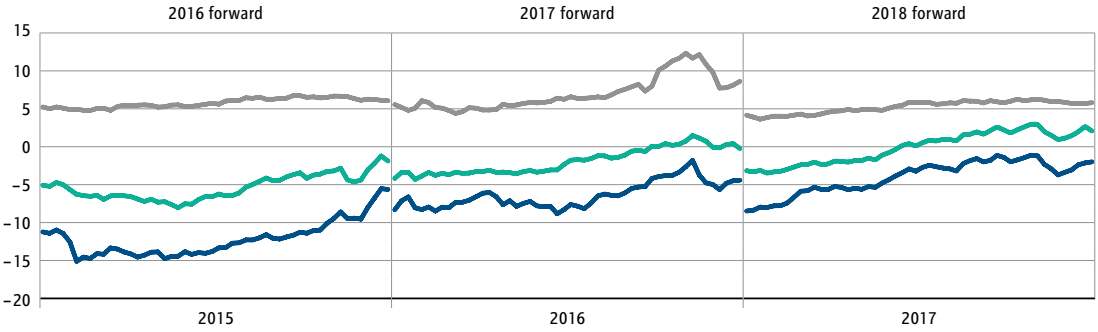
**Clean dark spreads[1] forward trading**
€/MWh (average weekly figures)




Source: RWE Supply & Trading.

1 Price of base-load electricity minus the cost of hard coal and $CO_2$ emission allowances based on a power plant efficiency of 35 % to 37 %; including $CO_2$ tax in the UK.

**Clean spark spreads[1] forward trading**
€/MWh (average weekly figures)




Source: RWE Supply & Trading.

1 Price of base-load electricity minus the cost of gas and $CO_2$ emission allowances based on a power plant efficiency of 49 % to 50 %; including $CO_2$ tax in the UK.

**Sustained pressure on electricity generation margins.** The margins of our conventional power plants are the difference between the price of electricity and the costs (including taxes) of the fuel and $CO_2$ emission allowances required to produce it. We generally source the fuel for our hard coal and gas-fired power plants from liquid markets at prevailing conditions. Therefore, the generation costs of these stations can change significantly. The margins are referred to as clean dark spreads for hard coal-fired power plants and clean spark spreads for gas-fired power plants.

The two above graphs illustrate the development of the aforementioned spreads in our main generation markets since 2015, based on the respective year-forward transactions. Taking the annual average figures as a basis, clean dark spreads were clearly on a downward trend over the entire three-year reporting period presented, particularly in the United Kingdom. Margins of gas-fired power stations displayed much more favourable development, picking up continually in both Germany and the Netherlands. In the United Kingdom, clean spark spreads were the highest in absolute terms, but in 2017 failed to match the very good level recorded the year before.

The cost of the fuel used to generate electricity from nuclear energy and lignite is generally more stable. We produce lignite from our own opencast mines. There are no reliable market prices for it due to its limited tradability. We cover our uranium consumption via long-term contracts at firm conditions. Owing to their relatively stable fuel costs, the margins of lignite-fired and nuclear power plants generally develop in line with wholesale electricity prices and they have mirrored the significant upward trend of the latter since 2016.

**RWE electricity from lignite and nuclear energy sold for an average of €31 per MWh.** We sell forward most of the output of our power stations and secure the prices of the required fuel and emission allowances in order to reduce short-term volume and price risks. Therefore, the income we earned from our power plants in the year under review depended on these types of forward contracts for 2017, which we had concluded up to three years in advance. Overall, our 2017 power production sold for a lower price compared to the previous year. For electricity from our German lignite-fired and nuclear power plants, we achieved an average of €31 per MWh (previous year: €35 per MWh). As a result, income from these stations was significantly lower than in 2016. The effects of the abolishment of the German nuclear fuel tax have not been considered here. Our hard coal-fired stations also recorded declining margins. Conversely, our gas-fired power plants, the production of which we sell forward closer to delivery, already benefited from the most recent recovery of wholesale electricity prices. In sum, their margins and deployment times were higher than in the previous year.

**Significant increase in German industrial electricity prices.** Electricity bills are greatly determined by grid fees, levies and taxes. This applies above all to households. In Germany and the United Kingdom, where the share of the total price accounted for by state-mandated components is growing steadily, residential tariffs rose by an average of 2 % and 7 % compared to 2016. In the Netherlands and Poland, households had to pay about 1 % and 3 % more than in the previous year. By contrast, residential tariffs declined by 3 % and 4 % in Hungary and Slovakia. The regional differences in the development of industrial electricity prices were even greater: they increased by 8 % in Germany and 3 % in the United Kingdom, whereas they dropped by 1 % in the Netherlands, 7 % in Poland, 8 % in Hungary and by as much as 11 % in Slovakia.

# 1.4 POLITICAL ENVIRONMENT

**In 2017, policymakers made trailblazing decisions regarding the energy sector. One of the most important ones related to the European Emissions Trading System: following a lengthy tug of war, the European Parliament and the Council of Ministers reached an agreement on a reform to strengthen this climate protection tool. The most important course set in Germany related to nuclear energy: it was established by law that the government will take over the processing and financing of the interim and final storage of radioactive waste. It will receive the capital required for this from a fund, into which the power plant operators made payments in the middle of 2017. This regulation is appropriate. As a result, our political risks in relation to nuclear energy decreased considerably.**

**European emissions trading reform adopted.** In February 2018, the European Parliament gave the go-ahead for a fundamental reform of the European Emissions Trading System (ETS). The European Council had already given its informal approval in December 2017. This was preceded by trilateral talks held by representatives of the two bodies and the EU Commission, which led to an agreement in November. The objective of the reform is to strengthen the ETS and bring it in line with the European greenhouse gas reduction goal for 2030. By then, branches of industry participating in the ETS must reduce their emissions by 43 % compared to 2005. Therefore, the number of $CO_2$ certificates issued will be lowered by 2.2 % annually during the fourth trading period, which runs from 2021 until 2030. The current reduction rate is 1.74 %. Another objective of the amendment to the ETS is to reduce the existing glut of allowances on the market more quickly. This will be done by transferring a much larger volume of allowances into the 'market stability reserve' (MSR) compared to what is prescribed by current legislation. The MSR, which will be used from 2019 onwards, is a tool that will give the EU more flexibility in bringing the supply of certificates in line with demand. The new regulation envisages withholding up to 24 % of the volume allocated on the market annually from 2019 to 2023 and transferring it to the MSR. It also envisages cancelling MSR emission allowances exceeding the volume allocated to the market in the preceding year from 2023 onwards. In addition, it will allow member states to cancel certificates relating to power plants closed as a result of emission-reduction measures.

**EU imposes stricter limits on air pollutant emissions.** The European Union has passed new regulations for limiting air pollutant emissions of new power plants, which must also be complied with by existing stations from 2021 onwards. A corresponding implementing regulation entered into force in August 2017. By and large, the standards are appropriate and feasible. However, they go beyond what is achievable at present in relation to nitrous oxides and mercury. The implementing regulation must now be translated into national law, which in Germany will involve an amendment to the thirteenth Federal Emission Control Act. The EU has given member states room for manoeuvre within which they can set their own thresholds. We hope that German policymakers will consider technical and economic feasibility as well as the need for a secure supply of electricity. Only once the Federal Emission Control Act has been amended can we estimate the consequences that this will have for our power plants. The need to implement extensive retrofits or to shut down individual stations early cannot be ruled out.

**European Council wants to exclude coal-fired power stations from capacity markets.** In the middle of December 2017, the member states in the European Council agreed on a joint position on the redesign of energy law. One of the main topics was the determination of minimum standards that national governments must observe if they have introduced capacity mechanisms or intend to do so. The countries agreed that power plants emitting more than 550 grams of carbon dioxide per kilowatt hour may only be compensated for their capacity if their annual emissions do not exceed 700 kilograms per kilowatt of installed capacity. This rule should apply to new and existing plant from 2026 and 2030 onwards, respectively. There are no provisions governing the level of the payments until then – with the exception that compensation for existing stations, which do not meet the 550 gram criterion, must be reduced by 5 % per year from 2026 to 2030. If the concepts of the European Council are implemented in the planned EU Electricity Market Regulation, coal-fired power stations and old gas-fired power plants would not be able to participate in capacity markets. A modern lignite-fired power plant would be allowed to operate for a maximum of 750 hours per year in order to remain within the annual emission contingent of 700 kg/kW. This would only represent about 10 % of its normal capacity utilisation. The service life of a modern hard coal-fired power station would be limited to roughly 950 hours per annum. If Germany introduced a capacity market, a large portion of the country's secured generation capacity would be excluded from it. Very little would be gained in terms of security of supply.

At the end of February 2018, the Industry Committee of the European Parliament debated the matter and established its standpoint. The Committee's position is generally in line with the concept of the Council. It is actually a proponent of even tighter regulation in certain areas. Now the Parliament and Council have to agree on a joint position. This will involve trilateral negotiations with representatives of the Commission, which will probably carry on into the second half of 2018.

**New law on nuclear waste disposal in force – utilities pay into the nuclear energy fund.** The law on the reorganisation of the responsibility for nuclear waste disposal in Germany entered into force on 16 June 2017. This was half a year after being passed by the Lower House of Parliament, as it was subject to EU clearance. The law is largely in line with the recommendations submitted in April 2016 by the Commission for the Review of the Financing of the Nuclear Phase-out tasked by the German government. Accordingly, the federal government will handle the processing and financing of the interim and final storage of radioactive waste, whereas responsibility for shutting down and dismantling the stations as well as for packaging radioactive waste will continue to be borne by the companies. The tasks transferred to the federal government will be financed by a fund into which power plant operators have paid. On 3 July 2017, the companies transferred the full amount of €24.1 billion to the fund's accounts at the Deutsche Bundesbank. RWE's share amounted to €6.8 billion. This ends the liability of nuclear power plant operators for the costs of intermediate and final storage. In order to provide a legal basis for this, on 26 June the companies involved concluded a public law contract with the Federal Republic of Germany. This contract provides the companies with a higher level of legal certainty related to the release from liability and also establishes details on the conditions of transferring radioactive waste to the Federal authorities. Based on this contract, numerous legal disputes between the utilities and the state over nuclear energy related issues were terminated, and the companies involved withdrew their claims.

**Germany reforms grid fee structure.** The German Act on the Modernisation of the Grid Fee Structure (NEMoG) entered into force on 22 July 2017. The new legislation introduced through NEMoG governs the gradual uniformity of transmission system fees. This measure was triggered by the fact that the four German transmission system operators mainly pass their network operation, maintenance and expansion costs through to the grid users in their respective balancing zones. Therefore, there are significant regional differences among transmission grid fees, which account for approximately a quarter of grid costs. Now the fees will be aligned in annual increments from 2019 to 2023. The details of the implementation will be set out in a regulation. As a result of NEMoG, grid fees will tend to rise in western and southern Germany and fall in the north and east. Energy-intensive industries in the balancing zone of Amprion, which is situated in North Rhine-Westphalia, Rhineland-Palatinate and Saarland as well as parts of Lower Saxony and Bavaria, are among the losers of the reform: they will have additional costs, which will be significant in some cases.

The second key part of NEMoG is the partial abolition of the compensation received by operators of decentralised generation units for 'avoided grid fees'. So far, the justification for the payments has been that the higher network levels experience relief when electricity is fed into the local distribution system and also used locally and that this could reduce the cost of expanding the supra-regional network, amongst other things. However, the German government points out that the expansion of renewable energy increasingly leads to a local oversupply of decentrally generated electricity, which results in feed-ins back into the higher-voltage network. As regards the reduction in compensation for avoided grid fees, NEMoG distinguishes between units with volatile generation volumes (e. g. wind farms) and those with controllable production (e. g. combined heat and power stations). Concerning the former generation units, the law envisages new plant no longer receiving compensation from 2018 onwards and fees for existing stations being gradually reduced. The following applies to units with controllable generation: new plant will no longer be subsidised from 2023 onwards, whereas old stations will continue to receive compensation. However, NEMoG also introduces limitations for the latter type of plant: the law stipulates that the basis for calculating avoided grid fees (which is derived from the grid costs) will be frozen at the 2016 level from 2018 onwards. It also envisages no longer taking into account certain grid costs in the future. Some RWE power stations are affected by these two adjustments. By contrast, operators of generation units that are covered by the German Renewable Energy Act (EEG) are not disadvantaged by the reform, as income from avoided grid fees results in a commensurate reduction in compensation under the EEG.

**German Network Agency decides to introduce new general productivity target for gas network operators.** At the end of last year, the German Network Agency, which is the federal network regulator, determined the minimum efficiency improvements that it expects of gas network operators from 2018 onwards. Accordingly, companies must increase productivity by 0.49 % above the general rate. In addition, network operators which have been found to have inefficiencies on the basis of cost audits will be obliged to achieve additional increases. The aforementioned rate of increase is preliminary. This indicator – usually referred to as the 'general sectoral productivity factor' – is one of the key levers in the concept of German incentive-based regulation for network operators. Within the scope of this concept, the regulatory authorities establish revenue caps for each five-year regulatory period. These caps are adjusted on an annual basis – depending on the productivity increases demanded of companies, among other things. The third regulation period for gas began at the start of 2018, and for electricity it will begin a year later. The federal and state governments had set the general sectoral productivity factor at 1.25 % and 1.5 % per year for the first two regulatory periods. This determination has now been made by the Network Agency for the first time. The Federal Association of the German Energy and Water Industries (BDEW) and the network operators are of the opinion that the earlier rates were too high. The BDEW believes that they should be reduced to zero, as it feels that anything above this level implies that the network operators' progress in terms of productivity is above average or that increases in wages and the cost of materials and capital employed in the grid business are below those of the economy in general.

**New Dutch government aims for exit from coal by 2030.** In mid-October 2017, after more than 200 days of negotiations, the new Dutch government concluded its coalition agreement. It reflects the intent of the four coalition parties, under the leadership of Prime Minister Mark Rutte, to take ambitious steps to reduce greenhouse gas emissions. One objective is for the country to stop generating electricity from coal completely by 2030. Five hard coal-fired power stations are currently in operation in the Netherlands, including two owned by RWE. Furthermore, the new government intends to introduce a national carbon price floor, making $CO_2$ emissions in the electricity sector more expensive. The goal behind these and further measures is to lower the country's greenhouse gas emissions by 49 % by 2030 compared to the 1990 level. In spite of this, the government is putting a stop to the subsidisation of biomass co-firing: it intends to discontinue this completely from 2024 onwards. However, subsidies already pledged to RWE will probably not be affected by this. At present, it is impossible to predict the ramifications of the coalition agreement for the energy sector, as a lot depends on the details of the climate protection package. To this end, the government intends to enter into a broad-based dialogue involving all affected companies. The measures will then be written into a new national climate and energy agreement by the end of 2018.

**Incremental capping of energy prices for UK households.** In the United Kingdom, policymakers have begun to cap energy prices for certain customer groups. The first of this type of measure entered into force in April 2017. It applies to households with prepayment meters and is limited to three years. In February 2018, this scheme was expanded to standard-tariff customers that receive a price reduction as low-income households, known as the 'warm home discount'. This regulation has a limited term and will be abolished by no later than the end of 2019.

The government envisages all customers with standard-rate tariffs benefiting from a price cap in the future. In October 2017, the Department for Business, Energy and Industrial Strategy presented a corresponding bill to the UK Parliament for review. It stipulates that the planned price cap will expire at the end of 2020. However, policymakers reserve the right to prolong it for up to three years. The review of the bill was completed in February 2018. A revised bill is expected to be submitted to Parliament in the spring, with the legislative and approval steps scheduled to be taken by the end of 2018. Although there is no certainty on the details of the general price capping, it will probably have negative effects on the earnings of utilities.

# 1.5 MAJOR EVENTS

**A number of pleasing events occurred for RWE last year. One was that the constitutional judges in Karlsruhe declared the German nuclear fuel tax null and void, resulting in the federal government refunding us the €1.7 billion in taxes we had paid in earlier years. We want to pay part of this sum to our shareholders as a special dividend in early May 2018. There was also some good news from innogy: our subsidiary paved the way for the continued expansion of its wind portfolio and positioned itself as an international supplier of solar farms and battery storage units by acquiring Belectric Solar & Battery. Furthermore, innogy came up with a convincing solution for its beleaguered UK retail customer business: together with its competitor SSE, it wants to create a strong, independent retail company in the United Kingdom. In the following, we will present the major events that occurred in 2017 and the beginning of 2018. We have limited ourselves to events that have not been commented on in detail elsewhere in this report.**

## Events in the fiscal year

**German Constitutional Court declares nuclear fuel tax null and void.** In the middle of April 2017, the German Constitutional Court ruled that the German Nuclear Fuel Tax Act was in violation of basic law and thus null and void. The decision was announced on 7 June. The Act had been passed by the German Lower House of Parliament at the end of October 2010 without involving the Upper House and expired at the end of 2016. It obligated the operators of nuclear power plants to pay a tax on the fuel used in their stations. Since 2011, RWE had filed appeals in court and with the authorities due to the doubts it had in relation to the Act's conformity with EU legislation and the German constitution. The Hamburg Fiscal Court shared our concerns and submitted the matter to the Constitutional Court. The constitutional judges found that the federal legislator was not authorised to introduce the nuclear fuel tax because it is not classified as a consumption tax within the meaning of Article 106 of German Basic Law. We had made payments totalling some €1.7 billion during the levy period, which was from 2011 to 2016. We were refunded this sum in addition to accrued interest. We recognised the tax refund in the non-operating result and the interest in the other financial result. This did not affect adjusted EBITDA or adjusted net income.

**RWE AG Executive Board plans special dividend of €1 from nuclear fuel tax refund.** Due to the reimbursement of the nuclear fuel tax at the beginning of May 2018, the Executive Board of RWE AG plans to pay a special dividend of €1 per share in addition to the regular dividend of €0.50 per share. We announced this in June 2017 after consulting with the Supervisory Board. The dividend proposal will be submitted to the Annual General Meeting on 26 April 2018 for the passage of a corresponding resolution. Based on the total of 614.7 million RWE shares, including 39 million preferred shares, the planned special disbursement amounts to €615 million. We are using most of the tax refund to increase our financial strength.

**RWE sheds majority stake in Mátra.** In the middle of December, RWE Power and EnBW signed a contract for the joint sale of their shareholdings of 50.9 % and 21.7 % in the Hungarian electricity generator Mátrai Erőmű Zrt. (Mátra for short). The buyer is a consortium made up of EP Holding, which is based in the Czech Republic, and Hungarian investor Lőrinc Mészáros. The transaction is scheduled for completion in the spring of 2018. Our rationale for the sale is that we want to focus our conventional electricity business on the core markets Germany, the United Kingdom and the Benelux region. Mátra specialises in producing and generating electricity from lignite. The company has slightly more than 2,000 people on its payroll and has a net generation capacity of about 840 MW.

**Further divestments in the generation business.** We completed the sale of the following investments and assets last year:

- Unit 5 of the Hamborn CHP station: the plant was sold to its former leaseholder thyssenkrupp Steel Europe (TKSE) at the end of May. It is located on the premises of the steel mill of TKSE in Duisburg, Germany, which is its operator. The unit is gas-fired and has a nominal electric capacity of 225 MW (net).

- Stakes in two residential property companies in the Rhenish lignite mining region: the interests of 50 % and 15 % held by RWE Power in Wohnungsbaugesellschaft für das Rheinische Braunkohlenrevier GmbH (WBG) and GSG Wohnungsbau Braunkohle GmbH were acquired by the Gelsenkirchen-based real estate company Vivawest in July. The price is a mid-range double-digit million euro amount. Together, WBG and GSG own approximately 1,800 rented apartments and 1,200 garages and parking spaces in 320 buildings in the Cologne-Aachen-Grevenbroich area. In addition, they manage some 150 residential units for third parties. The companies' original objective was to offer housing to miners, but there is hardly any need for this now.

- Littlebrook power plant site: in September, we sold most of the site to the UK property investor Tritax Big Box REIT plc. A smaller part had already been sold to the transmission system operator National Grid in August. The property sales resulted in total euro proceeds in the upper double-digit million range. The Littlebrook site is situated on the banks of the River Thames in Dartford, east of London. Until the end of March 2015, we operated an oil-fired power plant there. Due to stricter emission limits for large combustion plants, the station had to be shut down.

**innogy and SSE intend to combine UK retail operations.** At the beginning of November, innogy and its British competitor SSE agreed to establish an independent retail company in the United Kingdom by merging operations. innogy will transfer its entire UK retail business to the new company. SSE will contribute its residential customer business and its activities in the field of energy solutions but retain corporate customer sales and the Irish business. The merged retail company is expected to have a premium listing on the London Stock Exchange. innogy will take a 34.4 % non-controlling interest in the company, and SSE intends to demerge its 65.6 % interest to its shareholders. The transaction is subject to approval from the competition and regulatory authorities and SSE's shareholders. Including the listing, the deal is expected to close in the fourth quarter of 2018 or the first quarter of 2019. Until then, innogy and SSE will run their retail operations completely independently of one another.

This transaction is happening against the backdrop of the difficult framework conditions in the UK supply market, which is characterised by extremely high competitive pressure and continued political intervention to the detriment of the companies. In this challenging environment, the creation of a large independent retail company provides additional opportunities to win customers through attractive offers and good service. innogy's UK renewables business will not be affected by the transaction. This is an area in which our subsidiary wants to continue growing, in particular by investing in wind farm projects.

**innogy receives subsidy contract for Triton Knoll offshore wind farm and becomes project's sole owner.** In the middle of August, innogy won a tender for the Triton Knoll offshore wind project from the UK Department for Business, Energy and Industrial Strategy. The decision was reached by way of an auction. The project, which involves the construction of wind turbines with a combined capacity of approximately 860 MW off the eastern coast of England, has an estimated investment volume of £2 billion. The state guarantees £74.75 in compensation for each MWh of electricity fed into the grid from the wind farm for a period of 15 years. Until recently, Statkraft also held a stake in Triton Knoll, but in October 2017 the Norwegian energy utility sold its 50 % interest to innogy, which is now the project's sole owner. The Triton Knoll site has favourable wind conditions and moderate water depths. All of the permits necessary for the wind farm have already been obtained. The final investment decision is scheduled to be made in the middle of 2018 and, based on current plans, the turbines could start being commissioned in 2021.

In the United Kingdom, renewable energy has been subsidised via a mechanism called 'contract for difference' (CfD) since April 2015. If the price received by an operator on the wholesale market is lower than a guaranteed payment, the operator is reimbursed the difference. If the price is higher, the payment must be made by the operator. Projects qualifying for subsidies are chosen as follows: if a subsidy pool for a certain generation technology is large enough, all applicants receive a CfD. If the pool is insufficient, an auction determines who receives the awards.

**Acquisition of Belectric Solar & Battery and wind power project pipeline in the USA.** Last year, innogy took further steps for the successful implementation of its growth strategy. In early January 2017, it acquired the ground-mounted solar collector and battery storage specialist Belectric Solar & Battery GmbH for €74 million. The acquired company is headquartered in Kolitzheim, Germany, and has built solar collectors with a total net installed capacity of over 1.6 GW since its inception in 2001. Belectric is also the operator of a large number of these units. Furthermore, the company develops turnkey, large-scale battery storage solutions.

In the USA, innogy secured a project pipeline for onshore wind turbines with a total net installed capacity of over 2 GW. The seller is the British investment company Terra Firma Capital Partners. The transaction was contractually agreed in December 2017 and is scheduled to be completed in the second quarter of 2018. It requires the approval of the Committee on Foreign Investment in the United States. The acquired project portfolio encompasses more than 20 ventures distributed over seven states and in various phases of development. innogy will review the projects for profitability and keep all of its options open in terms of financing and ownership structure for the time being.

**Zuidwester and Nordsee One wind farms officially go online.** Last year, two large wind energy projects in which innogy was involved were completed successfully. First the wind farms constructed as part of the Noordoostpolder large-scale project were inaugurated in mid-June, including the innogy wind farm Zuidwester with a capacity of 90 MW. Zuidwester is located at the IJsselmeer. Its twelve onshore turbines are currently some of the most powerful in the world, capable of generating 7.5 MW each. They replace 50 smaller turbines installed in the 1980s and 1990s. As a result of this, the capacity of Zuidwester has increased six-fold. innogy has invested approximately €150 million in this wind farm, which has been generating electricity at full capacity since early 2017. Numerous companies are participating in Noordoostpolder. A total of 86 turbines with a total capacity of around 430 MW, located nearshore in the IJsselmeer and onshore along the dyke, have been built within the scope of Noordoostpolder.

In December, the Nordsee One offshore wind farm, with a generation capacity of 332 MW, was completed. Nordsee One is located approximately 40 kilometres north of the East Frisian Isle of Juist. Its main owner is the Canadian power utility Northland Power. innogy holds a 13.5 % stake. The wind farm has been generating electricity with all 54 of its turbines since September 2017. However, the construction work lasted until the end of the year. A total of €1.2 billion was invested in the project.

**Starting shot for UK capacity market.** The first twelve-month period of the UK capacity market began on 1 October 2017. During this period, the generators are paid £6.95 per kilowatt for the availability of the generation capacity that they guarantee. The payment was determined in early 2017 by way of an auction, in which all RWE stations involved qualified for a combined 7.9 GW in capacity payments. The bidding procedure involved a total of 59.3 GW in generation capacity, of which 54.4 GW won a contract. It was the fourth auction for the UK capacity market. The three preceding ones related to later periods. The auction procedure is as follows: the state calls for tenders for a certain amount of secured capacity. The participants submit bids as a minimum payment that they require for keeping their plant available during a pre-defined period. For old stations, this period generally lasts for twelve months, and for new stations, it can be extended to 15 years. The auction determines the level of the payment at which supply and demand are in line with each other. This is the amount received by all bidders which have submitted offers for a subsidy at or below that level. Participation in the capacity auctions is voluntary and technology-neutral. Plants that already receive other subsidies do not qualify. The first capacity auction was held in December 2014 and related to the period from October 2018 to September 2019, whereas the two following auctions each covered the next twelve months. This is because the original plan was to begin making payments in October 2018. To avoid supply shortfalls, which may have occurred if hard coal-fired power plants had been forced by the market to shut down, the UK government expedited the start of the capacity market by a year.

**RWE equips Eemshaven and Amer 9 hard coal-fired power stations for biomass co-firing.** In the first half of 2017, we decided to retrofit our hard coal-fired power plants Eemshaven and Amer 9 for co-firing with biomass. The Dutch state approved subsidies of up to €2.6 billion for the two plants. Along with the retrofits, the subsidies will also finance the additional expenses for procuring fuel. We will receive these funds over a period of eight years. The subsidies are allocated so that Eemshaven can achieve a biomass ratio of 15 % and Amer 9 a ratio of 80 % (instead of the previous 35 %). The Eemshaven power station has a net installed capacity of 1,554 MW and has been generating electricity since 2014. Amer 9 has a net capacity of 643 MW and has been in operation since 1993. In the event of a retrofit to achieve the aforementioned ratios, we would produce environmentally friendly electricity using a total of 2.5 million metric tons of biomass per year, allowing us to lower our annual $CO_2$ emissions by roughly 4 million metric tons. We will mainly source the ‘green’ fuel in Europe and America, ensuring that the requirements of the Dutch sustainability protocol for biomass are satisfied. The protocol was developed by the

Dutch government together with energy companies and non-governmental organisations and has been proven in tests.

**Gundremmingen B nuclear power station shut down.** Unit B of the Gundremmingen nuclear power plant was taken offline for good on 31 December 2017. The station's decommissioning is mandated by law as a result of the government's decision in 2011 to phase out nuclear energy. Unit C, which is identical and adjacent to Unit B at the Gundremmingen site, has permission to produce electricity until the end of 2021. RWE and E.ON hold stakes of 75 % and 25 % in the two units, respectively. Gundremmingen B had a net installed capacity of 1,284 MW and was commissioned in 1984 after eight years of construction. Since then, except during brief downtimes for inspection and maintenance, it contributed to the supply of electricity around the clock, both reliably and with zero carbon emissions. At approximately 330 billion kWh, its cumulative generation corresponds to half the amount consumed in Germany in a year.

**Peter Terium leaves innogy.** The Chairman and CEO of innogy SE, Peter Terium, left the company on 19 December 2017 by amicable and mutual agreement with the Supervisory Board. His successor had not yet been chosen when the review of operations was prepared. Uwe Tigges, who is in charge of the human resources office on the Executive Board, is the Board's Interim Chairman. In connection with this personnel decision, the Supervisory Board of innogy SE emphasised that it is generally supportive of the course charted by the Executive Board, but that it wishes that cost discipline be given a higher priority. Mr. Terium had held various positions in the RWE Group since 2003. He assumed chairmanship of the Executive Board of RWE AG in July 2012 and did the same at innogy SE in April 2016. After the successful IPO of our subsidiary in October 2016, he only worked for innogy. Mr. Terium was instrumental in the company advancing to become a trailblazer of sustainable and intelligent energy supply.

## Events after the close of the fiscal year

**UK capacity market auction for 2021/2022: RWE secures payment for 6.6 GW in generation capacity.** Two further auctions for the UK capacity market were held at the beginning of 2018. The focus was on the bidding process for the delivery period from 1 October 2021 to 30 September 2022, which ended after three days on 8 February 2018. With the exception of the Aberthaw hard coal-fired power plant and some small new-build projects, all RWE stations entered in the auction qualified for a capacity payment. Together, they account for 6.6 GW of secured capacity. However, the £8.40/kW capacity payment (before adjustment for inflation) determined by the tender was far below market expectations. Existing stations and new build projects with a total of 74.2 GW in generation capacity entered the auction, 50.4 GW of which received a capacity payment.

A few days before, a further auction took place, relating to the period from 1 October 2018 to 30 September 2019. An auction had already been held for this period in December 2014, at which stations accounting for a combined 49.3 GW (including 8.0 GW of RWE) qualified for a payment of £19.40/kW. The recent auction served the purpose of closing remaining capacity gaps. Additional generation capacity of 5.8 GW was auctioned at a price of £6.00/kW. RWE had participated in the procedure with a small unit, which will not receive a payment.

# 1.6 BUSINESS PERFORMANCE

**The RWE Group achieved its earnings goals for 2017. This was mainly thanks to a greatly improved performance in energy trading. In addition, we posted above-average income from the commercial optimisation of our power plant deployment. This is why our adjusted EBITDA was actually slightly higher than anticipated, totalling €5.8 billion, whereas adjusted net income was at the upper end of the forecast range, amounting to €1.2 billion. However, the encouraging overall picture should not belie the fact that the margins of our coal-fired and nuclear power stations have deteriorated further. The significant decline in electricity prices of earlier years came to bear here. However, we slightly cushioned the margin drops through our ongoing efficiency programme.**

## Business performance in 2017: What we forecast and what we accomplished

| **Outlook vs. actual** | 2016 actual € million | Outlook for fiscal 2017[1] | 2017 actual € million | Forecast fulfilled? |
|---|---|---|---|---|
| Adjusted EBITDA | 5,403 | €5.4 billion to €5.7 billion | 5,756 | Actual > Outlook |
| Lignite & Nuclear | 1,079 | Significantly below previous year | 671 | Yes |
| European Power | 377 | Significantly below previous year | 463 | Actual > Outlook |
| Supply & Trading | –139 | Significantly above previous year | 271 | Yes |
| innogy | 4,203 | Moderately above previous year | 4,331 | Yes |
| Adjusted net income | 777 | €1.0 billion to €1.3 billion | 1,232 | Yes |

1 See page 87 et seq. of the 2016 Annual Report and page 13 of the Interim statement on the first quarter of 2017. Qualifiers such as 'moderately' or 'significantly' indicate percentage deviations from the previous year's figures.

**Electricity production 6 % down on previous year.** In the financial year that just came to a close, the RWE Group produced 202.2 billion kWh of electricity. In 2017, 37 % of our electricity generation was from lignite, 27 % from gas, 15 % from both hard coal and nuclear, and 6 % from renewables. Power production was 6 % lower year on year. The contribution made by hard coal dropped considerably. Unfavourable market conditions played a role. Furthermore, the Voerde A/B hard coal-fired power station was shut down as of 1 April 2017. The two units each had a net installed capacity of 695 MW and belonged to Steag (75 %) and RWE (25 %). As the sole marketer, we disclosed its electricity as part of our generation. There were no major changes in the amounts of electricity that we generated from other energy sources. Our gas-fired power plants increased their production slightly, because market conditions improved in Continental Europe. In the United Kingdom, however, some of these stations were taken offline for extended periods of time for retrofits. We also posted a marginal gain in electricity generation from renewables. This was mainly because innogy commissioned new wind turbines and utilisation of existing wind power capacity rose due to the weather. Conversely, dry weather curtailed the production output of German hydroelectric power stations. Volumes also shrank due to the sale of the 33.3 % stake in the wind energy producer Zephyr Investments Limited in July 2016 (see 2016 Annual Report, page 40): based on contractually agreed electricity purchases, our reporting had included a portion of the generation and capacity of Zephyr's UK wind farm portfolio. In lignite-based power generation, opposing factors almost neutralised each other. There was a decline in outages owing to damage at power plants and scheduled maintenance. At the same time, however, two lignite units with net installed capacities of 284 MW and 278 MW were decommissioned as of 1 October 2017 and put into legally-mandated standby (see page 20).

In addition to our in-house generation, we procure electricity from external suppliers. In the year being reviewed, these purchases totalled 76.0 billion kWh (previous year: 65.3 billion kWh). In-house generation and power purchases combined for 278.2 billion kWh in total electricity production (previous year: 281.4 billion kWh).

| Power generation | Gas | | Lignite | | Hard coal | | Nuclear | | Renewables | | Pumped storage, other | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Billion kWh | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Lignite & Nuclear | – | – | 74.2 | 74.3 | – | – | 30.3 | 30.1 | – | – | 0.7 | 0.4 | 105.2 | 104.8 |
| European Power | 52.9 | 52.6 | – | – | 29.3 | 44.2 | – | – | 1.1 | 1.1 | 2.4 | 2.6 | 85.7 | 100.5 |
| of which: | | | | | | | | | | | | | | |
| Germany[1] | 7.4 | 6.3 | – | – | 13.3 | 22.4 | – | – | 0.7 | 0.7 | 2.4 | 2.6 | 23.8 | 32.0 |
| United Kingdom | 32.4 | 36.2 | – | – | 2.6 | 6.7 | – | – | 0.4 | 0.4 | – | – | 35.4 | 43.3 |
| Netherlands/Belgium | 9.3 | 6.9 | – | – | 13.4 | 15.1 | – | – | – | – | – | – | 22.7 | 22.0 |
| innogy | 1.0 | 0.7 | – | – | 0.1 | 0.1 | – | – | 10.2 | 10.0 | – | – | 11.3 | 10.8 |
| **RWE Group** | **53.9** | **53.3** | **74.2** | **74.3** | **29.4** | **44.3** | **30.3** | **30.1** | **11.3** | **11.1** | **3.1** | **3.0** | **202.2** | **216.1** |

1 Including electricity from generation assets not owned by RWE that we can deploy at our discretion on the basis of long-term agreements. In 2017, it amounted to 6.3 billion kWh (previous year: 10.6 billion kWh).

**One of Europe's biggest power producers, with 43.3 GW in generation capacity.** At the end of 2017, we had a total installed power generation capacity of 43.3 GW, giving us a leading market position in Europe. This figure includes the two lignite units that we put into standby and mothballed stations which are not currently operated for economic reasons. It also includes plants owned by third parties that we can deploy at our discretion on the basis of long-term agreements. Our generation capacity declined by 3.1 GW last year. This was primarily because we shut down the Voerde A/B hard coal-fired power station (1,390 MW) as of 1 April 2017 and the Gundremmingen B nuclear power station (1,284 MW) as of 31 December 2017. At innogy, the closure of two hard coal units of the Saarland-based subsidiary VSE led to a drop in capacity, whereas the commissioning of new wind turbines had a counteracting effect. The sale of the Hungarian lignite-based electricity generator Mátra contractually agreed in December 2017 (see page 37) did not affect the disclosed generation capacity, as the transaction had not closed as of the balance-sheet date.

In terms of generation capacity, gas is our major source of energy. At the end of 2017, it accounted for 35 %. Lignite was in second place with 25 %, followed by hard coal, with 17 %. Renewables and nuclear energy had a share of 10 % and 6 %, respectively. The geographic focus of our generation business is Germany, where 59 % of our installed capacity is located. The United Kingdom and the Netherlands follow, accounting for shares of 22 % and 13 %, respectively.

| **Power generation capacity** As of 31 Dec 2017, in MW | Gas | Lignite | Hard coal | Nuclear | Renewables | Pumped storage, other | Total | Total 31 Dec 2016 |
|---|---|---|---|---|---|---|---|---|
| Lignite & Nuclear | 460 | 11,017 | – | 2,770 | 23 | 27 | 14,297 | 15,764 |
| European Power | 14,382 | – | 7,292 | – | 261 | 2,792 | 24,727 | 26,116 |
| of which: | | | | | | | | |
| Germany[1] | 3,867 | – | 3,675 | – | 55 | 2,528 | 10,125 | 11,518 |
| United Kingdom | 6,662 | – | 1,560 | – | 55 | 264 | 8,541 | 8,546 |
| Netherlands/Belgium | 3,066 | – | 2,057 | – | 151 | – | 5,274 | 5,265 |
| Turkey | 787 | – | – | – | – | – | 787 | 787 |
| innogy | 234 | – | 10 | – | 3,864 | 137 | 4,245 | 4,531 |
| **RWE Group** | **15,076** | **11,017** | **7,302** | **2,770** | **4,148** | **2,956** | **43,269** | **46,411** |

1 Including generation capacity not owned by RWE that we can deploy at our discretion on the basis of long-term agreements. As of the end of 2017, it amounted to 2,986 MW (previous year: 4,373 MW).

**Significant decline in $CO_2$ emissions.** Last year, our power stations emitted 132.4 million metric tons of carbon dioxide. Our own plants accounted for 129.3 million metric tons, and the remaining 3.1 million metric tons came from contractually secured capacity. Compared to 2016, our $CO_2$ emissions declined by 15.9 million metric tons, or 11 %. Specific emissions, i. e. carbon dioxide emissions per megawatt hour of electricity generated, also declined, dropping from 0.686 to 0.655 metric tons. This was mainly because last year we produced much less electricity from coal.

Since the beginning of the third emissions trading period, which started on 1 January 2013, the countries of Western Europe have only allocated free emission allowances to energy utilities in exceptional cases. Of the 131.0 million metric tons of carbon dioxide that we emitted in EU countries in 2017, we were only able to cover 1.6 million metric tons with such allocations. In the previous year, we had received free certificates for 4.5 million metric tons, more than half of which were for unit 5 of the Hamborn CHP station, which has since been sold.

| **Emissions balance** | $CO_2$ emissions | | Free allocation of $CO_2$ certificates | | Shortage of $CO_2$ certificates | |
|---|---|---|---|---|---|---|
| Million metric tons of $CO_2$ | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Lignite & Nuclear | 88.5 | 88.6 | 0.7 | 0.8 | 87.8 | 87.8 |
| European Power[1] | 43.3 | 59.0 | 0.6 | 3.4 | 41.3 | 54.4 |
| of which: | | | | | | |
| Germany[2] | 14.1 | 24.7 | 0.6 | 3.4 | 13.5 | 21.3 |
| United Kingdom | 14.0 | 19.1 | – | – | 14.0 | 19.1 |
| Netherlands/Belgium | 13.8 | 14.0 | – | – | 13.8 | 14.0 |
| innogy | 0.6 | 0.7 | 0.3 | 0.3 | 0.3 | 0.4 |
| **RWE Group** | **132.4** | **148.3** | **1.6** | **4.5** | **129.4** | **142.6** |

1 Includes the $CO_2$ emissions of our gas-fired power station in the Turkish town of Denizli, which amounted to 1.4 million metric tons in 2017 (previous year: 1.2 million metric tons). As Turkey does not participate in European emissions trading, we do not need emission allowances for these volumes.
2 Including generation capacity not owned by RWE that we can deploy at our discretion on the basis of long-term contracts. In 2017, these stations emitted a total of 3.1 million metric tons of $CO_2$ (previous year: 7.1 million metric tons).

**91.3 million metric tons of lignite produced.** The fuel used by our power stations is procured by our generation companies either directly on the market or via RWE Supply & Trading. We source lignite from proprietary opencast mines. In our main mining region, which is west of Cologne, we produced 91.3 million metric tons of lignite last year (previous year: 90.5 million metric tons), of which 79.3 million metric tons were used to generate electricity in our power plants. The remainder was used to manufacture refined products (e. g. lignite briquettes) and, to a limited extent, to generate process steam and district heat.

| External electricity sales volume | Residential and commercial customers | | Industrial and corporate customers | | Distributors | | Total | |
|---|---|---|---|---|---|---|---|---|
| Billion kWh | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Lignite & Nuclear | 0.2 | 0.2 | – | – | 12.0 | 12.5 | 12.2 | 12.7 |
| European Power | – | – | 2.2 | 2.4 | 5.2 | 5.0 | 7.4 | 7.4 |
| Supply & Trading | – | – | 35.6 | 30.3 | – | – | 35.6[1] | 39.3[1] |
| innogy | 50.4 | 52.3 | 70.7 | 73.5 | 84.8 | 79.3 | 205.9 | 205.1 |
| **RWE Group[2]** | **50.6** | **52.6** | **108.5** | **106.2** | **102.0** | **96.8** | **261.1** | **264.6** |

1 Including volume effects of the sale of self-generated electricity on the wholesale market. If these sales volumes exceed the purchases made for supply purposes, the difference is recognised in the sales volume. This was not the case in fiscal 2017, whereas in 2016, there was a positive balance of 9.0 billion kWh.
2 Including volumes subsumed under 'other, consolidation'.

**Electricity sales volume slightly down year on year.** In the year under review, RWE sold 261.1 billion kWh of electricity to external customers, slightly less than in 2016. One reason for this decline was that our generation output shrank and RWE Supply & Trading therefore sold less electricity from RWE power plants on the wholesale market (see footnote 1 to the above table). Furthermore, innogy lost customers in the residential and corporate retail business, above all in the United Kingdom and the Netherlands. However, our subsidiary offset these sales shortfalls by adding new customers and intensifying its supply activities with existing customers at German distributors.

| External gas sales volume | Residential and commercial customers | | Industrial and corporate customers | | Distributors | | Total | |
|---|---|---|---|---|---|---|---|---|
| Billion kWh | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Supply & Trading | – | – | 26.8 | 24.7 | 0.7 | 0.3 | 27.5 | 25.0 |
| innogy | 100.6 | 102.9 | 67.6 | 83.1 | 58.4 | 54.1 | 226.6 | 240.1 |
| **RWE Group** | **100.6** | **102.9** | **94.4** | **107.8** | **59.1** | **54.4** | **254.1** | **265.1** |

**Gas supply volume down 4 %.** At 254.1 billion kWh, gas sales were 4 % lower year on year, despite marginal gains in the Supply & Trading division. A major reason for this was that industrial and corporate customers served by innogy switched suppliers. This comes to bear especially in sales volumes in Eastern Europe. Our subsidiary also suffered declines in volumes in the residential sector due to competition. However, these were moderate and predominantly related to the Dutch and UK businesses. Similar to electricity, the aforementioned drops in sales were contrasted by higher deliveries to German distributors.

| External revenue<br>€ million | 2017 | 2016 | +/–<br>% |
|---|---|---|---|
| Lignite & Nuclear | 1,176 | 1,193 | –1.4 |
| European Power | 728 | 774 | –5.9 |
| Supply & Trading | 3,189 | 3,646 | –12.5 |
| innogy | 39,475 | 40,149 | –1.7 |
| Other, consolidation | 17 | 71 | –76.1 |
| **RWE Group** | **44,585** | **45,833** | **–2.7** |
| Natural gas tax/electricity tax | 2,151 | 2,243 | –4.1 |
| **RWE Group (excluding natural gas tax/electricity tax)** | **42,434** | **43,590** | **–2.7** |

**External revenue slightly lower year on year.** The RWE Group generated €44,585 million in external revenue. This figure includes natural gas and electricity tax. Compared to the preceding year, our revenue declined by 3 %. €31,665 million stemmed from the sale of electricity and €10,012 million from the sale of gas. We recorded declines of 3 % for both products, primarily due to the drop in supply volumes. The development of revenue was slightly affected by changes in foreign exchange rates. On average, sterling, our most important foreign currency, dropped from €1.22 to €1.14. As a consequence, revenue generated in the UK was lower when converted to euros.

| Adjusted EBITDA<br>€ million | 2017 | 2016 | +/–<br>% |
|---|---|---|---|
| Lignite & Nuclear | 671 | 1,079 | –37.8 |
| European Power[1] | 463 | 377 | 22.8 |
| Supply & Trading | 271 | –139 | 295.0 |
| innogy | 4,331 | 4,203 | 3.0 |
| Other, consolidation | 20 | –117 | 117.1 |
| **RWE Group** | **5,756** | **5,403** | **6.5** |

1 Thereof UK: €205 million (2017) and €270 million (2016).

**Adjusted EBITDA of €5.8 billion slightly higher than forecast.** In the fiscal year that just ended, we achieved adjusted EBITDA of €5,756 million. Compared to 2016, this represents a rise of 7 %, primarily due to a significantly improved performance in energy trading. In addition, costs incurred to operate and maintain distribution networks dropped, while declining generation margins weighed on earnings. The outlook that we published in March 2017 envisaged adjusted EBITDA in the range of €5.4 billion to €5.7 billion (see 2016 Annual Report, page 87 et seq.). We closed the reporting year slightly above this range in part due to unexpectedly high revenue from the commercial optimisation of our power plant dispatch.

The following is a breakdown by segment:

- Lignite & Nuclear: Here, adjusted EBITDA experienced a significant decline as expected, dropping by 38 % to €671 million. The main reason for this is that we realised lower wholesale prices for the generation from our lignite-fired and nuclear power stations than in 2016. We had already sold forward nearly all of the production of these plants in earlier years. Another reason for the decline in earnings was that in 2016 adjusted EBITDA included one-off income from the reversal of mining provisions. Moreover, the earnings of Mátra in Hungary deteriorated. Due to the company's impending sale, we stopped recognising the earnings it achieved after 1 April 2017 in adjusted EBITDA, recording them instead in the non-operating result. A positive effect was felt from the fact that we no longer have to pay a nuclear fuel tax. In addition, we benefited from the resolute continuation of our efficiency-enhancement programme.

- European Power: Adjusted EBITDA in this segment rose by 23 % to €463 million. We therefore exceeded the March forecast, which had envisaged a significant decline. Two factors were instrumental in this: we achieved above-average earnings from the commercial optimisation of our power plant deployment, and the sale of the former Littlebrook power plant site resulted in a book gain, which we had not planned (see page 38). The rise in adjusted EBITDA can also be traced back to efficiency-enhancing measures. Whereas the market conditions for our hard coal-fired power stations worsened, they improved for our gas-fired power plants. Our accrual of provisions for impending losses from an electricity procurement contract in the preceding year had a major effect on the development of earnings. However, we also recorded exceptional income in 2016: it stemmed in part from property sales, the reversal of restructuring provisions, and the final settlement of damage caused to the new hard coal-fired power plant at Hamm (Westphalia).

- Supply & Trading: Here, adjusted EBITDA grew from –€139 million to €271 million. The significant rise in earnings we had forecast was therefore achieved. The main reason for this was the normalisation of our trading performance compared to the extremely weak performance in the prior year. Moreover, we posted substantial earnings in the gas business. A counteracting effect was felt because adjusted EBITDA for 2016 included our profit on the sale of the Lynemouth hard coal-fired power station in the United Kingdom (see page 22).

- innogy: At €4,331 million, adjusted EBITDA of our subsidiary met our forecast, rising by 3 % compared to 2016. The grid business was the main contributor: in Germany, network operation and maintenance costs declined. In addition, the reversal of provisions resulted in a profit, whereas 2016 was burdened by the accrual of provisions. Moreover, in the Czech Republic, transit volumes in the gas distribution network were above average in 2017 due to the weather. innogy also posted a gain in renewable energy, albeit only to a moderate extent. One-off income resulting from the revaluation of our subsidiary's shares in the Triton Knoll offshore wind project played a role. The commissioning of new wind turbines and improved wind conditions also contributed to the increase in earnings. However, this was contrasted by negative effects of the reduction in the use of German hydroelectric power stations and the weak British pound. Furthermore, the previous year's figure included one-off income from minor divestments. Adjusted EBITDA in retail declined slightly, in part due to a drop in income from the reversal of provisions for legal risks in Germany. Efficiency-improving measures provided relief in the UK retail business, which is run by the innogy subsidiary npower. However, npower continued to have difficulty in coping with the high competitive pressure. Many of the company's customers switched providers or could only be retained by offering them contracts with more favourable conditions. In addition, there was a rise in upfront costs. An increase in standard tariffs for electricity and gas, which became effective in the middle of March, only partially offset the aforementioned burdens.

| **Adjusted EBIT**<br>€ million | 2017 | 2016 | +/–<br>% |
|---|---|---|---|
| Lignite & Nuclear | 399 | 664 | –39.9 |
| European Power[1] | 155 | –37 | 518.9 |
| Supply & Trading | 265 | –145 | 282.8 |
| innogy | 2,816 | 2,735 | 3.0 |
| Other, consolidation | 11 | –135 | 108.1 |
| **RWE Group** | **3,646** | **3,082** | **18.3** |

1 Thereof UK: €40 million (2017) and €97 million (2016).

**Adjusted EBIT characterised by significant drop in operating depreciation.** Adjusted EBIT rose by 18 % to €3,646 million. The percentage increase was therefore much bigger than for adjusted EBITDA. The backdrop to this is that adjusted EBIT includes operating depreciation and amortisation, which decreased considerably. This drop is largely because we recognised substantial impairments in the 2016 consolidated financial statements (see 2016 Annual Report, page 48) and the asset base for scheduled depreciation was therefore lower.

| **Non-operating result**<br>€ million | 2017 | 2016 | +/–<br>€ million |
|---|---|---|---|
| Capital gains/losses | 118 | 94 | 24 |
| Impact of derivatives on earnings | –719 | –799 | 80 |
| Goodwill impairment losses | –479 | – | –479 |
| Other | 1,241 | –5,956 | 7,197 |
| **Non-operating result** | **161** | **–6,661** | **6,822** |

**Reconciliation to net income: substantial exceptional income from the nuclear fuel tax refund.** The reconciliation from adjusted EBIT to net income was characterised by the positive effects we felt from the refund of the German nuclear fuel tax. However, opposing effects of impairments also came to bear.

The non-operating result, in which we recognise certain one-off effects which are not related to operations or to the period being reviewed, improved by €6,822 million to €161 million. Its components developed as follows:

- Book gains on the disposal of investments and assets totalled €118 million (previous year: €94 million). This includes income we achieved through the sale of Unit 5 of the Hamborn CHP station in Germany and stakes in two residential property companies in the Rhenish lignite mining region. More detailed information on the aforementioned transactions can be found on page 37.

- Changes in the value of certain derivatives which we use to hedge against price fluctuations reduced earnings by €719 million (previous year: €799 million). Pursuant to International Financial Reporting Standards (IFRS), derivatives are accounted for at fair value at the corresponding balance-sheet date, whereas the transactions which are hedged with the derivatives are only recognised as a profit or loss when they are realised. These timing differences result in short-term effects on earnings, which are neutralised over time.

- Unlike in the prior year, we recognised a goodwill impairment loss of €479 million. It relates to innogy's UK retail business, the medium-term earnings prospects of which have worsened.

- The earnings stated under 'other' improved by €7,197 million to €1,241 million. The main reason was that the financial statements for the preceding year included significant one-off burdens, including impairments of €4.3 billion for power plants and other property, plant and equipment. We also recognised impairment losses in 2017 primarily related to the Hungarian lignite-based power generator Mátra. However, at €0.3 billion, they were far below the figure recorded in the prior year. Another factor contributing to the improvement in earnings was that the German government refunded us the €1.7 billion in nuclear fuel tax levied from 2011 to 2016 after the German Constitutional Court declared the levy null and void (see page 37). In addition, splitting the Conventional Power Generation division into the Lignite & Nuclear and European Power segments led to one-off effects, which were positive on balance (see page 107 in the Notes).

| Financial result<br>€ million | 2017 | 2016 | +/–<br>€ million |
|---|---|---|---|
| Interest income | 220 | 271 | –51 |
| Interest expenses | –907 | –914 | 7 |
| **Net interest** | **–687** | **–643** | **–44** |
| Interest accretion to non-current provisions | –261 | –1,288 | 1,027 |
| Other financial result | 197 | –297 | 494 |
| **Financial result** | **–751** | **–2,228** | **1,477** |

Our financial result improved by €1,477 million to –€751 million. Its components changed as follows:

- Net interest decreased by €44 million to –€687 million. Last year, we sold a portion of the securities we held in order to pay into the nuclear energy fund, resulting in a reduction in interest income. Furthermore, hybrid bond buybacks in October 2017 led to one-off expenses because the repurchase prices were above the issue prices. A positive effect was felt from the fact that we redeemed several bonds with relatively high coupons in 2016 and 2017 and that we took advantage of very low market interest rates when raising debt capital.

- The interest accretion to non-current provisions improved by €1,027 million to –€261 million. This is in part due to the contribution to the nuclear energy fund, as this caused the level of the provisions that accrue interest to become much lower. Furthermore, we apply a lower real discount rate to the portion of the nuclear energy obligations remaining with RWE. This is one of the reasons why the interest accretion was lower. The reduction in interest had already been considered in the 2016 consolidated financial statements by a corresponding increase in provisions and had been reflected as a negative one-off effect in the interest accretion.

- The 'other financial result' rose by €494 million to €197 million. This item includes the interest which we received from the German government on the nuclear fuel tax which has been refunded. This played a major role in improving earnings. Moreover, we booked much lower losses from the sale of securities than in 2016.

| Reconciliation to net income | | 2017 | 2016 | +/–<br>% |
|---|---|---|---|---|
| **Adjusted EBITDA** | € million | **5,756** | **5,403** | **6.5** |
| Operating depreciation, amortisation and impairment losses | € million | –2,110 | –2,321 | 9.1 |
| **Adjusted EBIT** | € million | **3,646** | **3,082** | **18.3** |
| Non-operating result | € million | 161 | –6,661 | 102.4 |
| Financial result | € million | –751 | –2,228 | 66.3 |
| **Income before taxes** | € million | **3,056** | **–5,807** | **152.6** |
| Taxes on income | € million | –741 | 323 | –329.4 |
| **Income** | € million | **2,315** | **–5,484** | **142.2** |
| of which: | | | | |
| Non-controlling interests | € million | 373 | 167 | 123.4 |
| RWE AG hybrid capital investors' interest | € million | 42 | 59 | –28.8 |
| **Net income/income attributable to RWE AG shareholders** | € million | **1,900** | **–5,710** | **133.3** |
| **Adjusted net income** | € million | **1,232** | **777** | **58.6** |
| Earnings per share | € | 3.09 | –9.29 | 133.3 |
| Adjusted net income per share | € | 2.00 | 1.26 | 58.7 |
| Number of shares outstanding (annual average) | millions | 614.7 | 614.7 | – |
| Effective tax rate | % | 24 | 6 | – |

Income before tax grew by €8,863 million to €3,056 million. Our effective tax rate was 24 % and therefore below the (theoretical) standard rate of 32.5 %. A major factor was that we were able to offset tax losses from previous years, for which no deferred tax assets were recognised, against current earnings. Earlier, we did not believe that we could use the loss carryforwards for an extended period of time due to a lack of tax gains. However, this became possible in 2017 because the nuclear fuel tax refund made a substantial contribution to earnings. The low effective tax rate was also due to the fact that we booked tax income for earlier years following tax audits. A counteracting impact was felt from the goodwill impairment to the UK retail business, which reduced earnings, but did not affect taxes.

After taxes, we generated income of €2,315 million (previous year: –€5,484 million). Non-controlling interests rose by €206 million to €373 million, partly due to the fact that 23.2 % of the shares in innogy have been held by third parties since the IPO. The impairments recognised at Mátra in Hungary and in innogy's UK retail business had a counteracting impact.

Hybrid capital investors accounted for €42 million of our earnings (previous year: €59 million). This sum corresponds to our finance costs after tax. It relates solely to the £750 million hybrid bond, which is classified as equity under IFRS, because it has a theoretically perpetual tenor. The remainder of RWE's hybrid capital is classified as debt, and we record interest accrued on it in the financial result. The decline in the hybrid capital investors' interest is largely because the costs of hybrid financing reduced taxes in the year under review, whereas this was not the case in 2016.

The aforementioned developments resulted in significantly improvemed net income of €1,900 million (previous year: –€5,710 million). Based on the 614.7 million in RWE shares outstanding, earnings per share amounted to €3.09 (previous year: –€9.29).

| **Reconciliation to adjusted net income**<br>€ million | Original figures 2017 | Adjustment | Adjusted figures 2017 | Adjusted figures 2016 |
|---|---|---|---|---|
| **Adjusted EBIT** | **3,646** | **–** | **3,646** | **3,082** |
| Non-operating result | 161 | –161 | – | – |
| Financial result | –751 | –309 | –1,060 | –1,818 |
| **Income before taxes** | **3,056** | **–470** | **2,586** | **1,264** |
| Taxes on income | –741 | 111 | –630 | –37 |
| **Income** | **2,315** | **–359** | **1,956** | **1,227** |
| of which: | | | | |
| Non-controlling interests | 373 | 309 | 682 | 391 |
| RWE AG hybrid capital investors' interest | 42 | – | 42 | 59 |
| **Net income/income attributable to RWE AG shareholders** | **1,900** | **–668** | **1,232** | **777** |

**Adjusted net income 59 % up year on year.** Adjusted net income totalled €1,232 million, which was at the upper end of the forecast range of €1.0 billion to €1.3 billion. It differs from net income in that the non-operating result and further material special items along with their impact on income taxes are deducted from it. For example, adjusted net income does not contain the effects of the nuclear fuel tax refund. It grew considerably compared to the figure recorded a year before (€777 million). The improvement in operating earnings and the financial result came to bear here, whereas taxes on income and non-controlling interests had counteracting effects.

| Capital expenditure on property, plant and equipment and on intangible assets<br>€ million | 2017 | 2016 | +/–<br>€ million |
|---|---|---|---|
| Lignite & Nuclear | 269 | 267 | 2 |
| European Power | 147 | 66 | 81 |
| Supply & Trading | 7 | 4 | 3 |
| innogy | 1,839 | 1,679 | 160 |
| Other, consolidation | –2 | 11 | –13 |
| **RWE Group** | **2,260** | **2,027** | **233** |

| Capital expenditure on financial assets<br>€ million | 2017 | 2016 | +/–<br>€ million |
|---|---|---|---|
| Lignite & Nuclear | 1 | 1 | – |
| European Power | 1 | 4 | –3 |
| Supply & Trading | 30 | 56 | –26 |
| innogy | 327 | 290 | 37 |
| Other, consolidation | 10 | 4 | 6 |
| **RWE Group** | **369** | **355** | **14** |

**More capital spent on power stations, IT and financial assets.** The RWE Group's capital expenditure totalled €2,629 million in the financial year that just ended. This was 10 % above the previous year's figure and within the anticipated range of €2.5 billion to €3.0 billion. Our capital expenditure on property, plant and equipment and intangible assets totalled €2,260 million, 11 % more than in 2016. A large portion of these funds was used to maintain and modernise opencast mining equipment, power stations, grids and IT infrastructure, expand renewables and develop innovative products and services. The increase over 2016 is due in part to retrofits to power stations in the United Kingdom. Furthermore, innogy stepped up its capital expenditure on IT. At €369 million, spending on financial assets was 4 % higher than in 2016. It was mostly attributable to innogy, the single-largest transaction of which was the acquisition of Belectric Solar & Battery (see page 38).

| Workforce[1] | 31 Dec 2017 | 31 Dec 2016 | +/– % |
|---|---|---|---|
| Lignite & Nuclear | 13,132 | 12,980 | 1.2 |
| European Power | 2,656 | 2,672 | –0.6 |
| Supply & Trading | 1,156 | 1,086 | 6.4 |
| innogy | 42,393 | 40,636 | 4.3 |
| Other[2] | 210 | 1,278 | –83.6 |
| **RWE Group** | **59,547** | **58,652** | **1.5** |

1 Converted to full-time positions.
2 At 31 December 2017, almost only employees of the holding company, RWE AG, were stated here. The previous year's figure included employees of the in-house service providers RWE Group Business Services (922) and RWE Service (243), which have since been dissolved.

**Additional personnel due to the acquisition of Belectric.**
As of 31 December 2017, the RWE Group had 59,547 people on its payroll, of which 35,344 worked at sites in Germany and 24,203 at locations in other countries. Part-time positions were calculated in these figures on a pro-rata basis. Headcount rose slightly compared to the end of 2016: 509 employees were added in Germany, and 386 were added abroad. One of the reasons was that innogy acquired Belectric Solar & Battery at the beginning of 2017. At the segment level, staff figures were also affected by intragroup transfers. Major changes resulted from folding RWE Group Business Services and RWE Service ('other' item) into an RWE subsidiary and transferring most of their personnel to operating Group companies. The headcount does not include young adults in professional training programmes. At the end of 2017, 2,215 young adults were learning a profession at RWE, nearly as many as in the previous year.

# 1.7 FINANCIAL POSITION AND NET WORTH

**The RWE Group's financial position and net worth improved further in the financial year that just ended. The refund of the nuclear fuel tax by the German government played an important role in this. It helped us to reduce net debt and increase our equity ratio. However, our contribution to the German nuclear energy fund also placed a heavy financial burden on us in 2017. Therefore, our operating cash flow was negative. Last year, we successfully completed the transfer of debt from RWE AG to innogy. In addition, our subsidiary established the last preconditions for being able to refinance itself independently through banks and on the capital market.**

**Financing of the RWE Group.** Responsibility for financing within the RWE Group has rested on two shoulders since the IPO of innogy in October 2016: innogy obtains financing for the business transferred to it, while RWE AG limits itself to financing the activities which remain under its operational management. Companies which are controlled by RWE AG or innogy SE only raise debt capital in specific cases, for example if it is more advantageous economically to make use of local credit and capital markets. RWE AG and innogy SE act as co-ordinators when subsidiaries assume a liability. This allows for the central management and monitoring of financial risks. Moreover, this strengthens our position when negotiating with banks, business partners, suppliers and customers.

**Flexible tools for raising debt capital.** As part of the reorganisation of the RWE Group, we laid the groundwork to ensure that RWE AG and innogy SE can fulfil their financing tasks completely independently of each other. This process was concluded in October 2017. Both companies have a range of tools which they can use in addition to cash flows from operating activities to meet their financing needs.

- RWE AG's and innogy's Debt Issuance Programmes (DIPs) give the companies latitude in procuring debt capital on the capital market over the long term. A DIP is a framework prospectus for the flexible issuance of senior bonds. RWE AG updated its programme in May 2017: the new DIP has a total volume of €10 billion. It is the successor programme to our former DIP, which had a volume of €30 billion, related to the RWE Group as a whole and was suspended in 2016. Since April 2017, innogy has had its own DIP, which allows a total of €20 billion in senior bonds to be issued. Under this programme, the company issued two bonds with an aggregate volume of €1.6 billion last year (see page 54).

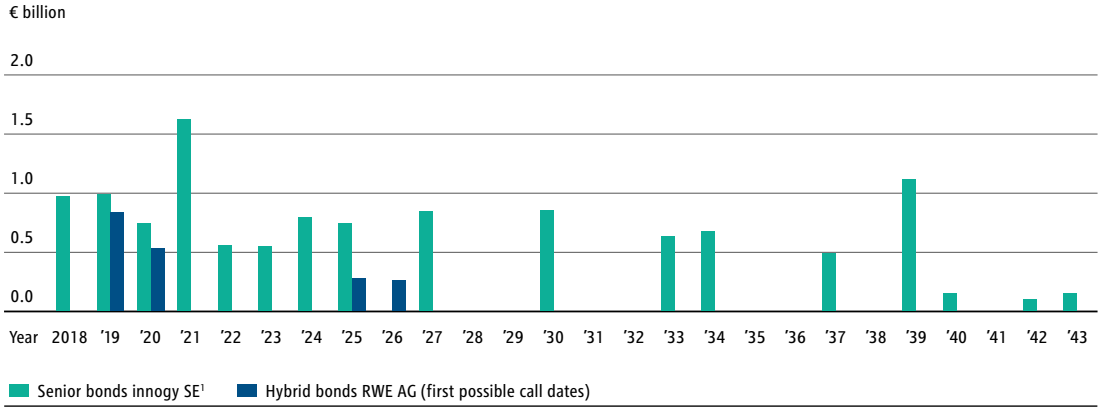
- RWE AG has a Commercial Paper Programme for short-term refinancing that enables it to raise funds equivalent to up to US$5 billion on the money market. We used a maximum of only €0.7 billion of this headroom in the past financial year. Since the end of 2016, innogy has also had a Commercial Paper Programme. It has a funding framework of €3 billion. Up to €1.5 billion thereof was used.

- Furthermore, RWE AG and innogy can resort to lines of credit granted them by international bank syndicates. These types of instrument serve to secure liquidity. Until recently, RWE AG had a credit line agreement with a volume of €4 billion, of which €1.5 billion had been transferred to innogy on an intra-group basis. On 6 October 2017, our subsidiary then took out its own line of credit, with a volume of €2 billion. It expires in October 2022, but can be prolonged twice for a year at a time. Moreover, the credit line can be topped up by €1 billion. Both options are subject to the approval of the consortium of banks. innogy cancelled its participation in RWE AG's existing line of credit when it concluded the new credit line agreement. RWE AG's existing credit line was adjusted thereafter and now has a volume of €3 billion. It expires in March 2021. So far, neither RWE AG nor innogy have made use of their lines of credit.

- Additional financial headroom for operating activities is provided by sureties which RWE AG and innogy SE have been granted by banks. A surety is a security or declaration of a guarantee by a bank on commission from the customer. The purpose is to collateralise transactions.

The aforementioned financing instruments do not contain conditions mandating compliance with specific limits in terms of leverage or capital structure. Their use is not subject to a specific rating.

**RWE Group bonds: maturities/first possible call dates (as of 31 Dec 2017)**




1 A small residual amount of a senior bond transferred to innogy remained with RWE AG; see commentary in the text.

**innogy takes over the bulk of RWE's capital market debt.** As part of the Group's financial reorganisation, innogy assumed most of RWE AG's capital market debt. We laid the foundation for this in the run-up to the IPO of innogy. The debt transfer was completed in the middle of last year.

In relation to the publicly-traded senior bonds issued by our former Dutch subsidiary RWE Finance B.V., the transfer was effected at the end of 2015 when we sold the issuer to a predecessor of innogy SE. Despite this sale, however, RWE AG was still the guarantor of the bonds at that point in time. In relation to the private placements made by RWE AG itself, the debt was initially transferred only in economic terms. To do this, internal lending agreements were concluded, in which the obligations of RWE AG to service the bonds were mirrored by corresponding payment obligations of innogy to RWE AG. Loans of €645 million and £350 million from the European Investment Bank (EIB) were economically allocated to innogy in the same manner. Above and beyond this, our subsidiary assumed obligations amounting to €2.9 billion vis-à-vis RWE AG, which cover the majority of the liabilities from RWE's hybrid bonds. The above measures were completed before innogy was listed on the stock market in October 2016.

Immediately after the public listing, we took the necessary steps to implement the debt transfer externally in relation to creditors. In early 2017, innogy replaced RWE AG as the guarantor for the public senior bonds, and in relation to the private issues, as the debtor. This was preceded by a vote of the bondholders, which is provided for in such cases by the German Debt Securities Act. The quorums and majorities necessary for a change in guarantor and debtor were achieved. Two senior bonds to which the Act could not be applied were transferred by a bond swap in December 2016. In one case, involving a bond with a volume of €500 million maturing in 2037, a small residual amount remained with RWE AG. Our two EIB loans were transferred to innogy in July 2017 after receiving creditor approval. On completion of the debtor exchange, the corresponding intra-group loans were redeemed or reduced.

**Bond volume drops to €14.0 billion.** At the end of 2017, the Group had bonds with a total nominal volume of an equivalent of €14.0 billion outstanding, compared to €14.7 billion a year before. The total of 24 issues are denominated in euros, sterling, US dollars and yen. We concluded hedges to manage our currency exposure. Taking such transactions into account, the RWE Group's debt broke down into 62 % in euros and 38 % in sterling on the balance-sheet date. At the end of the year, our senior bonds outstanding had an average remaining maturity of nine years.

The nominal volume of RWE AG hybrid bonds declined by €2.0 billion to €1.9 billion. This was mainly because we redeemed three bonds on the earliest possible date during the financial year that just ended: these were bonds of CHF 250 million (5.25 % coupon; redeemed in April), CHF 150 million (5 %; July) and US$1 billion (7 %; October). In addition to the redemptions, we bought back hybrid bonds with a total nominal value equivalent to €585 million in October of last year. Of this sum, €161 million was allocable to our €700 million bond (2.75 % coupon; earliest possible redemption in 2020), €268 million to our €550 million bond (3.5 %; 2025) and US$183 million to our US$500 million bond (6.625 %; 2026). This was preceded by a public buyback offer with a target volume of €550 million on 26 September. The only hybrid bond of which we did not buy any paper was the one with a volume of £750 million (7 %; 2019). The selection of paper bought back was based on yield considerations, amongst others.

The nominal volume of senior bonds, which are almost fully allocable to innogy SE, rose by €1.3 billion to €12.1 billion. This was primarily due to two new issuances: innogy placed a €750 million senior bond with a tenor of eight years and a coupon of 1 % in April. This was followed in October by the company's first 'green' bond, which has a nominal value of €850 million, a tenor of ten years and a coupon of 1.25 %. Green bonds are special-purpose financial vehicles, the issuance proceeds of which may only be used for projects with a positive effect on the environment. innogy will use the funds to refinance wind farms in Germany, the United Kingdom and the Netherlands. These plants are either under construction or in operation.

Shortly after the end of the reporting year, innogy took advantage of the favourable interest environment to issue a further senior bond. At the end of January 2018, the company placed paper with a nominal volume of €1 billion, a tenor of eleven-and-a-half years and a coupon of 1.5 %. Proceeds from this issuance will serve to refinance liabilities that fall due, among other things.

**Significantly lower borrowing costs.** In 2017, the cost of debt for RWE AG was 2.5 %, compared to 4.0 % in the previous year. This was calculated for the liabilities allocable to the Group parent from bonds, commercial paper and bank loans by the end of the year under review. Only hybrid bonds classified as debt pursuant to International Financial Reporting Standards were considered. The main reason for the decline in the cost of capital was that the redemption and buyback of hybrid bonds eliminated relatively high coupon payments. innogy calculated a cost of debt as of the balance-sheet date of 4.1 %, which was stable compared to 2016.

| **Credit rating of RWE AG (as of 31 Dec 2017)** | Moody's | Standard & Poor's[1] | Fitch |
|---|---|---|---|
| Non-current financial liabilities | | | |
| Senior debt | Baa3 | BBB– | BBB |
| Subordinated debt (hybrid bonds) | Ba2 | BB | BB+ |
| Current financial liabilities | P–3 | A–3 | F3 |
| Outlook | Stable | Stable | Stable |

1 At our request, Standard & Poor's withdrew its RWE rating after the balance-sheet date.

**Rating agencies confirm RWE's investment-grade rating.** The factors determining cost of debt also include the assessment of our creditworthiness by independent rating agencies. In 2017, the three leading agencies confirmed their credit ratings for RWE as a result of their regular rating reviews. In June, Moody's and Standard & Poor's announced that they kept their rating of our long-term creditworthiness at 'Baa3' and 'BBB–', respectively. In April, the agency Fitch confirmed its 'BBB' rating of RWE, which is one notch higher. All three agencies therefore issued an investment-grade rating for RWE – with a stable outlook. However, Standard & Poor's withdrew its RWE rating in February 2018 at our request. As next to no RWE senior bonds are outstanding due to the transfer of debt to innogy, we therefore deem the ratings by Moody's and Fitch sufficient.

By contrast, innogy continues to receive credit grades from all three agencies. They are a notch higher than those for RWE: innogy has been assigned a rating of 'Baa2' (negative outlook) by Moody's, 'BBB' (stable outlook) by Standard & Poor's and 'BBB+' (stable outlook) by Fitch. One of the reasons for the good grades is that innogy has a relatively stable earnings profile due to its high share of regulated business. The company provides detailed information on its credit rating in its 2017 Annual Report.

| **Cash flow statement**<br>€ million | 2017 | 2016 | +/–<br>€ million |
|---|---|---|---|
| Funds from operations | –1,545 | 3,013 | –4,558 |
| Change in working capital | –209 | –661 | 452 |
| **Cash flows from operating activities** | **–1,754** | **2,352** | **–4,106** |
| **Cash flows from investing activities** | **2,691** | **–4,570** | **7,261** |
| **Cash flows from financing activities** | **–1,536** | **4,282** | **–5,818** |
| Effects of changes in foreign exchange rates and other changes in value on cash and cash equivalents | –19 | –24 | 5 |
| **Total net changes in cash and cash equivalents** | **–618** | **2,040** | **–2,658** |
| | | | |
| Cash flows from operating activities | –1,754 | 2,352 | –4,106 |
| Minus capital expenditure[1] | –2,580 | –2,308 | –272 |
| Plus proceeds from divestitures/asset disposals[1] | 485 | 765 | –280 |
| **Free cash flow** | **–3,849** | **809** | **–4,658** |

1 This item solely relates to items with an effect on cash.

**Operating cash flows: significant decline due to contribution to the German nuclear energy fund.** In the year under review, the RWE Group recorded negative cash flows from operating activities amounting to –€1,754 million (previous year: €2,352 million). The endowment of the German nuclear energy fund curtailed our liquidity by about €7 billion (see page 35). Excluding this, operating cash flows improved substantially compared to 2016. One reason for this is the reimbursement of the €1.7 billion in nuclear fuel tax paid from 2011 to 2016.

Investing activities led to cash flows of €2,691 million. In the year being reviewed, we liquidated a large volume of current securities and short-term cash investments in order to finance the contribution to the nuclear energy fund. Our capital expenditure on property, plant and equipment and financial assets had a counteracting effect. In the prior year, cash outflows from investing activities totalled €4,570 million, in part owing to significant purchases of securities, which we had funded using proceeds from the IPO of innogy.

Cash flows from financing activities amounted to –€1,536 million as opposed to the high cash flows of €4,282 million in 2016 resulting from the public listing of innogy. In the reporting year, €4.9 billion in financial liabilities were redeemed, contrasted by a total of €4.0 billion in refinancing. Additional outflows resulted from a total of €603 million in dividends paid to co-owners of fully consolidated RWE companies and hybrid capital investors, €206 million of which was allocable to dividends paid by innogy to its minority shareholders.

On balance, the presented cash flows from operating, investing and financing activities caused our cash and cash equivalents to decline by €618 million.

The high level of cash outflows resulting from the payment made into the nuclear energy fund also characterised the development of free cash flow, which amounted to –€3,849 million (previous year: €809 million). Since 2017 we are using a new definition of free cash flow: it now includes spending on financial assets and proceeds from divestments and asset disposals. The year-earlier figure was adjusted accordingly.

**Lower net debt thanks to nuclear fuel tax refund.** As of 31 December 2017, our net debt amounted to €20.2 billion, down €2.5 billion compared to 2016. We had anticipated a stable level. The decline is partially due to the reimbursement of the nuclear fuel tax, which was not foreseeable when we issued the forecast at the beginning of 2017. Furthermore, provisions for pensions decreased by €1.3 billion. The background to this is that the plan assets, with which we cover most of our pension obligations, increased due to positive market developments. Moreover, we raised the discount rates used to calculate the net present value of the German pension obligations. The new rates average 2.0 % throughout the Group as opposed to 1.8 % in the 2016 financial statements and reflect the most recent development of market interest rates. Besides the aforementioned factors, divestments also contributed to the drop in debt, whereas investing activities and our dividend payments had a counteracting effect. The contribution to the nuclear energy fund did not have an impact on the level of net debt, because our nuclear energy provisions declined by the same amount.

| **Net debt**<br>€ million | 31 Dec 2017 | 31 Dec 2016 | +/–<br>€ million |
|---|---|---|---|
| Cash and cash equivalents | 3,933 | 4,576 | –643 |
| Marketable securities | 5,131 | 10,065 | –4,934 |
| Other financial assets | 1,863 | 1,621 | 242 |
| **Financial assets** | **10,927** | **16,262** | **–5,335** |
| Bonds, other notes payable, bank debt, commercial paper | 15,099 | 15,921 | –822 |
| Hedge transactions related to bonds | 27 | –263 | 290 |
| Other financial liabilities | 2,102 | 2,263 | –161 |
| **Financial liabilities** | **17,228** | **17,921** | **–693** |
| **Net financial debt** | **6,301** | **1,659** | **4,642** |
| Provisions for pensions and similar obligations | 5,420 | 6,761 | –1,341 |
| Surplus of plan assets over benefit obligations | –103 | –29 | –74 |
| Provisions for nuclear waste management | 6,005 | 12,699 | –6,694 |
| Mining provisions | 2,322 | 2,363 | –41 |
| Provisions for dismantling wind farms | 359 | 334 | 25 |
| Adjustment for hybrid capital | –77 | –1,078 | 1,001 |
| Plus 50 % of the hybrid capital stated as equity | 470 | 471 | –1 |
| Minus 50 % of the hybrid capital stated as debt | –547 | –1,549 | 1,002 |
| **Net debt** | **20,227** | **22,709** | **–2,482** |

**Stable off-balance-sheet obligations from electricity and commodity purchases.** Net debt does not include our off-balance-sheet obligations, which largely stem from long-term fuel and electricity purchase agreements. As of the balance-sheet date, payment obligations from material procurement contracts amounted to €26.2 billion for fuel (previous year: €26.0 billion) and €7.1 billion for electricity (previous year: €7.4 billion). These figures are based on assumptions regarding the prospective development of commodity prices. For further commentary on our off-balance-sheet obligations, please see page 144 et seq. in the Notes.

**Equity ratio rises to 17.4 %.** As of the cut-off date for the financial statements, the RWE Group had a balance-sheet total of €69.1 billion. This was €7.3 billion less than in the preceding year, primarily due to the payment made into the nuclear energy fund. Our contribution of roughly €7 billion was stated as part of current provisions on the previous year's balance sheet. Therefore, they dropped considerably. At the same time, cash outflows reduced current assets. The decrease in the balance-sheet total was also driven by a decline in derivatives, which fell by €2.2 billion on the assets side of the balance sheet and by €1.4 billion on the equity and liabilities side. By contrast, the refund of the nuclear fuel tax by the government extended the balance sheet. Due, among other things, to the last factor mentioned, the RWE Group's equity rose by €4.0 billion to €12.0 billion. Its share in the balance-sheet total (equity ratio) was 17.4 %, up 6.9 percentage points on the previous year's level.

| Group balance sheet structure | 31 Dec 2017 | | 31 Dec 2016 | |
|---|---|---|---|---|
| | € million | % | € million | % |
| **Assets** | | | | |
| Non-current assets | 45,694 | 66.2 | 45,911 | 60.1 |
| of which: | | | | |
| Intangible assets | 12,383 | 17.9 | 12,749 | 16.7 |
| Property, plant and equipment | 24,904 | 36.1 | 24,455 | 32.0 |
| Current assets | 23,365 | 33.8 | 30,491 | 39.9 |
| of which: | | | | |
| Receivables and other assets[1] | 12,487 | 18.1 | 14,122 | 18.5 |
| Assets held for sale | 128 | 0.2 | – | – |
| **Total** | **69,059** | **100.0** | **76,402** | **100.0** |
| | | | | |
| **Equity and liabilities** | | | | |
| Equity | 11,991 | 17.4 | 7,990 | 10.5 |
| Non-current liabilities | 36,774 | 53.3 | 39,646 | 51.9 |
| of which: | | | | |
| Provisions | 19,249 | 27.9 | 20,686 | 27.1 |
| Financial liabilities | 14,414 | 20.9 | 16,041 | 21.0 |
| Current liabilities | 20,294 | 29.3 | 28,766 | 37.6 |
| of which: | | | | |
| Provisions | 5,137 | 7.4 | 12,175 | 15.9 |
| Other liabilities[2] | 12,259 | 17.8 | 14,449 | 18.9 |
| Liabilities held for sale | 111 | 0.2 | – | – |
| **Total** | **69,059** | **100.0** | **76,402** | **100.0** |

1 Including financial accounts receivable, trade accounts receivable and income tax refund claims.
2 Including trade accounts payable and income tax liabilities.

# 1.8 NOTES TO THE FINANCIAL STATEMENTS OF RWE AG (HOLDING COMPANY)

**The financial statements of RWE AG reflect significantly improved earnings. After recording losses due to significant impairments recognised for power plants in 2016, we posted a net profit of €1.4 billion in the year under review. The refund of the nuclear fuel tax by the government contributed to this. It was also one of the reasons why RWE AG's equity ratio improved by 7.7 percentage points to 17.9 %.**

**Financial statements.** RWE AG prepares its financial statements in compliance with the rules set out in the German Commercial Code and the German Stock Corporation Act. The financial statements are submitted to Bundesanzeiger Verlag GmbH, located in Cologne, Germany, which publishes them in the Federal Gazette. The financial statements of RWE AG can be ordered directly from us and are also available on the internet at www.rwe.com/reports.

| **Balance sheet of RWE AG (abridged)**<br>€ million | 31 Dec 2017 | 31 Dec 2016 |
|---|---|---|
| **Assets** | | |
| Financial assets | 24,901 | 32,115 |
| Accounts receivable from affiliated companies | 4,811 | 8,218 |
| Other accounts receivable and other assets | 505 | 753 |
| Marketable securities and cash and cash equivalents | 3,951 | 4,887 |
| **Total assets** | **34,168** | **45,973** |
| | | |
| **Equity and liabilities** | | |
| Equity | 6,104 | 4,697 |
| Provisions | 2,368 | 2,419 |
| Accounts payable to affiliated companies | 22,623 | 32,136 |
| Other liabilities | 3,073 | 6,721 |
| **Total equity and liabilities** | **34,168** | **45,973** |

| **Income statement of RWE AG (abridged)**<br>€ million | 2017 | 2016 |
|---|---|---|
| Income from financial assets | 2,268 | – 1,240 |
| Net interest | – 339 | – 368 |
| Other income and expenses | – 345 | 1,176 |
| Taxes on income | – 172 | – 569 |
| **Net profit/net loss** | **1,412** | **– 1,001** |
| Transfer to other retained earnings (previous year: withdrawal) | – 490 | 1,006 |
| **Distributable profit** | **922** | **5** |

**Assets.** RWE AG had €34.2 billion in total assets as of 31 December 2017. This represents a decline of €11.8 billion compared to the previous year. Accounts receivable from and payable to affiliated companies dropped considerably. One reason for this was that innogy assumed the capital market debt of RWE AG in 2017 and that the corresponding intra-group loans were redeemed or reduced with effect from the debtor exchange (see page 53). Furthermore, a dividend claim vis-à-vis RWE Downstream Beteiligungs GmbH that arose in 2016 ceased to exist because the company, which holds our 76.8 % stake in innogy, made a corresponding dividend payment to RWE AG in the year under review. The decline in total assets is also due to the fact that RWE AG sold securities held as current and non-current assets. We used the proceeds to redeem a loan granted us by RWE Power and to offset the loss incurred by that company in the preceding year. As of 31 December 2017, RWE AG's equity ratio was 17.9 %, which was much higher than in the prior year (10.2 %). In addition to the aforementioned effects, the net profit we posted in 2017 also came to bear.

**Financial position.** RWE AG is set up solidly in financial terms and has a number of flexible financing tools at its disposal. Leading rating agencies certify our high creditworthiness. A detailed presentation of RWE's financial position and financing activity in the year under review has been made on page 52 et seqq.

**Earnings position.** In 2017, RWE AG's earnings position improved significantly compared to the previous year, which was characterised by substantial one-off burdens.

Income from financial assets rose by €3,508 million to €2,268 million. Following the power plant impairments recognised in 2016, RWE's two large generation companies returned to profitability in the reporting year. RWE Power benefited from the nuclear fuel tax refund, while RWE Generation profited from the successful commercial optimisation of power plant deployment among other things.

Net interest improved by €29 million to –€339 million. Our reduction in the volume of hybrid bonds outstanding last year through redemptions and buybacks resulting in less spend on financing came to bear here.

The net amount from other income and expenses decreased by €1,521 million to –€345 million in part due to the non-recurrence of positive one-off effects seen in the prior year: in 2016, the reorganisation of the RWE Group had revealed hidden reserves in the investments.

With a tax expense of €172 million (previous year: €569 million), RWE AG achieved a net profit of €1,412 million in fiscal 2017 after the loss of €1,001 million recorded in the preceding year. We also expect a net profit in the 2018 financial year, albeit lower than in 2017.

The distributable profit of €922 million reflects the planned dividend payment to our shareholders: the Supervisory and Executive Boards of RWE AG will propose to the Annual General Meeting on 26 April 2018 that a dividend of €1.50 be paid per common and preferred share for fiscal 2017. The sum is made up of the regular dividend of €0.50 and a special payment of €1.00 with which RWE shareholders are to partake of the nuclear fuel tax refund.

**Corporate governance declaration in accordance with Section 289f and Section 315d of the German Commercial Code.** On 15 February 2018, the Executive Board of RWE AG issued a corporate governance statement in accordance with Section 289f and Section 315d of the German Commercial Code and published it on the internet at www.rwe.com/corporate-governance-declaration.

# 1.9 PRESENTATION OF THE RWE GROUP WITH INNOGY AS A PURE FINANCIAL INVESTMENT

**Since the public listing of our subsidiary innogy on the stock exchange, we have been managing it as a pure financial investment. A comprehensive agreement ensures that the company can conduct its business operations independently. Accordingly, when developing the planning for the RWE Group, we also consider Group figures in which innogy is not included as a fully consolidated company, but instead at the investment's fair value plus the dividend payment. In this chapter, we present some of these non-IFRS figures and explain how we calculated them.**

**Full consolidation only reflects the status of the investment in innogy to a limited extent.** Pursuant to International Financial Reporting Standards (IFRS) we must include companies that are indirectly or directly controlled by RWE AG in the Group's financial statements on a fully consolidated basis. This means that the income, expenses, cash flows, assets, liabilities, etc. of these activities are considered in the Group figures. innogy is fully consolidated in the Group's financial statements, as we hold a majority stake of 76.8 % in the company. However, this representation only partially reflects the manner in which we manage our subsidiary. For us, innogy has the status of a pure financial investment, which we expect to deliver an attractive, reliable dividend. This is set out in a comprehensive agreement which stipulates that our subsidiary can act independently in business matters and that RWE AG may only exercise its influence as the majority owner by way of the legally mandated bodies, i. e. the Supervisory Board and the Annual General Meeting.

**Adjusted figures.** For planning purposes, we adopt a presentation that does not conform with IFRS and deviates from the principle of full consolidation. This involves assigning innogy to the 'other financial assets' line item on the balance sheet. The figure stated is calculated by multiplying the number of shares we hold in innogy with the share price on the stock market as of the cut-off date for the financial statements.

Adjusted EBITDA for 2017 only includes innogy's dividend payment of €683 million, whereas for adjusted EBITDA in 2016, innogy was considered based on the contribution of its companies to the RWE Group's income from investments and income from investments accounted for using the equity method, which totalled €730 million. innogy no longer has a direct effect on the RWE Group's non-operating result or financial result. However, RWE's figures are modified further, as we treat business transactions between the rest of the Group and innogy as transactions with third parties.

**Adjusted EBITDA better than expected.** The following is an overview of some key financial indicators calculated applying the aforementioned method. These figures trend in the same direction as they would if innogy were fully consolidated. At €2,066 million, adjusted EBITDA slightly exceeded our expectations, rising by 7 % compared to 2016. Adjusted net income amounted to €973 million, which is at the upper end of the range which we had forecast, after having been slightly negative in 2016 (–€20 million). We also displayed positive development regarding net debt: it dropped by 34 % to €4,510 million, primarily due to the nuclear fuel tax refund.

| **Key figures for the RWE Group including innogy as a financial investment that is not fully consolidated**[1]<br>€ million | 2017 | 2016 | +/–<br>% |
|---|---|---|---|
| Adjusted EBITDA | 2,066 | 1,928 | 7.2 |
| Adjusted EBIT | 1,474 | 1,077 | 36.9 |
| Income before tax | 2,320 | –5,795 | 140.0 |
| Net income | 2,160 | –5,807 | 137.2 |
| Adjusted net income | 973 | –20 | – |
| Net financial debt | –6,070 | –9,999 | 39.3 |
| Net debt | 4,510 | 6,858 | –34.2 |

1 Figures not calculated according to IFRS. In addition to recognising innogy as a financial investment, this relates to the following items: supply and service agreements of the rest of the Group with innogy have all been accounted for as executory contracts, although they would have had to be measured at fair value according to IAS 39. We have not formed provisions for contingent losses from these transactions. Figures for supply and service relationships with external third parties and associated provisions have been accounted for as in the IFRS consolidated financial statements. The same applies to the accounting effects of hedges and deferred taxes.

# 1.10 DISCLOSURE RELATING TO GERMAN TAKEOVER LAW

**The following disclosure is in accordance with Section 315a, Paragraph 1 and Section 289a, Paragraph 1 of the German Commercial Code as well as with Section 176, Paragraph 1, Sentence 1 of the German Stock Corporation Act. The information relates to company-specific regulations for example adjustments to the capital structure by the Executive Board and in the event of a change of control of the company. At RWE, these provisions are in line with the standards of German listed companies.**

**Composition of subscribed capital.** RWE AG's subscribed capital consists of 575,745,499 no-par-value common shares and 39,000,000 no-par-value preferred shares without voting rights, each in the name of the bearer. They account for 93.7 % and 6.3 % of the subscribed capital, respectively. Holders of preferred shares are given priority when distributable profit is distributed. Pursuant to the Articles of Incorporation, it is appropriated in the following order:

1) to make any back payments on shares of the profit allocable to preferred shares from preceding years;

2) to pay a preferred share of the profit of €0.13 per preferred share;

3) to pay the share of the profit allocable to common shares of up to €0.13 per common share; and

4) to make equal payments of potential further portions of the profit allocable to common and preferred shares, unless the Annual General Meeting decides in favour of a different appropriation.

The composition of the subscribed capital and the rights and obligations of the shareholders comply with the requirements of the law and the Articles of Incorporation.

**Shares in capital accounting for more than 10 % of voting rights.** As of 31 December 2017, no holding in RWE AG exceeded 10 % of the voting rights. In the middle of the year, RWEB GmbH had informed us that its share of the voting rights had fallen from 14.18 % to 2.70 %.

**Limitation of share transfers.** Within the scope of the employee share plan of RWE AG, 340,920 RWE common shares were issued to employees in the financial year that just ended. These securities must be held until 31 December 2018.

**Appointment and dismissal of Executive Board members/ amendments to the Articles of Incorporation.** Executive Board members are appointed and dismissed in accordance with Section 84 et seq. of the German Stock Corporation Act in conjunction with Section 31 of the German Co-Determination Act. Amendments to the Articles of Incorporation are made pursuant to Section 179 et seqq. of the German Stock Corporation Act in conjunction with Article 16, Paragraph 6 of the Articles of Incorporation of RWE AG. According to the aforementioned provision in the Articles of Incorporation, unless otherwise required by law or the Articles of Incorporation, the Annual General Meeting shall adopt all resolutions by a simple majority of the votes cast or – if a capital majority is required – by the simple majority of the capital stock represented when the resolution is passed. Pursuant to Article 10, Paragraph 9 of the Articles of Incorporation, the Supervisory Board is authorised to pass resolutions to amend the Articles of Incorporation that only concern the wording without changing the content.

**Executive Board authorisations for implementing share buybacks.** Pursuant to a resolution passed by the Annual General Meeting on 16 April 2014, RWE AG is authorised to buy back up to 10 % of its capital stock as of the entry into force of said resolution or – if this figure is lower – at the exercise of this authorisation in shares of any kind until 15 April 2019. At the Executive Board's discretion, the acquisition shall be made on the stock exchange or via a public purchase offer.

Shares purchased in this way may then be cancelled. Furthermore, the purchased shares may be transferred to third parties or sold otherwise in connection with mergers or acquisitions of companies, parts of companies, operations, or of stakes in companies. Shares that are not sold on the stock exchange or through a tender to all shareholders may only be sold for cash. Moreover, in such cases, the sale price may not be significantly lower than the price at which the shares are listed on the stock market. The company may transfer shares bought back to the holders of option or convertible bonds. The company may also use the shares to fulfil its obligations resulting from employee share schemes. In the aforementioned cases, shareholder subscription rights are waived. These authorisations may be exercised in full or in part, or once or several times for partial amounts.

**Executive Board authorisation for the issuance of new shares.** Pursuant to the resolution passed by the Annual General Meeting on 16 April 2014, the Executive Board is authorised to increase the company's capital stock, subject to the Supervisory Board's approval, by up to €314,749,693.44 until 15 April 2019, through the issuance of up to 122,949,099

new bearer common shares in return for contributions in cash or in kind (authorised capital). These authorisations may be exercised in full or in part, or once or several times for partial amounts.

In principle, shareholders are entitled to subscription rights. However, subject to the approval of the Supervisory Board, the Executive Board may waive such rights in the following cases: they may be waived in order to prevent the number of shares allocated from the subscription resulting in fractional amounts (fractions of shares). Subscription rights may also be waived in order to issue shares in exchange for contributions in kind for the purposes of mergers or acquisitions of companies, parts of companies, operations, or of stakes in companies. Subscription rights may be waived in the event of a cash capital increase if the price at which the new shares are issued is not significantly lower than the price at which shares are quoted on the stock market and the portion of the capital stock accounted for by the new shares, for which subscription rights are waived, does not exceed 10 % in total. Furthermore, subscription rights may be waived in order to offer shares to potential holders of convertible or option bonds commensurate to the rights to which they would be entitled as shareholders on conversion of the bond or on exercise of the option.

The Executive Board is authorised, subject to the approval of the Supervisory Board, to determine the further details and conditions of the share issuance.

In sum, the capital stock may not be increased by more than 20 % through the issuance of new shares waiving subscription rights.

**Effects of a change of control on debt financing.** Our debt financing instruments often contain clauses that take effect in the event of a change of control. The following rule applies to a residual amount of a senior bond remaining with RWE AG after the transfer of debt to innogy (see page 53): in the event of a change of control in conjunction with a drop in RWE AG's credit rating below investment-grade status, creditors may demand immediate redemption. In such cases, RWE AG has the right to cancel its subordinated hybrid bonds within the defined change of control period; if this does not occur, the annual compensation payable on the hybrid bonds increases by 500 basis points.

RWE AG's €3 billion syndicated credit line also includes a change-of-control clause, which essentially has the following content: in the event of a change of control or majority at RWE, further drawings are suspended until further notice. The lenders shall enter into negotiations with us on a continuation of the credit line. Should we fail to reach an agreement with the majority of them within 30 days from such a change of control, the lenders may cancel the line of credit.

**Effects of a change of control on Executive Board and executive compensation.** Members of the Executive Board of RWE AG have the special right to terminate their employment contract in the event that shareholders or third parties obtain control over the company and this would be linked to significant disadvantages for the Executive Board members in question. In such a case, they may resign from their position within six months of the change of control with cause by giving three months' notice and request the termination of their employment contract and receive a one-off payment.

The amount of the one-off payment shall correspond to all compensation due until the end of the contractually agreed term of service, but no more than three times the total contractual annual compensation. Share-based compensation is not included in this. This is in line with the currently valid recommendations of the German Corporate Governance Code.

In the new Strategic Performance Plan presented on page 66 et seq., it is stipulated for the Executive Board and executives of RWE AG and subordinated associated companies that in the event of a change of control the granted performance shares which have already been finally determined but not yet been paid out, shall be paid out early. The pay-out amount shall correspond to the number of performance shares multiplied by the sum of the average closing price of the RWE common share over the last 30 trading days prior to the announcement of the change of control and the amount of dividend paid out per share up to that point in time, calculated starting from the time when the final number of performance shares was fully granted. All conditionally granted performance shares at the time of the change of control shall expire without replacement or compensation.

# 1.11 COMPENSATION REPORT

**We believe that performance-oriented and transparent supervisory and management board compensation is a key element of good corporate governance. In this chapter, we have provided information on the structure and level of the compensation of the Supervisory Board and Executive Board of RWE AG. In addition to the requirements of German stock corporation and commercial law, we also consider the recommendations of the German Corporate Governance Code concerning the design and presentation of compensation systems.**

## Structure of Supervisory Board compensation

The remuneration of the Supervisory Board is governed by the provisions of the Articles of Incorporation of RWE AG. Accordingly, the Chairman of the Supervisory Board receives fixed compensation of €300,000 per fiscal year. Their Deputy receives €200,000 per fiscal year. The other members of the Supervisory Board receive fixed compensation of €100,000 and additional remuneration for committee mandates according to the following rules.

Members of the Audit Committee receive additional remuneration of €40,000. This additional payment is increased to €80,000 for the Chair of this committee. With the exception of the Nomination Committee, the members and the Chairs of all the other Supervisory Board committees receive an additional €20,000 and €40,000 in compensation, respectively. Remuneration for a committee mandate is only paid if the committee is active at least once in the fiscal year.

Supervisory Board members who concurrently hold several offices in this body only receive compensation for the highest-paid position. Compensation is prorated if a Supervisory Board member only performs a function for part of a fiscal year.

In addition to the remuneration paid, out-of-pocket expenses are refunded to the members of the Supervisory Board. Supervisory Board members also receive income from the exercise of Supervisory Board mandates at subsidiaries of RWE AG.

The members of the Supervisory Board imposed on themselves the obligation, subject to any obligations to relinquish their pay, to use 25 % of the total compensation paid (before taxes) to buy RWE shares and to hold them for the duration of their membership of the Supervisory Board of RWE AG. Last year, all of the members who do not donate their compensation met this self-imposed obligation for their compensation for 2016. For the new members elected to the Board in April 2017, this self-imposed obligation will apply to the compensation for fiscal 2017, which was paid out at the start of fiscal 2018.

## Level of Supervisory Board compensation

In total, the remuneration of the Supervisory Board (including compensation for committee mandates at subsidiaries, but excluding out-of-pocket expenses) amounted to €3,637,000 in fiscal 2017 (previous year: €3,228,000). Of this sum, €459,000 (previous year: €442,000) was remuneration paid for mandates on committees of the Supervisory Board and €877,000 (previous year: €482,000) was remuneration paid for mandates at subsidiaries. The rise in compensation for the exercise of mandates is due in part to the fact that certain individuals also belong to the Supervisory Board of innogy SE and that they only received prorated compensation for the exercise of this mandate in 2016.

The remuneration of all individuals who have served on the Supervisory Board in 2016 and/or 2017 is shown in the following table.

| **Supervisory Board compensation**[1] | Fixed compensation | | Compensation for committee offices | | Compensation for mandates at subsidiaries[2] | | Total compensation[3] | |
|---|---|---|---|---|---|---|---|---|
| € '000 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Dr. Werner Brandt, Chairman | 300 | 240 | – | 24 | 300 | 130 | 600 | 393 |
| Dr. Manfred Schneider, Chairman (until 20 April 2016) | – | 91 | – | – | – | – | – | 91 |
| Frank Bsirske, Deputy Chairman | 200 | 200 | – | – | 200 | 86 | 400 | 286 |
| Reiner Böhle | 100 | 100 | 20 | 20 | 120 | 48 | 240 | 168 |
| Sandra Bossemeyer | 100 | 70 | 20 | 14 | – | – | 120 | 84 |
| Dieter Faust (until 20 April 2016) | – | 30 | – | 12 | – | 12 | – | 55 |
| Ute Gerbaulet (since 27 April 2017) | 68 | – | – | – | – | – | 68 | – |
| Reinhold Gispert (since 27 April 2017) | 68 | – | 26 | – | 14 | – | 108 | – |
| Roger Graef (until 20 April 2016) | – | 30 | – | – | – | – | – | 30 |
| Arno Hahn (until 27 April 2017) | 32 | 100 | 13 | 40 | 18 | 54 | 63 | 194 |
| Andreas Henrich | 100 | 70 | – | – | – | – | 100 | 70 |
| Maria van der Hoeven (20 April 2016 until 14 October 2016) | – | 49 | – | – | – | 12 | – | 61 |
| Manfred Holz (until 20 April 2016) | – | 30 | – | 6 | – | 6 | – | 42 |
| Prof. Dr. Hans-Peter Keitel | 100 | 100 | 20 | 20 | – | – | 120 | 120 |
| Dr. h. c. Monika Kircher | 100 | 21 | – | – | – | – | 100 | 21 |
| Martina Koederitz (20 April 2016 until 27 April 2017) | 32 | 70 | – | – | 38 | 33 | 71 | 103 |
| Monika Krebber | 100 | 70 | 20 | 14 | 67 | – | 187 | 84 |
| Frithjof Kühn (until 20 April 2016) | – | 30 | – | 6 | – | – | – | 36 |
| Hans Peter Lafos (until 20 April 2016) | – | 30 | – | – | – | 12 | – | 42 |
| Harald Louis | 100 | 70 | 20 | 14 | 40 | – | 160 | 84 |
| Christine Merkamp (until 20 April 2016) | – | 30 | – | – | – | – | – | 30 |
| Dagmar Mühlenfeld | 100 | 100 | 20 | 20 | – | – | 120 | 120 |
| Peter Ottmann | 100 | 70 | 20 | 14 | – | 8 | 120 | 92 |
| Günther Schartz | 100 | 70 | 20 | 14 | – | 2 | 120 | 85 |
| Dr. Erhard Schipporeit | 100 | 70 | 80 | 56 | – | – | 180 | 126 |
| Dagmar Schmeer (until 20 April 2016) | – | 30 | – | – | – | – | – | 30 |
| Prof. Dr.-Ing. Ekkehard D. Schulz (until 20 April 2016) | – | 30 | – | 12 | – | – | – | 42 |
| Dr. Wolfgang Schüssel | 100 | 100 | 40 | 34 | – | – | 140 | 134 |
| Ullrich Sierau | 100 | 100 | 40 | 40 | – | – | 140 | 140 |
| Ralf Sikorski | 100 | 100 | 40 | 40 | 50 | 50 | 190 | 190 |
| Marion Weckes | 100 | 70 | 40 | 28 | – | – | 140 | 98 |
| Dr. Dieter Zetsche (until 20 April 2016) | – | 30 | – | – | – | – | – | 30 |
| Leonhard Zubrowski | 100 | 100 | 20 | 20 | 30 | 30 | 150 | 150 |
| **Total**[3] | **2,301** | **2,303** | **459** | **442** | **877** | **482** | **3,637** | **3,228** |

1 Supervisory Board members who joined or retired from the corporate body during the year receive prorated compensation.
2 Compensation for exercising mandates at subsidiaries is only included for periods of membership of the Supervisory Board of RWE AG.
3 The commercial rounding of certain figures can result in inaccurate sums.

## Structure of Executive Board compensation

**Principles of Executive Board compensation.** The structure and level of the Executive Board's remuneration are determined by the Supervisory Board of RWE AG and reviewed on a regular basis to determine whether they are appropriate and in line with the market. The compensation system described in the following has been applied since 1 October 2016. It ensures that remuneration reflects individual performance, company performance and the development of the RWE share over the long term.

Executive Board compensation is composed of non-performance-based and performance-based components. The former consists of the fixed salary, the pension instalment as well as fringe benefits. The performance-based components include the bonus and a share-based payment, the latter of which is a long-term compensation component.

**Recipients of Executive Board compensation.** In the financial year that just ended, Rolf Martin Schmitz, Markus Krebber and Uwe Tigges received compensation for their work on the Executive Board of RWE AG. Rolf Martin Schmitz has been a member of the Executive Board since 1 May 2009 and its Chairman since 15 October 2016. Markus Krebber was appointed to the corporate body with effect from 1 October 2016 and has been in charge of finance since 15 October 2016. Uwe Tigges belonged to the Executive Board from 1 April 2013 to 30 April 2017. He was in charge of human resources and was the Labour Director. He resigned from his office in order to focus on his work on the Executive Board of innogy SE, which he joined on 1 April 2016. As of 1 May 2017, his tasks on the Executive Board of RWE AG were transferred to Rolf Martin Schmitz, who has since also been the company's Labour Director.

All of the members of the Executive Board entered into employment contracts based on the current compensation system with effect from 1 October 2016. Uwe Tigges, who belonged to the Executive Boards of RWE AG and innogy SE at the time, received his contract from innogy SE.

## Non-performance-based Executive Board compensation

**Fixed compensation and pension instalments.** All Executive Board members receive a fixed salary, which is paid in twelve monthly instalments. As a second fixed compensation component, members of the Executive Board are entitled to a pension instalment for every year of service, which is determined on an individual basis. The pension instalment is paid in cash or retained in part or in full in exchange for a pension commitment of equal value through a gross compensation conversion. RWE has concluded a reinsurance policy to finance the pension commitment. The accumulated capital may be drawn upon on retirement, but not before the Executive Board member turns 62. Members of the Executive Board of RWE reach the established age limit when they are 63 years old. They can be reappointed for one year at a time thereafter, but may not hold office beyond their 65$^{th}$ birthday.

When retiring, Executive Board members can choose between a one-time payment and a maximum of nine instalments. They and their surviving dependants do not receive any further benefits. Vested retirement benefits from earlier activities within the RWE Group remain unaffected by this. The vested retirement benefits acquired by Uwe Tigges were transferred from RWE AG to innogy SE upon termination of his employment contract.

A different rule applies to Rolf Martin Schmitz, who was appointed to the Executive Board before the pension instalments were introduced. He was granted a pension benefit, which remains.

**Fringe benefits.** Non-performance-based compensation components also include fringe benefits, primarily consisting of the use of company cars and accident insurance premiums.

## Performance-based Executive Board compensation

**Bonus.** Executive Board members receive a bonus, which is based on the economic performance of the company and the degree to which they achieve their individual goals and the collective goals of the Executive Board. The starting point for calculating the bonus is what is referred to as the 'company bonus', which depends on the level of adjusted EBIT and is determined as follows.

The Supervisory Board sets a target for adjusted EBIT at the beginning of every fiscal year. After the end of the fiscal year, the actual level of adjusted EBIT achieved is compared with the target figure. If the figures are identical, the target achievement is 100 %. In this case, the company bonus equals the contractually agreed baseline bonus. If adjusted EBIT is more or less than the established target, target achievement increases or decreases by a factor of 2.5. If adjusted EBIT is exactly 120 % of the target figure, the target achievement amounts to 150 %. The latter figure is also the cap, which cannot be exceeded even if adjusted EBIT is higher. The lower limit is reached if adjusted EBIT is exactly 80 % of the target figure. In this case, the target achievement for the company bonus amounts to 50 %. If the EBIT figure is lower than the 80 % threshold, no company bonus is paid out.

The performance of individual Executive Board members is considered by multiplying the company bonus by a performance factor. It may vary between 0.8 and 1.2. The value achieved depends on the following criteria, each of which is weighted by one-third: (1) achievement of the individual targets, (2) collective performance of the Executive Board, and (3) performance in corporate responsibility (CR) and employee motivation. Success in CR depends on the achievement of environmental and social goals and is documented in our sustainability reporting. Employee motivation is measured with a motivation index, which is based on anonymous surveys of employee commitment and satisfaction.

After the end of every financial year, the Supervisory Board evaluates the individual performance of the Executive Board members relative to the above three criteria and determines their individual performance factor. This is done in line with the binding goals and targets which it sets at the beginning of the financial year. The bonus determined in this manner is paid out in full to the Executive Board members after the end of the fiscal year.

**Share-based payment.** Executive Board members are granted a share-based payment according to RWE AG's Strategic Performance Plan (SPP). The SPP rewards the achievement of long-term goals. The key determinants of its success are the level of adjusted net income and the performance of the RWE common share (return on share price development and dividend) over a period of several years. By linking compensation to the development of the share price over the long term, the SPP motivates the Executive Board to consider the interests of the company's owners when taking decisions.

The SPP is based on conditionally granted performance shares. Performance shares are granted as of 1 January of every fiscal year. The SPP's conditions envisage a transitional tranche in fiscal 2016 (year of introduction) and three more regular tranches for 2017, 2018 and 2019. The Executive Board members receive a grant letter for each tranche. The – preliminary – number of performance shares is calculated based on the gross grant amount mentioned in the grant letter by dividing the grant amount by the average closing quotation of the RWE share on the last 30 days of trading on Xetra before the grant.

The granted performance shares have a term of four years (vesting period). After the end of the first year, the number of fully granted performance shares is determined. It depends on the adjusted net income achieved by the RWE Group for the year. The actual figure is compared to a pre-defined target figure. Determining this target figure is the responsibility of the Supervisory Board, which orientates itself towards the approved medium-term plan in doing so. If the target figure is achieved exactly, 100 % of the conditionally granted performance shares of the tranche is fully allocated. If the target figure is exceeded, the final grant is more than 100 % and vice-versa. Similar to determining the company bonus, there is an upper limit and a lower limit. If adjusted net income reaches or exceeds the upper threshold, 150 % of the conditionally granted performance shares is fully vested. If it is at the lower threshold, the final grant amounts to 50 %. If the actual figure is lower than the threshold, all of the conditionally granted performance shares from the tranche lapse. This means that the final number of performance shares can vary from 0 % to 150 % of the conditionally granted performance shares.

The fully vested performance shares are fully paid out in cash to the member of the Executive Board after the end of the four-year vesting period. The level of the payment depends on the performance of the RWE common share. It corresponds to the finalised number of performance shares multiplied by the average closing quotation of the RWE share of the last 30 days of trading on Xetra before the end of the vesting period added to the cumulative dividend paid during the holding period. However, a cap applies in this case as well: even in the event of extremely good share performance, the payment is limited to a maximum of 200 % of the initial gross grant amount.

The members of the Executive Board are obligated to reinvest 25 % of the payment (after taxes) in RWE shares. The shares must be held until at least the end of the third year after conclusion of the vesting period.

Upon introduction of the SPP in October 2016, the Executive Board members were granted share-based payments retroactively and in full for 2016, the transitional year. With regard to the introductory 2016 tranche, the final number of performance shares depends on the level of adjusted net income in 2017 and its relation to the target figure for 2017. This solution was chosen because, upon being granted in October 2016, it no longer made sense to establish a 2016 target figure for adjusted net income.

In 2016, the Supervisory Board established target figures for adjusted net income for the planned SPP tranches (2016 to 2019). As part of this, the aforementioned upper and lower thresholds were also determined. The Supervisory Board is only able to subsequently adjust these figures to a very limited degree and only in predefined situations, in order to be able to take into account the effects of capital measures, acquisitions, disposals or regulatory changes which were not known or foreseeable when the target figures were determined. RWE AG therefore complies with the recommendations of the German Corporate Governance Code (GCGC), in that – as a rule – changes to the performance targets or comparison parameters should not be subsequently made.

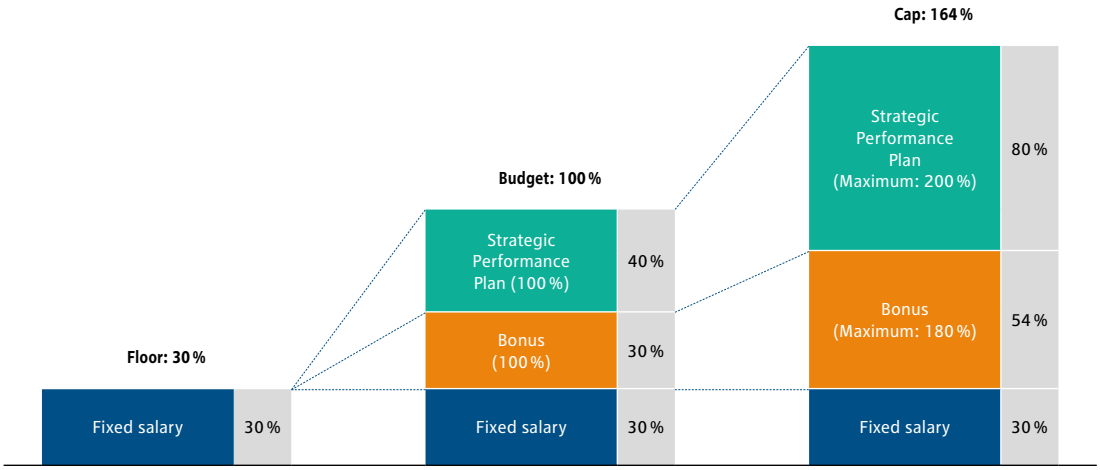
The performance shares remain unaffected after an Executive Board member leaves the body at the end of his or her contract and are paid out as planned at the end of the four-year vesting period. If an Executive Board member voluntarily leaves the company early or is dismissed with good cause, all performance shares which have not yet reached the end of the plan's duration lapse. The SPP also contains a demerit provision. This empowers the Supervisory Board to punish infractions by Executive Board members, for example for serious violations of the company's Code of Conduct, by reducing or completely voiding ongoing SPP tranches.

**Compensation for exercising mandates.** During the past fiscal year, members of the RWE AG Executive Board were paid to exercise supervisory board mandates at affiliates. This income is deducted from the bonus and therefore does not increase the total remuneration.

**Shares of total compensation accounted for by the individual components.** Assuming that both the company and the Executive Board members achieve their performance targets to a degree of 100 %, the compensation structure roughly breaks down as follows: the base salary accounts for around 30 % of total remuneration. Approximately 30 % is allocable to short-term variable compensation, i.e. the bonus. As a long-term compensation component, the SPP accounts for about 40 % of total remuneration.

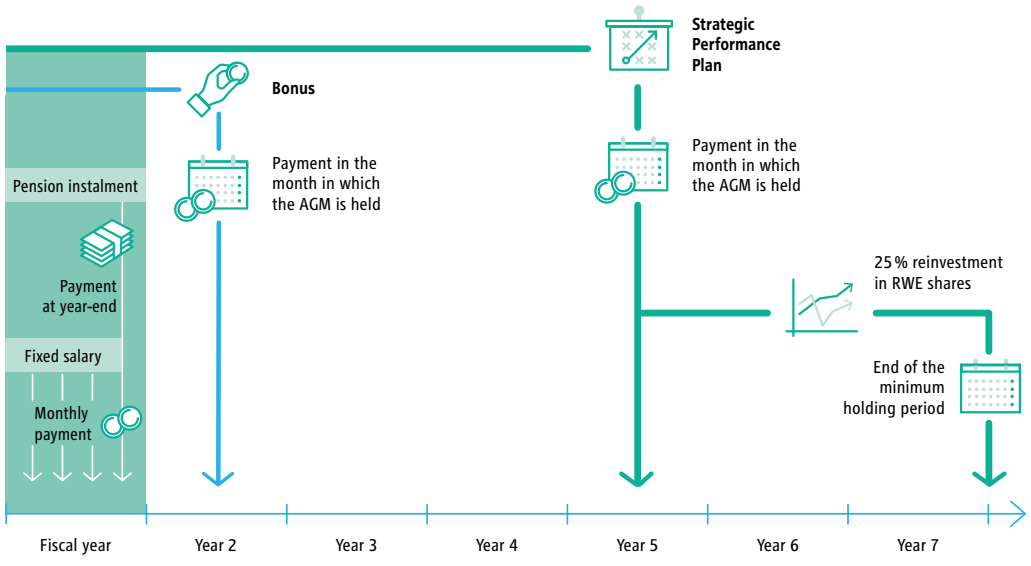
**Limitation of Executive Board compensation.** As set out earlier, the level of variable compensation components is limited. The company bonus amounts to a maximum of 150 % of the contractually agreed bonus budget. Multiplying this by the individual performance factor (0.8 to 1.2), it is possible to reach a maximum of 180 % of the bonus budget. With regard to share-based payment under the SPP, payout of the performance shares after the completion of the vesting period is limited to a maximum of 200 % of the grant budget. Based on the above maximum values, a cap can also be derived for the total compensation (see the diagram overleaf).

**Range of Executive Board compensation**




**Payment dates.** Executive Board members receive their fixed salary in twelve monthly instalments. The pension instalment is paid out at the end of the year, insofar as it is not converted into a pension commitment. After the fiscal year, the Supervisory Board determines the target achievement for the company bonus and the individual performance factor. The bonus is paid out in the month of the Annual General Meeting (AGM) which attends to the financial statements of RWE AG. After the end of the four-year vesting period, the performance shares from the SPP are paid out, during the month of the Annual General Meeting held in the following year. As explained earlier, Executive Board members must invest 25 % of the payment in RWE common shares and may not liquidate these shares until after three additional calendar years have passed from completion of the four-year vesting period. As a result, it takes a total of seven years for Executive Board members to obtain the full amount of their compensation.

**Executive Board compensation payment timeline for a fiscal year**



**Pension scheme.** Until the introduction of the pension instalment as of 1 January 2011 described earlier, pension benefits were granted to the members of the Executive Board. Of the Executive Board members in 2017, this only applies to Rolf Martin Schmitz; the pension commitment made to him in 2009 will remain unchanged. It entitles him to life-long retirement benefits in the event of retirement from the Executive Board of RWE AG upon turning 60, permanent disability, early termination or non-extension of the employment contract by the company. In the event of death, surviving dependants are entitled to the benefits. The amount of Rolf Martin Schmitz's qualifying income and the level of benefits determined by the duration of service are taken as a basis for his individual pension and surviving dependants' benefits.

**Change in corporate control.** If shareholders or third parties obtain control over the company and this results in major disadvantages for the Executive Board members, they have a special right of termination. They have the right to resign from the Executive Board and to request that their employment contract be terminated in combination with a one-off payment within six months of the change of control.

A change of control as defined by this provision occurs when one or several shareholders or third parties acting jointly account for at least 30 % of the voting rights in the company, or if any of the aforementioned can exert a controlling influence on the company in another manner. A change of control also occurs if the company is merged with another legal entity, unless the value of the other legal entity is less than 50 % of the value of RWE AG.

On termination of their employment contracts, Executive Board members receive a one-off payment equalling the compensation due until the end of the term of their contract: this amount will not be higher than three times their total contractual annual compensation. The share-based payments under the SPP are not considered here.

In the event of a change of control, all of the fully vested performance shares under the SPP that have not been paid out are paid out early. All performance shares granted under the SPP on a preliminary basis lapse on the date of the change of control.

**Early termination and severance cap.** Following a recommendation of the GCGC, the Executive Board's employment contracts include a provision stipulating that if an Executive Board mandate is otherwise terminated early without due cause, a severance payment of no more than the remuneration due until the end of the employment contract and no more than two total annual compensations including fringe benefits is made (severance cap).

## Level of Executive Board compensation

The following section presents the compensation granted to the Executive Board members of RWE AG for their work in fiscal 2017. It was calculated in compliance with the rules set out in the German Commercial Code.

**Total compensation for fiscal 2017.** Pursuant to the calculation regulations of the German Commercial Code, the total compensation of the Executive Board for fiscal 2017 amounted to €7,274,000. This includes sums received by Uwe Tigges through to 30 April 2017 for his dual offices on the Executive Board of RWE AG and innogy SE. These emoluments were paid by innogy SE and were refunded by RWE AG on a prorated basis. Total compensation in 2016 amounted to €15,486,000. This figure includes the sums received by Peter Terium and Bernhard Günther until they resigned from the Executive Board of RWE AG on 14 October 2016.

**Level of individual compensation components.** In 2017, non-performance-based components, i.e. the fixed salary of the Executive Board members, fringe benefits and the pension instalment, amounted to €2,342,000 (previous year: €4,471,000). Pursuant to the German Commercial Code, the annual service cost of the pension commitment to Rolf Martin Schmitz is not recognised as compensation, as opposed to the pension instalment of €255,000 paid to Markus Krebber (previous year: a prorated €64,000). The pension instalment of €85,000 paid to Uwe Tigges for the period ending on 30 April 2017 is included in this figure (previous year: €255,000 for the full year).

In 2017, performance-based components, consisting of the Executive Board members' bonuses and grants under the SPP, amounted to a total of €4,932,000 (previous year: €11,015,000). This and the following figures for 2017

consider the prorated compensation of Uwe Tigges until his resignation. Accordingly, the prior-year figures also include the compensation paid to Peter Terium and Bernhard Günther until their resignation. Of the performance-based components of the Executive Board members, €2,365,000 (previous year: €4,115,000) was attributable to the bonus for fiscal 2017 paid directly and €2,567,000 (previous year: €2,987,000) to the allocation of performance shares under the SPP.

As set out on page 66, the level of the bonus largely depends on adjusted EBIT. For fiscal 2017, the Supervisory Board had set a target of €3,573 million (100 % target achievement) and a cap of €4,288 million (150 % target achievement).

Including adjustments, this resulted in an actual figure of €3,676 million. Accordingly, the degree to which the target was achieved was 107 %. In calculating the actual figure, adjustments were made in order to account for structural differences between actual and target figures. These differences result in particular from impairments or unscheduled special items (e. g. sales proceeds).

The following table summarises the short-term remuneration paid in accordance with the German Commercial Code for fiscal 2017.

| **Short-term Executive Board compensation**[1] | Dr. Rolf Martin Schmitz | | Dr. Markus Krebber | | Uwe Tigges | | Peter Terium | | Dr. Bernhard Günther | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | since 1 Oct 2016 | | until 30 Apr 2017 | | until 14 Oct 2016 | | until 14 Oct 2016 | | | |
| € '000 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| **Non-performance-based compensation** | | | | | | | | | | | | |
| Fixed compensation | 960 | 960 | 750 | 188 | 250 | 750 | – | 1,050 | – | 563 | 1,960 | 3,511 |
| Fringe benefits (company car, accident insurance) | 15 | 19 | 20 | 4 | 7 | 20 | – | 23 | – | 24 | 42 | 90 |
| Other payments (pension instalments) | – | – | 255 | 64 | 85 | 255 | – | 360 | – | 191 | 340 | 870 |
| **Total** | **975** | **979** | **1,025** | **256** | **342** | **1,025** | **–** | **1,433** | **–** | **778** | **2,342** | **4,471** |
| **Performance-based compensation** | | | | | | | | | | | | |
| Direct bonus payment | 1,168 | 962 | 643 | 133 | 213 | 861 | – | 1,224 | – | 635 | 2,024 | 3,815 |
| Compensation for mandates[2] | 138 | 150 | 203 | 78 | – | 20 | – | 27 | – | 25 | 341 | 300 |
| **Bonus** | **1,306** | **1,112** | **846** | **211** | **213** | **881** | **–** | **1,251** | **–** | **660** | **2,365** | **4,115** |
| **Total** | **2,281** | **2,091** | **1,871** | **467** | **555** | **1,906** | **–** | **2,684** | **–** | **1,438** | **4,707** | **8,586** |

1 The table is based on the Group perspective. The figures include all the emoluments received by Uwe Tigges, Peter Terium and Bernhard Günther for their work on the Executive Boards of RWE AG and innogy SE until they resigned from the Executive Board of RWE AG. Pursuant to the German Commercial Code, RWE AG may only state in its separate financial statements the partial amounts that are allocable to it in economic terms. Only Uwe Tigges worked for both companies in fiscal 2017. In the separate financial statements of RWE AG, he is allocated non-performance-based compensation of €171,000 and performance-based compensation of €107,000.

2 In 2017, the compensation for exercising intragroup supervisory board offices was fully set off against the bonus.

**Share-based payment according to the Strategic Performance Plan.** In fiscal 2017, Rolf Martin Schmitz and Markus Krebber were granted performance shares under the SPP of RWE AG, whereas Uwe Tigges received performance shares under the SPP of innogy, which has a similar structure. The following overview shows the volume of performance shares issued. The main factor in determining the ratio of the number of performance shares granted on a preliminary basis to the final number of performance shares granted was the adjusted net income of the RWE Group in fiscal 2017. The Supervisory Board established an actual figure of €806 million for this. The amount differs from the figure mentioned on page 48 (€1,232 million) because more adjustments were necessary, as required by the SPP conditions. These adjustments are the same as the ones made to calculate the actual figure for adjusted EBIT (see above). Based on a target of €686 million (grant of 100 %) and a cap of €1,086 million (grant of 150 %) the final grant amounts to 115 % of the performance shares granted on a preliminary basis. The allocation ratio for Uwe Tigges was aligned to innogy's adjusted net income and was 88 % in 2017.

| Long-term incentive payment[1] Strategic Performance Plan | | Dr. Rolf Martin Schmitz | | Dr. Markus Krebber since 1 Oct 2016 | | Uwe Tigges until 30 Apr 2017 | |
|---|---|---|---|---|---|---|---|
| Tranche | Year | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Company | | RWE AG | RWE AG | RWE AG | RWE AG | innogy SE | innogy SE |
| Grant date | | 1 Jan 2017 | 1 Jan 2016 | 1 Jan 2017 | 1 Jan 2016 | 1 Jan 2017 | 1 Jan 2016 |
| Fair value at grant date | € '000 | 1,250 | 769 | 988 | 247 | 329 | 706 |
| Share price (average) | € | 11.62 | 13.78 | 11.62 | 13.78 | 32.07 | 37.13 |
| **Number of performance shares allocated on a provisional basis** | | **107,573** | **55,787** | **84,983** | **17,915** | **10,264** | **19,021** |
| Measurement date of performance conditions | | 31 Dec 2017 | 31 Dec 2017 | 31 Dec 2017 | 31 Dec 2017 | 31 Dec 2017 | 31 Dec 2017 |
| Target achievement in relation to adjusted net income | % | 115 | 115 | 115 | 115 | 88 | 88 |
| Final number of fully granted performance shares | | 123,709 | 64,155 | 97,730 | 20,602 | 9,032 | 16,738 |
| End of the vesting period | | 31 Dec 2020 | 31 Dec 2019 | 31 Dec 2020 | 31 Dec 2019 | 31 Dec 2020 | 31 Dec 2019 |

1 From the Group perspective, the compensation stated for Uwe Tigges under the SPP of innogy SE is share-based. In accordance with the German Commercial Code, the separate financial statements of RWE AG are based on a different perspective: as the payment depends on the innogy share instead of on the development of the RWE share, the SPP compensation received by UWE Tigges is classified as non-share-based and is only included in total remuneration once the payment conditions are met.

The table below shows the level of provisions formed for share-based payment obligations under the SPP.

| Addition of provisions for long-term share-based incentive payments € '000 | | 2017 | 2016 |
|---|---|---|---|
| Dr. Rolf Martin Schmitz | | 592 | 141 |
| Dr. Markus Krebber | since 1 October 2016 | 393 | 46 |
| Uwe Tigges | until 30 April 2017 | 124 | 134 |
| Peter Terium | until 14 October 2016 | – | 143 |
| Dr. Bernhard Günther | until 14 October 2016 | – | 82 |
| **Total** | | **1,109** | **546** |

**Obligations under the former pension scheme.** The service cost of pension obligations to Rolf Martin Schmitz amounted to €538,000 in 2017 (previous year: €229,000). This is not a compensation component in accordance with the German Commercial Code. As of year-end, the net present value of the defined benefit obligation determined in accordance with International Financial Reporting Standards (IFRS) amounted to €12,391,000 (previous year: €13,923,000). The value of the pension obligation determined according to the German Commercial Code totalled €9,287,000 (previous year: €9,894,000). The pension obligation for 2017 decreased by €607,000 (previous year: increase of €435,000).

Based on the emoluments qualifying for a pension as of 31 December 2017, the projected annual pension of Rolf Martin Schmitz on retiring from the company as of the expiry of his appointment amounts to €556,000 (previous year: €484,000). This includes vested pension benefits due from former employers transferred to RWE AG.

## Recommendations of the German Corporate Governance Code

According to the version of the German Corporate Governance Code (GCGC) published on 7 February 2017, the total remuneration of management board members comprises the monetary compensation elements, pension commitments, other awards, fringe benefits of all kinds and benefits from third parties which were granted or paid in the financial year with regard to management board work. Item 4.2.5, Paragraph 3 of the Code lists the compensation components that should be disclosed. Unlike under German commercial law, according to the GCGC the annual service cost of pension benefits is also part of total compensation.

The GCGC provides specific examples for the recommended presentation of management board compensation based on model tables, which distinguishes between 'benefits granted' and 'benefits received'.

- According to the GCGC, benefits or compensation are granted when a binding commitment to such is made to the management board member. In deviation from German commercial law, it is not relevant to what extent the management board member has already provided the services being remunerated.
- The term 'benefits received' defines the extent to which the management board member has already received payments. In this regard, the relevant aspect is the time at which the amount being paid is sufficiently certain and not the actual time of the payment.

This distinction made in the Code can be illustrated with the example of the bonus: the contractually agreed and promised budgeted bonus for the fiscal year in question is considered 'granted'. Conversely, the benefits received table shows the bonus level which will actually be paid with a high degree of probability. In this regard, it is not relevant that no payment actually took place during the year in question. The payment date is deemed to have been reached when the indicators and results needed to determine target achievement (and therefore the bonus) are known with sufficient certainty. The Code assumes that this is already the case at the end of the year. As a result, the one-year Executive Board bonuses are stated in the reporting year in the benefits granted table.

In the following, we present the compensation of the Executive Board of RWE AG in the manner recommended by the GCGC, based on the sample tables.

| **Benefits granted** | Dr. Rolf Martin Schmitz since 1 May 2009, Chief Executive Officer since 15 Oct 2016 | | | | Dr. Markus Krebber since 1 Oct 2016, Chief Financial Officer since 15 Oct 2016 | | | |
|---|---|---|---|---|---|---|---|---|
| € '000 | 2016 | 2017 | 2017 (Min) | 2017 (Max) | 2016 | 2017 | 2017 (Min) | 2017 (Max) |
| Fixed compensation | 960 | 960 | 960 | 960 | 188 | 750 | 750 | 750 |
| Pension instalment | – | – | – | – | 64 | 255 | 255 | 255 |
| Fringe benefits | 19 | 15 | 15 | 15 | 4 | 20 | 20 | 20 |
| **Total fixed compensation** | **979** | **975** | **975** | **975** | **256** | **1,025** | **1,025** | **1,025** |
| **One-year variable compensation** | **900** | **1,100** | **0** | **1,980** | **178** | **713** | **0** | **1,283** |
| Bonus | 900 | 1,100 | 0 | 1,980 | 178 | 713 | 0 | 1,283 |
| **Multi-year variable compensation** | **769** | **1,250** | **0** | **2,500** | **247** | **988** | **0** | **1,975** |
| SPP 2016 tranche[1] (term: 2016–2019) | 769 | – | – | – | 247 | – | – | – |
| SPP 2017 tranche (term: 2017–2020) | – | 1,250 | 0 | 2,500 | – | 988 | 0 | 1,975 |
| **Total variable compensation** | **1,669** | **2,350** | **0** | **4,480** | **425** | **1,701** | **0** | **3,258** |
| **Total** | **2,648** | **3,325** | **975** | **5,455** | **681** | **2,726** | **1,025** | **4,283** |
| Service cost | 229 | 538 | 538 | 538 | – | – | – | – |
| **Total compensation** | **2,877** | **3,863** | **1,513** | **5,993** | **681** | **2,726** | **1,025** | **4,283** |

1 The grant contains the contractual bonus retention for the period up to 30 September 2016, which was transferred to the 2016 tranche of the SPP on this one occasion.

| Benefits granted | Uwe Tigges Chief HR Officer/Labour Director until 30 Apr 2017 | | | |
|---|---|---|---|---|
| € '000 | 2016 | 2017 | 2017 (Min) | 2017 (Max) |
| Fixed compensation | 750 | 250 | 250 | 250 |
| Pension instalment | 255 | 85 | 85 | 85 |
| Fringe benefits | 20 | 7 | 7 | 7 |
| **Total fixed compensation** | **1,025** | **342** | **342** | **342** |
| **One-year variable compensation** | **713** | **238** | **0** | **428** |
| Bonus | 713 | 238 | 0 | 428 |
| **Multi-year variable compensation** | **706** | **329** | **0** | **658** |
| SPP 2016 tranche[1] (term: 2016–2019) | 706 | – | – | – |
| SPP 2017 tranche (term: 2017–2020) | – | 329 | 0 | 658 |
| **Total variable compensation** | **1,419** | **567** | **0** | **1,086** |
| **Total** | **2,444** | **909** | **342** | **1,428** |
| Service cost | – | – | – | – |
| **Total compensation** | **2,444** | **909** | **342** | **1,428** |

1 The grant contains the contractual bonus retention for the period up to 30 September 2016, which was transferred to the 2016 tranche of the SPP on this one occasion.

| Benefits received | Dr. Rolf Martin Schmitz since 1 May 2009, Chief Executive Officer since 15 Oct 2016 | | Dr. Markus Krebber since 1 Oct 2016, Chief Financial Officer since 15 Oct 2016 | | Uwe Tigges Chief HR Officer/ Labour Director until 30 Apr 2017 | |
|---|---|---|---|---|---|---|
| € '000 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 |
| Fixed compensation | 960 | 960 | 750 | 188 | 250 | 750 |
| Pension instalment | – | – | 255 | 64 | 85 | 255 |
| Fringe benefits | 15 | 19 | 20 | 4 | 7 | 20 |
| **Total fixed compensation** | **975** | **979** | **1,025** | **256** | **342** | **1,025** |
| **One-year variable compensation** | **1,306** | **1,112** | **846** | **211** | **213** | **881** |
| Bonus[1] | 1,306 | 1,112 | 846 | 211 | 213 | 881 |
| **Multi-year variable compensation** | **0** | **947** | **0** | **0** | **0** | **723** |
| Bonus retention 2013–2015 (released) | – | 947 | – | – | – | 723 |
| SPP 2016 tranche (term: 2016–2019) | 0 | 0 | 0 | 0 | 0 | 0 |
| SPP 2017 tranche (term: 2017–2020) | 0 | – | 0 | 0 | 0 | 0 |
| **Total variable compensation** | **1,306** | **2,059** | **846** | **211** | **213** | **1,604** |
| **Total** | **2,281** | **3,038** | **1,871** | **467** | **555** | **2,629** |
| Service cost | 538 | 229 | – | – | – | – |
| **Total compensation** | **2,819** | **3,267** | **1,871** | **467** | **555** | **2,629** |

1 The bonus includes compensation for exercising intragroup supervisory board offices; also see the table 'Short-term Executive Board compensation' on page 70.

# 1.12 DEVELOPMENT OF RISKS AND OPPORTUNITIES

**RWE's risk position is significantly affected by changes in the regulatory framework in the energy sector. State intervention with the object of reducing greenhouse gas emissions could have a very negative effect on us, in particular if it leads to an accelerated exit from coal-based electricity generation. This applies first and foremost to our home market Germany. The development of prices on wholesale markets for electricity, fuel and emission allowances also exposes us to substantial risks – as well as opportunities, as demonstrated by the recovery of electricity prices in the last two years. The RWE Group rests on a solid foundation in both financial and organisational terms. One of the key elements of this foundation is our risk management, which has proven itself over many years, enabling us to identify, assess and control risks systematically.**

**Redistribution of risk management responsibilities in the RWE Group.** The restructuring of the RWE Group also involved the reorganisation of our risk management. Since its public listing in October 2016, innogy SE has controlled its risks independently – as well as those of its subsidiaries. As regards all of the other Group companies, responsibility remains with RWE AG. The manner in which RWE AG records innogy's risks has also changed. Since we fully consolidate our subsidiary in the Group's financial statements, but manage it as a financial investment, our analysis essentially focuses on the market value of our investment in innogy and changes in this value. We map the risk of losses in value inter alia using a mathematical model which tracks the history of the investment's share price. Furthermore, innogy provides us with semi-annual reports on its individual risks. Based on this information, we determine whether the market value risk we have calculated for the investment in innogy needs to be corrected. If, for example, we were to find that the individual risks reported by innogy have been underestimated, we would put the risk of negative changes in market value into a higher category.

The following is a detailed presentation of RWE AG's risk management. Corresponding information regarding innogy can be found in our subsidiary's latest annual report.

**Organisation of RWE AG's risk management.** The primary responsibility for our risk management lies with the Executive Board of RWE AG. It monitors and manages the overall risk of the Group and its operational subsidiaries. In doing so, it determines the risk appetite of RWE and defines upper limits for risk positions.

At the level below the Executive Board, the Controlling & Risk Management Department has the task of applying and developing the risk management system. It derives detailed limits for the individual business fields and operating units from the risk caps set by the Executive Board. Its tasks also include checking the identified risks for completeness and plausibility and aggregating them. In so doing, it receives support from the Risk Management Committee, which is composed of the heads of the following five RWE AG departments: Accounting, Controlling & Risk Management (Chair), Corporate Business Development, Finance & Credit Risk and Legal. The Controlling & Risk Management Department provides the Executive Board and the Supervisory Board of RWE AG with regular reports on the company's risk exposure.

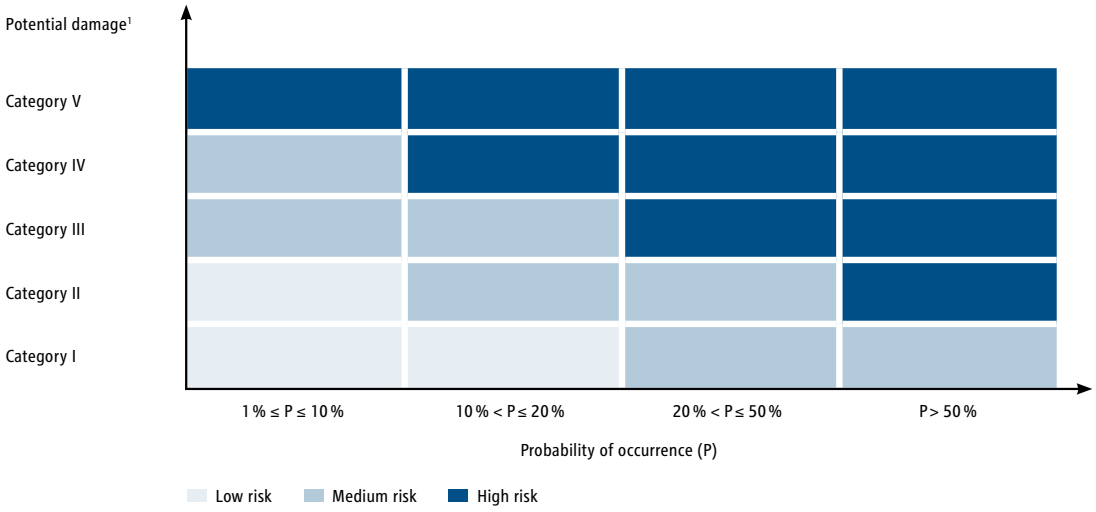
A number of additional organisational units and committees have been entrusted with risk management tasks:

- Financial risks and credit risks are managed by the Finance & Credit Risk Department, which reports directly to the CFO of RWE AG.
- The Accounting Department is responsible for risks involved in financial reporting. It also reports directly to the CFO of RWE AG and uses an accounting-related internal control system, which is described on page 82.
- The Internal Audit & Compliance Department monitors compliance with RWE's Code of Conduct. One of its main focal points is avoiding corruption risks. It reports to the CEO of RWE AG or, if members of the Executive Board are affected, directly to the Chairman of the Supervisory Board and the Chairman of the Supervisory Board's Audit Committee.
- In so far as they relate to the conventional electricity generation, energy trading and gas businesses, risks from changes in commodity prices are monitored by RWE Supply & Trading.
- Strategies to limit market risks from the generation business are approved by the Commodity Management Committee. This is an expert body which currently consists of the CFO of RWE AG, members of the management of RWE Supply & Trading and a representative of the Controlling & Risk Management Department.

- The strategic guidelines for the management of financial assets (including the funds of RWE Pensionstreuhand e.V.) are determined by the Asset Management Committee. This body also currently attends to this task for the financial investments of innogy SE. Its members include the CFO of RWE AG, the head of the Finance & Credit Risk Department, the head of the Portfolio Management/Mergers & Acquisitions Department and the head of Financial Asset Management from the Portfolio Management/Mergers & Acquisitions Department. The heads of the innogy Finance and Controlling & Risk Departments and the CFO of innogy's Grid & Infrastructure Division are also members.
- There is also a committee at RWE AG which supports the accounting teams and the functions of high relevance to accounting in preventing the incorrect financial reporting of risks (see page 82).

Under the expert management of the aforementioned organisational units, RWE AG and its operating subsidiaries are responsible for identifying risks early, assessing them correctly and managing them in compliance with central standards. The Internal Audit Department regularly assesses the quality and functionality of our risk management system.

## RWE AG risk matrix




| Potential damage | **Earnings risks**[2]<br>Potential impact on net income – compared to adjusted EBITDA[3] and equity[4] | **Indebtedness/liquidity/equity risks**[2]<br>Potential impact on net debt and equity |
|---|---|---|
| Category V | ≥ 50 % of equity | ≥ €8 billion |
| Category IV | ≥ 100 % of adjusted EBITDA and < 50 % of equity | ≥ €4 billion and < €8 billion |
| Category III | ≥ 40 % and < 100 % of adjusted EBITDA | ≥ €2 billion and < €4 billion |
| Category II | ≥ 20 % of EBITDA and < 40 % of adjusted EBITDA | ≥ €1billion and < €2 billion |
| Category I | < 20 % of adjusted EBITDA | < €1 billion |

1 In relation to the aggregated level of damage from 2018 to 2020.
2 innogy is not included in the figures as a fully consolidated company, but as a pure financial investment (see page 60).
3 Average for 2018 to 2020 derived from the medium-term plan.
4 Equity as of 30 September 2017 (€14,990 million).

**Risk management as a continuous process.** Risks and opportunities are defined as negative or positive deviations from expected figures. Their management is an integral and continuous part of operating processes. We assess risks every six months, using a bottom-up analysis. We also monitor risk exposure between the regular survey dates. The Executive Board of RWE AG is immediately notified of any material changes. Our executive and supervisory bodies are updated on the risk exposure on a quarterly basis.

Our analysis normally covers the three-year horizon of our medium-term plan, but can extend beyond that for long-term risks. We evaluate risks to determine their impact on net income on the one hand and on net debt and equity on the other hand. We calculate the probability of occurrence for all risks as well as their potential damage. Risks that share the same cause are aggregated to a single risk. We analyse the material individual risks of the RWE Group using a matrix in which the risks' probability of occurrence and potential net damage are represented, i.e. taking account of hedging measures such as hedge transactions. Depending on their position in the matrix, we distinguish between low, medium and high risks. Based on this analysis, we determine whether there is a need for action and initiate measures to mitigate the risks if necessary.

We have made adjustments to the method used to quantify risks. Whereas in 2016 we used key figures in which innogy was included as a fully consolidated company, we now record our subsidiary as a purely financial investment. Details on this approach can be found on page 60. This change caused the figure for equity, which we use as a basis to scale earnings risks, to increase significantly. A second change in methodology relates to the effects which risks can have on net income. We now calculate them as percentages of adjusted EBITDA instead of adjusted EBIT. Adjusted EBITDA is the more important management parameter. Since it does not include depreciation or amortisation, it comes closer to the cash flows from operating activities, which are of huge significance especially for managing our power plant portfolio. Due to the adjustments described above, the limits that we use to categorise earnings risks changed substantially. By contrast, the limits that we use to classify the effects of risks on net debt and equity have not changed.

| **Risk classes**[1] | Classification of the highest single risk | |
|---|---|---|
| | 31 Dec 2017 | 31 Dec 2016 |
| Market risks | Medium | Medium |
| Regulatory and political risks | High | High |
| Legal risks | Medium | Medium |
| Operational risks | Medium | Low |
| Financial risks | High | Medium |
| Creditworthiness of business partners | Medium | Medium |
| Other risks | Low | Medium |

1 In the risk assessment as of 31 December 2017, innogy is only recorded based on the risk of changes in the market value of our investment in the company, whereas in the risk assessment as of 31 December 2016, innogy's individual risks were still considered.

**Main risks for the RWE Group.** As presented in the table above, our main risks can be classified into seven groups, depending on their nature. The highest individual risk determines the classification of the risk of the entire risk class. As mentioned earlier, we consider innogy in the assessment as a pure financial investment, the aggregated total risk of which consists of declines in its share price. The individual risks of our subsidiary, on which we provide information on page 80 et seq., are no longer presented separately in our risk matrix. As we record the possibility of a decline in innogy's share price in our matrix, the financial risks have been reclassified from 'medium' to 'high'. We also classify our regulatory and political risks as 'high'. This assessment did not change compared to the previous year.

In the following, we discuss the main risks and opportunities and explain what measures have been taken to counter the threat of negative developments.

- **Market risks.** In most of the countries in which we are active the energy sector is characterised by the free formation of prices. Declines in quotations on wholesale electricity markets can cause power plants and electricity procurement contracts concluded at fixed prices to become less economically feasible and, in some cases, even unprofitable. In such events, we may have to recognise impairments or form provisions. Following an extended downward trend, in 2016 and 2017, wholesale electricity prices picked up again in our most important generation markets, Germany, the United Kingdom and the Netherlands. The main reason for this was that fuel quotations recovered, especially of hard coal. It cannot be ruled out that this upward trend stops or that electricity prices decrease substantially again. However, there is also a chance that this recovery continues and that future realisable generation margins rise further.

  In addition to fuel costs, demand for electricity and the amount of generation capacity available to meet it are also decisive to the development of wholesale electricity prices. Risks also exist here due to the expansion of electricity storage. For example, the increased use of batteries could result in households with photovoltaic units becoming independent from the regular electricity market. Conversely, the electrification of the heating and transportation sector would have positive effects on demand for electricity. Above and beyond this, we expect the ongoing reduction of secured generation capacity in our home market Germany to increasingly lead to shortages with high electricity prices.

  We assess the price risks to which we are exposed on the procurement and supply markets taking account of current forward prices and expected volatility. For our power plants, we limit margin risks by selling most of our electricity forward and securing the prices of the fuel and $CO_2$ emission allowances needed for its generation. Our goal is to limit the consequences of negative price developments and tap into additional earnings potential.

RWE Supply & Trading plays a central role when it comes to managing commodity price risks. It functions as the Group's interface to the global wholesale markets for electricity and energy commodities. The company markets large portions of our power generation and purchases the necessary fuels and $CO_2$ certificates needed to produce electricity. The role of RWE Supply & Trading as internal transaction partner makes it easier for us to limit the risks associated with price volatility on energy markets. However, the trading transactions are not exclusively intended to reduce risks. To a limited degree, the company also takes commodity positions to achieve a profit.

Our risk management system for energy trading is firmly aligned with best practice as applied to the trading businesses of banks. As part of this, transactions are concluded with third parties only if the credit risks are within approved limits. There are guidelines governing the treatment of commodity price risks and associated credit risks. Our subsidiaries constantly monitor their commodity positions. Risks associated with trades conducted by RWE Supply & Trading for its own account are monitored daily.

The Value at Risk (VaR) is of central importance for risk measurement in energy trading. It specifies the maximum loss from a risk position not exceeded with a given probability over a certain period of time. The VaR figures within the RWE Group are based on a confidence interval of 95 %. The assumed holding period for a position is one day. This means that, with a probability of 95 %, the daily loss will not exceed the VaR.

The VaR for commodity positions in the trading business of RWE Supply & Trading may not rise above €40 million. In the financial year that just closed, it averaged €10 million (previous year: €17 million), and the daily maximum was €15 million (previous year: €34 million). In the middle of 2017, we pooled the management of our gas portfolio and our liquefied natural gas (LNG) business in a new organisational unit at RWE Supply & Trading and established a VaR cap of €12 million for these activities. The average VaR measured from the foundation of the organisation unit until the end of 2017 was €3 million. Additionally, we have set limits for each trading desk. Furthermore, we develop extreme scenarios and factor them into stress tests, determine their consequences for earnings, and take countermeasures if we deem the risks to be too high.

We also apply the VaR concept to measure the extent to which the commodity price risks that we are exposed to outside the trading business can affect the RWE Group's adjusted EBITDA. To this end, we calculate the overall risk for the Group on the basis of the commodity risk positions of the individual companies; this overall risk mainly stems from power generation. As the majority of our generation position is already fully hedged for 2018, only minor market price risks remain for this year. Additionally, profit opportunities arise, because we are able to adapt our power plant deployment to short-term market developments flexibly.

In certain cases, financial instruments used to hedge commodity positions are presented as on-balance-sheet hedging relationships in the consolidated financial statements. This also applies to the financial instruments we use to limit interest and currency risks. More detailed information can be found in the Notes to the consolidated financial statements on page 141 et seqq.

Our biggest market risks remain unchanged in the 'medium' category.

- **Regulatory and political risks.** Energy supply is a long-term business and companies involved in this industry are particularly dependent on a stable, reliable framework. Stricter thresholds for emissions can result in massive declines in earnings, if the transition periods are too short and existing plants have to be shut down early. This kind of risk emanates from the German Climate Action Plan 2050, which was adopted at the end of 2016 (see page 33 of the 2016 Annual Report). According to the Plan, by 2030 the energy sector must lower its emissions by more than 60 % compared to the level of 1990. We view this target as being very ambitious and see a risk that coal-fired power stations may have to be decommissioned earlier than planned. In the Netherlands, the new government is planning a complete exit from coal by 2030, and it intends to make carbon dioxide emissions by power plants more expensive by introducing a $CO_2$ tax. Such measures can place a huge burden on us. In a dialogue with policymakers, we want to point out the possible negative effects of an overly ambitious path of emissions reductions, in particular with regard to security of supply.

  We are also exposed to risks in the field of nuclear energy, albeit to a much lesser extent than in the past. Last year, a German law redistributing responsibility for nuclear waste management between the federal government and the power plant operators was enacted (see page 35). Since the companies made contributions to the new nuclear energy fund in the middle of 2017, they have no longer been liable for the costs of interim and final storage. We have reaffirmed this in legal terms with the Federal Republic of Germany by way of a contract. However, we are exposed to cost risks associated with disposal tasks for which we remain responsible in operating and financial terms. For example, it cannot be ruled out that the dismantling of nuclear power stations will be more expensive than planned.

  Another issue that has been clarified is the legality of the German nuclear fuel tax, which had been levied from 2011 to 2016. The German Constitutional Court declared the tax null and void, upon which the Federal government refunded us the €1.7 billion in tax payments made plus interest (see page 37). This caused one of our major opportunities to materialise. However, it cannot be ruled out that nuclear fuel may be taxed again, this time fulfilling the constitutional requirements.

  Even in the present political environment, we are exposed to risks associated for example with approvals when building and operating production facilities. This particularly affects our opencast mines and power stations. The danger here is that new-build projects receive late or no approval, or granted approvals are withdrawn. Depending on the progress of construction work and the contractual obligations to suppliers, this can have a very negative financial impact. We try to limit this risk as much as possible by preparing our applications for approval with great care and ensuring that approval processes are handled competently.

  For us, the regulatory and political risks of most significance are those resulting from intervention to limit carbon emissions and make them more expensive. As in the preceding year, we classified these risks as 'high'.

- **Legal risks.** Individual RWE Group companies are involved in litigation and arbitration proceedings due to their operations or the acquisition of companies. Out-of-court claims have been filed against some of them. Furthermore, companies from the RWE Group are directly involved in various procedures with public authorities or are at least affected by their outcomes. We have accrued provisions for possible losses resulting from pending proceedings before ordinary courts and arbitration courts.

Risks may also result from exemptions and warranties that we granted in connection with the sale of shareholdings. Exemptions ensure that the seller covers the risks that are identified within the scope of due diligence, the probability of occurrence of which is, however, uncertain. In contrast, warranties also cover risks that are unknown at the time of sale. The hedging instruments described above are standard procedure in sales of companies and equity holdings. The maximum classification of our legal risks is 'medium'. There was no change in this regard compared to the previous year.

- **Operational risks.** RWE operates technologically complex, interconnected production facilities. During their construction and modernisation, delays and cost increases can occur, for example due to accidents, material defects, late deliveries or time-consuming approval processes. We counter this through diligent plant and project management as well as high safety standards. We also regularly inspect and maintain our facilities. Nevertheless, it is impossible to prevent occasional outages. If economically viable, we take out insurance policies.

  In relation to capital expenditure on property, plant and equipment and intangible assets, there is a risk that the return may fall short of expectations. Furthermore, prices paid for acquisitions may retrospectively prove to be too high. However, it is also possible that the returns on investments turn out to be higher than originally assumed. We conduct extensive analyses to try and map the financial and strategic effects of transactions as realistically as possible. Moreover, RWE has specific accountability provisions and approval processes in place to prepare and implement investment decisions.

  Our business processes are supported by secure data processing systems. Nevertheless, we cannot rule out a lack of availability of IT infrastructure or a breach in data security. Our high security standards are designed to prevent this. In addition, we regularly invest in hardware and software upgrades. We now classify our operating risks as 'medium' as opposed to 'low' in the previous year. This is because we anticipate higher wholesale electricity prices than before. If this expectation materialises, power station outages would result in more significant drops in margins. However, our assumptions concerning the frequency of such events have not changed.

- **Financial risks.** The volatility of market interest rates, foreign exchange rates and share prices can have a significant effect on our financial position. Above all, the development of innogy's share price is important to us. A crash on the stock markets and negative developments at innogy can cause the market value of our stake in the company to decline significantly. This risk has partially materialised: the innogy share dropped considerably in value in December 2017 due to a profit warning issued by management. However, innogy may well regain the trust of the capital market and its share price may recover.

  RWE holds other shares besides those in innogy. The average VaR for the share price risk of this paper was €2 million (previous year: €8 million).

  We are exposed to foreign exchange risks primarily owing to our business activities in the United Kingdom. Furthermore, energy commodities such as coal and oil are traded in US dollars. Companies which are overseen by RWE AG have their currency risks managed by the parent company. RWE AG aggregates the risks to a net financial position for each currency and hedges it if necessary. In 2017, the average VaR for RWE AG's foreign currency position was less than €1 million. The same applies to the prior year.

  We differentiate between several categories of interest rate risks. For example, rises in interest rates can lead to reductions in the price of the securities we hold. This primarily relates to fixed-interest bonds. The VaR for the interest rate-related price risk of capital investments was €5 million on average at RWE AG (previous year: €9 million).

  Moreover, increases in interest rates cause our financing costs to rise. We measure this risk using the cash flow at risk (CFaR), applying a confidence level of 95 % and a holding period of one year. The average CFaR at RWE AG was €3 million. Due to the reorganisation, there is no average figure for the prior year.

  Furthermore, market interest rates have an effect on our provisions, as they are the point of reference for the discount rates used for determining the net present values of obligations. This means that in the case of declining market interest rates our provisions generally rise and vice versa.

Risks and opportunities from changes in the price of securities are controlled by a professional fund management system. Range of action, responsibilities and controls are set out in internal guidelines which the Group companies are obliged to adhere to when concluding financial transactions. All financial transactions are recorded using special software and are monitored by RWE AG.

The conditions at which we can finance our business on the debt capital market are dependent on the credit ratings we receive from international rating agencies. As set out on page 55, Moody's and Fitch place our long-term creditworthiness in the investment grade category with a stable outlook. However, the agencies may change their assessments and lower our credit rating at any time. This can result in additional costs if we have to raise debt capital or hedge trades.

We classify our financial risks as 'high' because they now also contain the share price risk associated with our stake in innogy (previous year: 'medium').

- **Creditworthiness of business partners.** Our business relations with key accounts, suppliers, trading partners and financial institutions expose us to credit risks. Therefore, we track the creditworthiness of our partners closely and assess their credit standing based on internal and external ratings, both before and during the business relationship. Transactions that exceed certain approval thresholds and all trading transactions are subject to a credit limit, which we determine before the transaction is concluded and adjust if necessary, for instance in the event of a change in creditworthiness. At times, we request cash collateral or bank guarantees. Credit risks and the utilisation of the limits in the trading and financing business are measured daily.

  We agree on collateral when concluding over-the-counter trading transactions. Furthermore, we enter into framework agreements, e.g. those of the European Federation of Energy Traders (EFET). For financial derivatives, we make use of the German master agreement for forward financial transactions or the master agreement of the International Swaps and Derivatives Association (ISDA).

  As in the past, our risks stemming from the creditworthiness of our business partners do not exceed the category 'medium'.

- **Other risks.** This risk class includes reputation risks and risks associated with non-compliance and criminal offences committed by employees of the Group. It also encompasses the possibility of planned divestments not being implemented, for example owing to regulatory requirements or the lack of acceptable bids. We consider other risks to be low. Including innogy, we had classified them as 'medium' in the previous year.

**innogy's risk exposure.** The development of the market value of our 76.8 % shareholding in innogy is mainly affected by the individual risks of our subsidiary. We have outlined some of these risks below. Detailed information on this topic can be found in innogy's current annual report.

- Earnings in the renewable energy business strongly depend on state subsidy systems. Here, there is a risk that the realisable compensation declines and new projects cease to be attractive. This can lead to investment undertaking being broken off. Reductions in the subsidisation of existing generation units cannot be fully ruled out. The revenue of these plants is also exposed to the risk of unfavourable market developments to the extent that it is partly determined by wholesale electricity prices. This particularly applies to wind farms when subsidies have expired. If such risks materialise, impairments may have to be recognised for these plants or they may have to be sold below their carrying amount. However, these plants can earn unexpectedly high returns if wholesale electricity prices increase.

- In the grid business, risks arise predominantly from the regular adjustments to the regulatory framework. In Germany, the new five-year regulatory period began on 1 January 2018 for gas network operators and on 1 January 2019 this will be the case for electricity network operators. Major decisions regarding these periods by the regulatory authorities are still pending. For example, cost reviews are yet to be completed for innogy's network companies, and the maximum allowable revenues must be established. There is the risk that regulatory authorities set low revenue caps and require the companies to achieve significant cost savings. However, it is also possible that the network operators are granted favourable conditions. Margins realisable in the gas storage business, which is assigned to the Grid & Infrastructure division, depend in part on seasonal differences in gas prices. If the differences are significant, high income can be achieved. In contrast, declines in differences can reduce earnings and lead to impairments.

- innogy faces significant competitive pressure in the retail business. When competition is tough, cost disadvantages and a weak performance on the market can quickly lead to declines in margins and customer losses. innogy mitigates the risk of sales and margin declines with customer retention measures, a differentiated price policy and a high quality of service in all of its retail markets. Our subsidiary does justice to changing customer demands by supplementing its offering with innovative products. In addition to the competitive landscape, regulatory intervention can also curtail earnings in the retail business. One such example is the cap on residential customer tariffs in the United Kingdom. As set out on page 36, households with prepayment tariffs are given price protection for a limited period. The same applies to low-income customers that receive a price reduction known as the 'warm home discount'. The government's plans envisage all standard-tariff customers benefiting from contractual price caps. This would cause margins in the UK supply business to deteriorate further. In view of the difficult market environment in the United Kingdom, innogy and SSE agreed to strengthen their UK retail operations by combining them to form a new, publicly listed company (see page 38).

- innogy has identified general risks and opportunities affecting all areas, inter alia in connection with investing activities. Our subsidiary intends to spur structural change in the energy sector and seize growth opportunities in doing so. Accordingly, substantial amounts of capital are spent on modernising grids, expanding renewable energy and developing innovative retail offerings. Capital expenditure on property, plant and equipment and financial assets can lead to returns below expectations. The price for acquiring companies may prove to have been too high in retrospect. Vice-versa, capital expenditure can be more profitable than originally assumed. innogy is also exposed to risks in relation to IT security. The damage that can potentially be caused by cyber attacks has risen due to progressive digitisation, the increasing interconnectivity of devices via the internet, and the mounting complexity of software and hardware. innogy has taken extensive technical and organisational measures in order to protect itself from such dangers. Another general risk results from changes in interest rates. Due to the expansionary monetary policy of leading central banks, market interest rates are currently low. Should they fall further, an upward adjustment may have to be made to the company's pension provisions. A rise in interest rates would usually lead to a decline in pension provisions, but would have the added disadvantage that refinancing would become more costly.

innogy monitors these and other risks continuously and takes countermeasures where necessary. The company does not currently see any risks that may jeopardise its existence.

**Overall assessment of RWE's risk and opportunity situation: general assessment by company management.** As demonstrated by the contents of this chapter, RWE's risk exposure is largely influenced by the development of economic and regulatory framework conditions and the market value of its majority interest in innogy. Regulatory risks arise inter alia from the German climate protection plan adopted at the end of 2016, which is to be concretised this year. We see the danger that we may have to shut down other coal-fired power plants in addition to the lignite-fired stations that are on standby. We may also experience significant burdens in the Netherlands if the government's current plans to exit from coal are implemented. By contrast, risk exposure in nuclear energy has dropped. It is now established by law how responsibility for nuclear waste management is divided between the Federal government and the power plant operators. In addition, the legal uncertainty over the nuclear fuel tax has been eliminated. As the German Constitutional Court declared the levy null and void and we were refunded the tax payments made, one of our most important opportunities materialised.

Market conditions in electricity generation have a significant influence on our earnings. German wholesale prices appear to have emerged from their trough. They are currently far above the record low recorded at the beginning of 2016. To a great extent, this is because global prices for hard coal have recovered. Should these trends reverse and electricity prices drop sharply once again, significant earnings shortfalls are to be expected, possibly as well as a downgrade of our credit rating and additional costs for hedging trading transactions. However, prices may continue to trend upwards and generation margins may improve. Such a development may then occur in Germany if the nuclear phase-out and additional power plant closures cause reliably available generation capacity to become tighter.

In view of the regulatory pressure and the market risks in the energy sector, utilities such as RWE must see to it that they are crisis-proof. On the strength of ambitious efficiency-enhancing programmes, strict investing discipline and the IPO of innogy, we have given the Group a solid financial foundation. By analysing the effects of risks on our liquidity and pursuing a conservative financing strategy, we ensure that we always have enough cash and cash equivalents in order to meet our payment obligations punctually. We have strong operating cash flows, considerable liquid funds and great financial leeway, thanks to our commercial paper programme and the unused line of credit. We budget our liquidity with foresight, based on the short, medium and long-term funding needs of our Group companies, and have a significant amount of minimum liquidity on a daily basis.

Thanks to our comprehensive risk management system and the measures for safeguarding our financial and earning power described earlier, we are confident that we can manage the current risks to RWE. At the same time, we are working hard to ensure that this remains the case in the future.

**Report on the accounting-related internal control system: statements in accordance with Sec. 289, Para. 4, and Sec. 315, Para. 4 of the German Commercial Code.** Risks associated with financial reporting reflect the fact that our annual, consolidated and interim financial statements may contain misrepresentations that could have a significant influence on the decisions made by their addressees. Our accounting-related Internal Control System (ICS) aims to detect potential errors that result from non-compliance with accounting standards. The foundations of the ICS are our basic principles, which are set out in RWE's Code of Conduct and, first and foremost, include our ambition to provide complete, objective, correct, clear and timely information, as well as the company's groupwide guidelines. Building on this, minimum requirements for the accounting-related IT systems are designed to ensure the reliability of data collection and processing. An effective ICS enables the mitigation of the risk of material misrepresentations. However, it cannot eliminate it entirely.

RWE AG is responsible for the design and monitoring of the ICS. These tasks are performed by the Accounting Department. Additionally, there is a group-wide set of rules for designing and monitoring the ICS. We also created the ICS Committee. Its objective is to ensure that the ICS is applied throughout the Group following uniform principles, meeting high ambitions in terms of correctness and transparency. Representatives from the Accounting, Controlling & Risk Management and Internal Auditing & Compliance departments, along with the representatives from the areas of finance, human resources, procurement, trading and IT – all of which play an important role in financial reporting – are members of this Committee.

We subject the ICS to a comprehensive review every year. As a first step, we examine whether the risk situation is presented appropriately and whether suitable controls are in place for the identified risks. In a second step, we test the effectiveness of the controls. If the ICS reviews are based on accounting-related processes, e. g. the receipt and processing of invoices in our service centre in Cracow, the preparation of financial statements and consolidation, they are conducted by employees from the Accounting Department. The representatives of the finance, human resources, purchasing, trading and IT functions certify whether the agreed ICS quality standards are adhered to by their respective areas. The Internal Audit Department and external auditing firms are also involved in the ICS reviews. The results of the reviews are documented in a report to the Executive Board of RWE AG. The review conducted in 2017 once again demonstrated that the ICS is an effective system.

Our ICS reviews do not cover innogy SE or its subsidiaries. However, these entities apply the aforementioned process analogously. The results obtained are considered in the assessment of the ICS of RWE AG.

Within the scope of external reporting, the members of the Executive Board of RWE AG took an external half-year and full-year balance-sheet oath, confirming that the prescribed accounting standards have been adhered to and that the figures give a true and fair view of the net worth, financial position and earnings. When in session, the Supervisory Board's Audit Committee regularly concerns itself with the effectiveness of the ICS. Once a year, the Executive Board of RWE AG submits a report on this to the committee.

# 1.13 OUTLOOK

**Although the decline German wholesale electricity prices halted at the beginning of 2016, we continue to feel the consequences in 2018. The margins of our power stations, which we realised through forward sales for 2018, were down year on year. Therefore, in 2018, the RWE Group will probably fall short of the operating result achieved last year. We anticipate adjusted EBITDA of between €4.9 billion and €5.2 billion and adjusted net income of between €0.7 billion and €1.0 billion. We will continue to benefit from our ongoing efficiency-enhancement programme. Our participation in the UK capacity market will also have an increasingly positive effect on our earnings.**

**Experts predict that the economy will remain robust.** Based on initial forecasts for 2018, the global economy will expand by some 3 %, roughly as much as last year. The economy of the Eurozone is predicted to grow by about 2 %. The German Council of Economic Experts is of the opinion that the country will record a gain of 2.2 %. The Dutch economy is expected to outgrow the Eurozone yet again, with the Belgian economy failing to keep pace with it. Experts anticipate an increase of 1.5 % in the United Kingdom. The general situation in the economies of the RWE Group's most important markets in Central Eastern Europe is unlikely to change much compared to 2017: posting growth of 3 % to 4 %, Poland, the Czech Republic, Hungary and Slovakia may well remain clearly above the European average.

**Demand for energy probably higher than in 2017.** Our forecast for this year's energy consumption is based on assumed economic developments. In addition, we anticipate that temperatures in 2018 will be normal and therefore lower overall than in 2017, which was characterised by relatively mild weather. If these conditions materialise, we expect that demand for electricity will be stable or rise marginally in Germany, the Netherlands and the United Kingdom. The stimulus of expanding economies and the possibly colder weather will be contrasted by the dampening effects of the increasingly efficient use of energy. Similar to 2017, electricity consumption in Poland, Hungary and Slovakia is expected to rise by between 2 % and 3 %.

We anticipate a general rise in gas usage. This is based on assumed normalised temperatures and a commensurate increase in the need for heating. In addition, the predicted economic growth should stimulate demand for gas. Stimulus may also come from the electricity generation sector, if the market conditions for gas-fired power plants improve further. We anticipate opposing effects from the trend towards saving energy.

**Electricity production for 2018 nearly completely sold forward.** In the last two years, the wholesale prices of electricity and major energy commodities trended back upwards following a prolonged downward spiral. Their development depends on a number of factors, which are almost impossible to predict. However, the future development of these prices is only of secondary importance to our earnings in the current fiscal year, as we have already sold almost all of our electricity generation for 2018 and secured the prices of the required fuel and emission allowances. The 2018 price we achieved for electricity from our German lignite-fired and nuclear power stations is below last year's average of €31 per MWh.

**Adjusted EBITDA in 2018: range of €4.9 to €5.2 billion expected.** We anticipate that the RWE Group's operating earnings in the financial year underway will be weaker than in 2017. We forecast adjusted EBITDA in the range of €4.9 billion to €5.2 billion. This would be significantly less than last year. The main reasons for this are lower generation margins, less income from special items and increased startup costs for innogy's growth projects. Assuming relatively stable operating depreciation, adjusted EBIT is also likely to drop considerably. Adjusted net income is expected to decline to between €0.7 billion and €1.0 billion. It differs from net income under International Financial Reporting Standards in that the non-operating result, which is characterised by one-off effects, and further material special items (including applicable taxes) are deducted from it.

| **Earnings forecast for 2018**<br>€ million | 2017 actual | Forecast for 2018 |
|---|---|---|
| Adjusted EBITDA | 5,756 | 4,900 – 5,200 |
| of which: | | |
| Lignite & Nuclear | 671 | 350 – 450 |
| European Power | 463 | 300 – 400 |
| Supply & Trading | 271 | 100 – 300 |
| innogy | 4,331 | 4,100 – 4,200 |
| Adjusted net income | 1,232 | 700 – 1,000 |

We expect earnings at the divisional level to develop as follows:

- Lignite & Nuclear: Adjusted EBITDA is anticipated to decline to between €350 million and €450 million. As mentioned earlier, most of this year's electricity generation has already been placed on the market. In sum, the margins realised were lower than in 2017. Moreover, the Gundremmingen B nuclear power station will stop contributing to earnings as we had to shut it down at the end of 2017. However, we are confident of being able to profit from further efficiency-enhancing measures.

- European Power: Adjusted EBITDA of this segment is expected to total between €300 million and €400 million. This would put it below last year's figure, which benefited from one-off income from property sales. Earnings contributed by the commercial optimisation of our power plant deployment are unlikely to match the high level achieved in 2017. Furthermore, we anticipate declining margins from electricity forward sales. By contrast, the premiums that we receive for participating in the UK capacity market will increase.

- Supply & Trading: We expect to post annual average adjusted EBITDA in the order of €200 million in this segment over the long term. We estimate a range of €100 million to €300 million for 2018. This assumes a normal trading performance. Earnings in the gas business are likely to close the year down on the above-average figure recorded in 2017.

- innogy: Our subsidiary anticipates adjusted EBITDA of between €4.1 billion and €4.2 billion, slightly less than in 2017. Earnings in the retail business may well decline considerably, in part due to rising startup costs for future-oriented projects. Moreover, exceptional income is likely to be lower than in 2017. This also applies to the Grid & Infrastructure division, which is expected to close fiscal 2018 slightly down year on year. If transit volumes in the Czech gas distribution network return to normal levels after the positive effect of the weather in 2017, they may contribute to the decline in earnings. innogy anticipates stable earnings in the field of renewable energy. The commissioning of new generation capacity will have a positive effect. Assuming average weather conditions, the capacity utilisation of wind turbines and run-of-river power stations will improve. This will be contrasted by higher costs incurred to develop new projects. In addition, last year's earnings benefited from income from the revaluation of the Triton Knoll wind power project.

**Capex budget subject to counter-financing measures.** Most of the capital spent in the RWE Group is attributable to innogy. Our subsidiary plans a net capital expenditure in the order of €2.5 billion in 2018. Gross capex exceeding this amount will be financed with proceeds from divestments and asset disposals. As before, the investment magnets are the maintenance and modernisation of distribution grids and the expansion of renewable energy. We plan to spend about €400 million in capital on property, plant and equipment in conventional power generation, primarily to maintain and modernise power stations and opencast mines. Some of the funds have been earmarked for small growth projects, e. g. the conversion of our Dutch hard coal-fired power stations to biomass co-firing.

**Net debt probably higher year on year.** Our net debt is likely to increase moderately in the current fiscal year. A major reason for this is the dividend payments to RWE shareholders and co-owners of fully consolidated RWE companies. Our forecast for net debt is based on the assumed stability of market interest levels and – in turn – of the discount factors that we use to calculate provisions.

**Outlook for the RWE Group with innogy as a pure financial investment.** For management purposes, we also use Group figures in which innogy is included as a pure financial investment instead of as a fully consolidated company. More detailed information on how these figures are calculated can be found on page 60. Adjusted EBITDA in 2018 calculated taking this approach is expected to total between €1.4 billion and €1.7 billion (last year: €2.1 billion). The figure predicted for adjusted net income is between €0.5 billion and €0.8 billion (last year: €1.0 billion). We expect net debt to post a moderate rise (last year: €4.5 billion).

**Forward-looking statements.** This report contains forward-looking statements regarding the future development of the RWE Group and its companies as well as economic and political developments. These statements are assessments that we have made based on information available to us at the time this document was prepared. In the event that the underlying assumptions do not materialise or unforeseen risks arise, actual developments can deviate from the developments expected at present. Therefore, we cannot assume responsibility for the correctness of these statements.

**References to the internet.** The contents of pages on the internet and publications to which we refer in the review of operations are not part of the review of operations and are merely intended to provide additional information. The corporate governance declaration in accordance with Section 289a as well as Section 315d of the German Commercial Code is an exception.