Powering into the future.

Annual Report 2018

RWE

Powering. Reliable. Future.

The new RWE: engine of the energy transition

We all need electricity – children and adults, small businesses and industrial heavyweights. Where there is electricity, there is light, warmth and communication; there is production, medical care and mobility. Electricity is life.

For more than 120 years, RWE has been a reliable electricity provider to people and companies alike. We see to it that electricity is available wherever it is needed, day and night, when the sun is shining, in wind, sleet or snow, and across all seasons. For people in our core markets, electricity is a matter of course – not because it is, but because that is what we have turned it into.

Today, climate change presents us with a new challenge. It is no longer just about ensuring that electricity is generated, but also about how it is produced. If possible, it should be zero-carbon, like solar, wind and hydro. We will also tackle this challenge with resolve and spur the sector's transformation into a sustainable energy system that preserves the climate. We are laying the foundation for this by acquiring the renewable energy business of E.ON and of our financial subsidiary innogy. In the future, we will spend billions of euros building new wind and solar farms – in Europe, the USA and many other places around the world.

But expanding renewable energy is not the end of the road. The wind and the sun are not available around the clock. This is why high-capacity energy storage is needed, and we intend to play our part in developing and building it. Moreover, in the foreseeable future, there will be a need for conventional power stations that generate electricity whenever wind turbines and solar panels can't. Otherwise, we will go back to square one, when security of supply was not a matter of course.

At RWE we're powering into the future of electricity supply: a supply of energy that preserves the climate *and* is absolutely reliable. Our mission is to ensure that these objectives do not become mutually exclusive. This mission is:

Powering. Reliable. Future.

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AT A GLANCE

RWE Group – key figures[1]		2018	2017	+/– %
Power generation	billion kWh	176.0	200.2	−12.1
External revenue (excluding natural gas tax/electricity tax)	€ million	13,388	13,822	−3.1
Adjusted EBITDA	€ million	1,538	2,149	−28.4
Adjusted EBIT	€ million	619	1,170	−47.1
Income from continuing operations before taxes	€ million	49	2,056	−97.6
Net income	€ million	335	1,900	−82.4
Cash flows from operating activities of continuing operations	€ million	4,611	−3,771	222.3
Capital expenditure	€ million	1,260	902	39.7
Property, plant and equipment and intangible assets	€ million	1,079	706	52.8
Financial assets	€ million	181	196	−7.7
Free cash flow	€ million	3,439	−4,439	177.5
Number of shares outstanding (annual average)	thousands	614,745	614,745	–
Earnings per share	€	0.54	3.09	−82.5
Dividend per common share	€	0.70[2]	1.50	–
Dividend per preferred share	€	0.70[2]	1.50	–
		31 Dec 2018	31 Dec 2017	
Net debt of continuing operations	€ million	4,389	–	–
Workforce[3]		17,748	19,106	−7.1

1 Change in reporting; see explanation on page 40.
2 Dividend proposal for RWE AG's 2018 fiscal year, subject to the passing of a resolution by the 3 May 2019 Annual General Meeting.
3 Converted to full-time positions.

"2019 HAS THE POTENTIAL TO BE A VERY GOOD YEAR FOR RWE."

Rolf Martin Schmitz on the planned asset swap with E.ON, the future of RWE as a renewable energy company and the consequences of Germany's exit from coal

Mr. Schmitz, many market observers were surprised at your announcement in March 2018 that you would sell innogy to E.ON and receive the renewable energy activities of the two companies in return. Had you been planning this move for a while?
No. The idea didn't crop up until the end of 2017. This was followed in January 2018 by the first talks between my opposite number at E.ON, Johannes Teyssen, and myself. And then it all went very fast. That's the way it goes sometimes: someone comes up with an idea that is so compelling that you just want to implement it both rapidly and well.

On 12 March, the first stock trading day after the announcement of the transaction, the share prices of all three companies involved rose significantly. RWE's common stock gained 9%. How do investors feel about the envisaged transaction?
The capital market is a reliable barometer of the quality of a deal. And based on the reactions of the stock market, there is no doubt that most investors welcome the transaction. I also get this feedback directly, when I speak with institutional investors. We often receive praise for the fact that we are exchanging a purely financial investment, where we don't have any influence in operating terms, for a high earning business that we can run ourselves. Furthermore, our investors welcome the fact that RWE once again has a growth story. And that we will soon have a broader setup in electricity generation and reduce our dependency on conventional energy sources.

The asset swap with E.ON will turn RWE into a new company, transforming at least half of it ...
The 'new RWE' won't be an entirely different company. With our power plants, we will continue to provide security of supply and with renewables, we will become the engine of the energy transition. And both are important. Conventional and renewable generation have always been two sides of the same coin for us.

But the focus will probably increasingly shift towards renewable energy, an area in which you have ambitious growth targets.
In terms of earnings, renewables will have the upper hand right from the start. In the first year after the completion of the asset swap, they will account for more than half of the Group's adjusted EBITDA. The transaction will turn us into the No. 3 in renewable energy in Europe. In offshore wind, we will even be No. 2 globally. We want to expand this position through initial net investments of 1.5 billion euros per year. This should enable us to place 2 to 3 gigawatts of new generation capacity on the system every year. The focus remains on wind and we have also set our sights on solar and storage projects. Our focus will lie on markets in Europe, North America and the Asia-Pacific region.

Will RWE become a global player in renewable energy?
The global aspect of our approach is that we will only enter certain international markets with certain technologies. In Asia, for example, we're looking to only invest in offshore wind projects, and in Australia only in onshore wind and solar power. Basically, we will serve regional markets around the globe.

As a part of the transaction you will receive a project pipeline of over 17 gigawatts, mostly wind projects. How much of this do you intend to implement?
Of course, we can't make this decision until we have operational control. However, we probably won't implement a fair share of the projects in the pipeline. Only those that meet our return requirements will be considered. Under no circumstances will we make investment decisions 'no matter what the cost'. This should really go without saying, but it probably isn't a bad idea to come out and reiterate it.

You have set yourself the goal of completing the asset swap with E.ON this year. Is everything on schedule?
Executing a transaction of this magnitude involves a lot of work and demands patience. But we are making very good progress. In January 2019, we filed the asset swap with the European Commission and received clearance from Brussels on 26 February. On the same day, the German Cartel Office also gave its go-ahead. However, this only relates to our part of the transaction. E.ON also filed its part with the Commission in January. In this case, the approval process will take some more time. A hard Brexit may cause delays, but I'm confident that we will stay on track.

There is some resistance to the deal. Your competitors claim that the merger of innogy and E.ON will jeopardise competition. How would you respond to this?
Not at all, really, because that falls in E.ON's remit. What I can say is that the German grid business is regulated by the state. And there are far more than a thousand suppliers in the domestic retail electricity market. The hurdles to switching supplier are low. Nowadays, you can do that online with just a few clicks. So that market works and there is no reason to believe that this will change.

Experience shows that 'soft' factors are also instrumental to the success of company transactions. Will the managers, who have different cultural backgrounds, agree on a common language? Will the employees at all sites be able to identify with the company's goals? These and other questions are no doubt on peoples' minds at RWE.
Yes, absolutely. This is why the integration of the new activities under the RWE umbrella is one of our most important tasks. We will be limited in our actions in this respect until the transaction closes. But we've already accomplished a lot within the allowed framework. We have determined our strategy for the renewables business and put together the team that will lead it. And we will soon reach decisions on the second management level. One thing is clear: RWE is not just expanding through the addition of a new subsidiary – the company will be fundamentally transformed. We will become much more diverse and much more international. Be it engineers in Neurath, project developers in Chicago or traders in Singapore, they will all represent the new RWE. What is important is that we take this as an opportunity and learn from our differences.

RWE should become popular as a leading green electricity producer. Are you already feeling an effect on your image?
This hasn't yet trickled down into the public's consciousness, but that doesn't surprise me. Only once the transaction has been completed will we be able to operate as a renewable energy company. And even then, it will take at least a couple of years for what the new RWE stands for to be engrained in peoples' minds.

Why will it take so long?
Because RWE's history is deeply rooted in electricity generation from coal, gas and nuclear energy. This somewhat one-sided picture will not change overnight. In addition, I don't really want our image to be changed completely. RWE has the reputation of being a responsible, reliable partner. This is something we're proud of and would like to keep on living up to when we cover the entire range of power generation technologies. What would allow us to make considerable progress regarding our image is a clear political framework for the future of coal-fired electricity generation which is acceptable to all stakeholders.

Germany should soon have such a framework. The Growth, Structural Change and Employment Commission has submitted a concept for a coal phase-out by 2038. It envisages further power stations being taken offline in the next few years. Does that come as an unpleasant surprise to you?
I was pleasantly surprised that the Commission nearly unanimously agreed on a concept for the future. With just one exception, all of the members endorsed the recommendations, including representatives of industry, trade unions, environmental associations and civic initiatives. This is an outstanding accomplishment by the Commission and its chairs. They established a solid basis, on which talks can now be held between the federal government and companies.

So the framework is in place. What are the next steps?
Now everything hinges on whether the government follows the Commission's recommendations entirely. I would caution against taking apart a package that has been agonised over for months. The objective of the talks between the government and the companies must be to reach an agreement on the details, because the final report includes a lot of points that need clarification. It's good news that companies will be granted compensation for premature shutdowns and that the impact on mining operations will be taken into consideration. This is in line with our legal understanding.

The Commission recommends further power plant closures through to 2022. This will affect about 3 gigawatts of lignite-fired capacity. Will North Rhine-Westphalia have to shoulder most of the burden?
Yes, that's highly likely, as structural change here seems to be easier than in the lignite mining regions in the east of the country. But one mustn't forget that in the Rhenish lignite mining region, we are already decommissioning 1.5 gigawatts prematurely under the security stand-by regime. Further closures will be much more difficult to implement and will probably have severe ramifications for the opencast mining system leading to job cuts. I expect significant redundancies through to 2023, which far exceed planning to date and normal churn. We will be able to make reliable estimates of the number of affected employees once we know exactly what we have to deal with.

How can you ensure that the interests of the affected employees are safeguarded?
Of course, any measures taken must be socially acceptable as the employees shouldn't be made to pay the price for political decisions. In its report, the Commission clearly spoke out against forced layoffs and leaving people in the lurch. Similar to the exit from hard coal mining, an adjustment allowance is envisaged. But we need some more details, as there are still a lot of questions that require answers.

Let's talk about last year's business performance. At slightly more than 1.5 billion euros, adjusted EBITDA was at the lower end of the forecast range. What are your views?
All told, we can be satisfied with our operating performance. The things we had control of went well. Our employees did another formidable job in 2018. But some things can't be foreseen or influenced, such as the court-ordered suspension of the UK capacity market. This cost us about 50 million euros in 2018. It's impossible to predict these things in advance. This is why we forecast ranges instead of specific figures.

Another unwelcome surprise was the temporary halt to the clearance of Hambach Forest in Germany ordered by the Münster Higher Administrative Court last autumn. How big of a burden do you currently think this will be for you?
We maintain the assessment we made shortly after the court ruling for the time being. We anticipate that lignite production from the Hambach opencast mine will be reduced by an average of 10 to 15 million metric tons in 2019 and the two following years. This translates into 9 to 13 terawatt hours less electricity and 100 to 200 million euros less EBITDA – per year. In 2019, the earnings curtailment will probably still hover around the lower end of the range, because we have optimised operating procedures.

Speaking of 2019: what are your expectations for the current fiscal year?
In tems of operations, we could fare as we did in 2018, despite the burdens resulting from the court order regarding Hambach Forest. We anticipate that adjusted EBITDA will come in between 1.4 and 1.7 billion euros. Here, we assume that the UK capacity market will remain inactive in 2019. In addition, we expect the recovery of wholesale electricity prices to have positive effects. But more than anything, 2019 is the year in which we want to complete the asset swap with E.ON and fire the starting shot for the new RWE. If longer-term, reliable prospects can be created for coal-fired electricity generation on top of that, 2019 will be a very good year for RWE.

A last word on the new RWE, where coal-fired generation and nuclear power will share a home with renewable energy. One part of the business is a political hot potato and will be scaled back, while the other basks in the limelight and is only set to grow. Could this contrast possibly turn into a stress test?
I think that quite the opposite is true. As I said earlier, conventional generation and renewable energy are two sides of the same coin. And if we manage, for example, to be extremely efficient in dismantling our nuclear power stations, this will make a contribution to our economic success just as a profitable wind farm would. A manager in the nuclear energy business recently told me that working for a company with growth prospects motivates him. At the new RWE, everyone can benefit from everyone else. And everyone is important no matter where they are. If that's communicated clearly, we will have the best possible chance to have a successful shared future.

This interview was conducted by Burkhard Pahnke and Jérôme Hördemann.

THE EXECUTIVE BOARD OF RWE AG

Dr. Rolf Martin Schmitz
Dr. Markus Krebber

Dr. Rolf Martin Schmitz
Chief Executive Officer

Born in 1957 in Mönchengladbach; doctorate in engineering; Planning Engineer at STEAG AG from 1986 to 1988; various positions, including Head of Corporate Development and Economic Policy, at VEBA AG from 1988 to 1998; Member of the Executive Board of rhenag Rheinische Energie AG from 1998 to 2001; Member of the Board of Management of Thüga AG from 2001 to 2004; Chairman of the Board of Directors of E.ON Kraftwerke GmbH from 2004 to 2005; Chairman of the Executive Board of RheinEnergie AG and Managing Director of Stadtwerke Köln from 2006 to 2009; Chief Operating Officer National of RWE AG from May 2009 to September 2010; Chief Operating Officer of RWE AG from October 2010 to October 2016 and Deputy Chairman of the Executive Board of RWE AG from July 2012 to October 2016; Chairman of the Executive Board and Chief Executive Officer of RWE AG since October 2016; concurrently Labour Director of RWE AG since May 2017.

Group-level responsibilities
- Corporate Transformation
- Internal Audit & Compliance
- Group Communications & Public Affairs
- Group Strategy
- Human Resources
- Legal
- Corporate Business Development

Dr. Markus Krebber
Chief Financial Officer

Born in 1973 in Kleve; Banker; doctorate in economics; Management Consultant at McKinsey & Company from 2000 to 2005; various management positions at Commerzbank AG from 2005 to 2012; Managing Director and Chief Financial Officer of RWE Supply & Trading GmbH from November 2012 to August 2016; Chief Executive Officer of RWE Supply & Trading GmbH from March 2015 to May 2017; Chief Financial Officer of RWE AG since October 2016.

Group-level responsibilities
- Business Services
- Controlling & Risk Management
- Finance & Credit Risk
- Investor Relations
- Portfolio Management/Mergers & Acquisitions
- Accounting
- Tax

SUPERVISORY BOARD REPORT

"In renewable energy, RWE will receive a business characterised by stable income, attractive growth options and widespread public acceptance. As a result, the company will take a major step forward."

Dear Shareholders,
Ladies and Gentlemen

Following the founding and the IPO of innogy in 2016, another landmark decision was taken last year, which will fundamentally change the RWE Group. An extensive asset swap was agreed with our German competitor E.ON, which is scheduled to be completed in 2019. This will make RWE Europe's No. 3 in renewable energy, with E.ON strengthening itself through the addition of innogy's grid and retail businesses. My fellow Supervisory Board members and I welcome the transaction. In renewable energy, RWE will receive a business characterised by stable income, attractive growth options and widespread public acceptance. As a result, the company will take a major step forward. This assessment is apparently shared by the capital market: buoyed by the new operating prospects, the RWE common share earned a total return of 20% last year, impressively bucking the market's negative trend.

RWE's share performance would probably have been even better, if the temporary halt to the clearance of Hambach Forest ordered by the Münster Higher Administrative Court had not abruptly reminded us of the risks to which RWE remains exposed in conventional power generation. The ruling handed down in October 2018 will curtail the operation of the Hambach opencast lignite mine considerably and weigh on earnings. Following the occasionally heated debate on the clearance of the forest and the future of electricity production from coal in Germany, one can only hope that these topics are once again addressed with less bias and more far-sightedness in the future. The recommendations of the Growth, Structural Change and Employment Commission submitted in January 2019 could make an important contribution to this end. The Commission, which was established by the government, is in favour of Germany taking further coal-fired power stations offline by the end of 2022 and phasing out electricity generation from coal entirely by no later than 2038 (also see page 33 of this annual report). We thoroughly discussed the Commission's recommendations at an extraordinary Supervisory Board meeting on 5 February 2019. It is likely that there will be serious consequences for RWE's lignite business. The recommendations harbour both risks and opportunities. They can give policymakers a basis for providing planning certainty to companies, employees and the regions. In doing so, it must be ensured that those affected are not put at a disadvantage.

Now let me go into the work we did on the Supervisory Board in the financial year that just ended. Once again, we fulfilled all of the duties imposed on us by German law and the Articles of Incorporation. We advised the Executive Board on running the company and monitored its actions attentively. Moreover, we were consulted on all fundamental decisions. The Executive Board informed us of all material aspects of business developments, the earnings situation as well as the risks and the management thereof both verbally and in writing. This was done regularly, extensively and in a timely fashion. Decisions were taken on the basis of detailed reports and draft resolutions submitted by the Executive Board. The Supervisory Board had ample opportunity to concern itself with these in its plenary sessions and its committees. We were also informed by the Executive Board of projects and transactions of special importance or urgency in several extraordinary meetings and between meetings. We passed the resolutions required of us by law or the Articles of Incorporation. Occasionally, we did so by circular. As Chairman of the Supervisory Board, I was constantly in touch with the Executive Board. This allowed us to discuss events of material importance to the Group's situation and development without delay.

Last year, the Supervisory Board convened for five ordinary and three extraordinary meetings. The shareholder and the employee representatives on the Supervisory Board consulted separately on the agenda items of the plenary sessions in advance. The following table provides an overview of the attendance of the members of the corporate bodies at the meetings of the Supervisory Board and its committees:

Attendance at meetings in fiscal 2018 by Supervisory Board member[1]	Supervisory Board	Executive Committee	Audit Committee	Personnel Affairs Committee	Strategy Committee
Dr. Werner Brandt, Chairman	8/8	1/1	3/4[2]	3/3	1/1
Frank Bsirske, Deputy Chairman	6/8	1/1		3/3	1/1
Michael Bochinsky (since 1 August)	3/3		2/2		
Reiner Böhle	8/8			3/3	
Sandra Bossemeyer	7/8	1/1			
Martin Bröker (since 1 September)	3/3				
Ute Gerbaulet	7/8				
Reinhold Gispert (until 31 July)	5/5		2/2		
Andreas Henrich (until 31 August)	5/5				
Prof. Dr. Hans-Peter Keitel	7/8	1/1			1/1
Dr. h. c. Monika Kircher	8/8				
Monika Krebber	6/8[3]	1/1			
Harald Louis	8/8			3/3	
Dagmar Mühlenfeld	8/8	1/1			
Peter Ottmann	8/8			3/3	
Günther Schartz	7/8				1/1
Dr. Erhard Schipporeit	6/8[3]		4/4		
Dr. Wolfgang Schüssel	8/8	1/1	4/4	3/3	
Ullrich Sierau	8/8		3/4		
Ralf Sikorski	7/8		4/4		1/1
Marion Weckes	8/8		4/4		
Leonhard Zubrowski	8/8	1/1			1/1

1 Attendance is indicated by the ratio of the number of meetings attended by the Supervisory Board member to the total number of meetings during the individual's term as a member of the corporate body in question. Only the committees that convened in the year under review are listed.

2 Dr. Werner Brandt attended meetings of the Audit Committee as a guest.

3 Due to potential conflicts of interest, Monika Krebber and Dr. Erhard Schipporeit, who also sit on the Supervisory Board of innogy SE, did not attend the extraordinary Supervisory Board meetings on 11 and 12 March 2018, at which the envisaged asset swap with E.ON was discussed.

Main points of debate of the Supervisory Board meetings. We were informed by the Executive Board very thoroughly of current events of importance to RWE in the ordinary sessions. A focal point of regular reporting was the political debate concerning Germany's coal phase-out and the work of the Growth, Structural Change and Employment Commission. We also discussed the German Environmental Ministry's initial ideas on how to translate the new EU clean air standards for power stations into national law. The Executive Board also kept us abreast of the developments in energy policy in neighbouring countries, e. g. the coal phase-out planned in the Netherlands. In addition to these and other issues, Brexit was also addressed. We only discussed special topics in our extraordinary meetings. Now I would like to address the main points of our sessions in more detail:

- At its ordinary meeting on 7 March 2018, the Supervisory Board discussed and approved the financial statements for fiscal 2017 and the agenda of the Annual General Meeting of 26 April 2018. Furthermore, we consulted about the talks that I conducted with major institutional investors on corporate governance matters (Executive Board remuneration, composition of the Supervisory Board, etc.) and on RWE's climate protection strategy. This dialogue was received very positively by investors and is scheduled to be continued once a year.

- The main topic at two extraordinary meetings, which took place on 11 and 12 March 2018 was the asset swap planned between RWE and E.ON through which the two companies will have a fundamentally new setup. We gave the go-ahead to the transaction on 12 March after intensive debates. The asset swap was contractually agreed on the same day.

- At the ordinary meeting on 26 April 2018, we discussed how politicians will translate the new EU clean air standards for power plants into national law. By then, the German Environmental Ministry had already presented its first concepts regarding the matter. In addition, we made the final preparations for the Annual General Meeting, which was held on the same day.

- Our ordinary meeting on 6 July 2018 was dedicated to IT security. The state and industry are exposed to the ever greater risk of cyber attacks. Both the frequency and severity of such attacks have increased. In our meeting we discussed the protective measures that had already been taken and the next steps necessary in order to continue guaranteeing the security of RWE's IT infrastructure in the future.

- At the ordinary meeting on 21 September 2018, we focused on the capital market's view of RWE. The Executive Board informed us of the positive feedback from investors on the envisaged asset swap with E.ON. We addressed in great detail whether RWE should maintain the preferred shares in the long run. On international capital markets, it is customary for every share to have a vote. Together with the Executive Board, we discussed various possible actions and features, including the conversion of preferred shares to common shares.

- On 14 October 2018, the Supervisory Board convened for an extraordinary session at which it concerned itself with the preliminary halt to the clearance of Hambach Forest ordered by the Münster Higher Administrative Court. The Executive Board informed us about the far-reaching consequences that the Court's ruling could have for the opencast mining operations and the company's earnings and consulted with us regarding the next steps.

- We reviewed and adopted the planning for fiscal 2019 at an ordinary meeting on 12 December 2018. As usual, we also discussed the recommendations of the German Corporate Governance Code (GCGC) which were unchanged from 24 April 2017, and approved an updated statement of compliance together with the Executive Board. Another focal topic was digitisation and its increasing importance to the corporate world. We agreed that expertise in this area should be considered expressly in the Supervisory Board's competence and skills matrix and expanded it accordingly. During the meeting, we also discussed the ruling of the General Court of the Court of Justice of the European Union on the UK capacity market, which led to a suspension of capacity payments. We conducted an in-depth debate on the United Kingdom's impending exit from the EU and its possible effects on RWE. Furthermore, we received a report from the Executive Board on the increasingly critical views that banks and insurance companies have of coal. However, to date this has hardly affected the business relations between RWE and financial institutions.

Supervisory Board committees. Last year, the Supervisory Board had five standing committees, the members of which are listed on page 199. These committees are charged with preparing topics and resolutions for plenary sessions. Occasionally, they exercise decision-making powers conferred on them by the Supervisory Board. The Supervisory Board was informed of the work of the committees by their chairmen at every ordinary meeting. In the year under review, a total of nine committee meetings were held, on which I would like to report in more detail. Attendance by individual is presented in the table on page 9.

- The **Executive Committee** convened once. Its members discussed the company's planning for fiscal 2019 as well as the outlook for 2020 and 2021 in depth and prepared their adoption by the Supervisory Board.

- The **Audit Committee** was in session four times. It concerned itself in particular with the financial statements of RWE AG and the Group, together with the combined review of operations, as well as with the report for the first half of the year and the quarterly statements. The Committee discussed the financial statements in detail with the Executive Board before they were published and received reports on the outcome of the audits and audit-like reviews from the independent auditors. It paid special attention to the quality of the financial statement audits. The Committee also engaged in dialogue with the independent auditors via its chairman in between sessions. Furthermore, the body submitted a recommendation to the Supervisory Board regarding the election of the independent auditors for fiscal 2018, prepared the grant of the audit award to the independent auditors including the fee agreement, and set the priorities of the audit. Non-financial reporting was also on the agenda: analyses and comparisons to other companies prove that RWE has a high level of transparency in this area. As usual, the Committee was informed of the effectiveness of the accounting-related internal control system. This did not reveal any issues that would call the effectiveness of the control system into question. Furthermore, the Committee dealt with the design of the compliance management system, the planning and findings of the internal audit, the RWE Group's exposure to risk pursuant to the German Corporate Control and Transparency Act, data security as well as legal and tax issues. In-house experts were consulted when necessary.

- The **Personnel Affairs Committee** held three meetings during the year being reviewed. Amongst other things, the corporate body discussed the adjustments to the target figures for the variable remuneration of the Executive Board and executives necessary due to the envisaged asset swap with E.ON. Detailed information on the changes can be found on page 64 et seqq. Moreover, the Committee prepared the Supervisory Board resolution on the renewed appointment of Markus Krebber as member of the Executive Board of RWE AG.

- The **Nomination Committee** did not convene in 2018.

- The members of the **Strategy Committee** held one session. This meeting focused on the asset swap agreed with E.ON. The Executive Board explained the key points of its future strategy for the renewable energy business. In addition, it informed the Committee of the measures taken to prepare the integration of the business activities that will be transferred to RWE as part of the transaction.

- The **Mediation Committee** pursuant to Section 27, Paragraph 3 of the German Co-Determination Act did not have to meet in 2018.

Conflicts of interest. The members of the Supervisory Board are obliged by law and the GCGC to immediately disclose any conflicts of interest they have. Last year, Monika Krebber and Erhard Schipporeit, who sit on the Supervisory Board of both RWE AG and innogy SE, filed notifications of conflicts of interest in respect of the decisions regarding the envisaged asset swap with E.ON. Therefore, they did not receive any of the preparatory documents in relation to the relevant agenda items and did not participate in the relevant consultations or passing of resolutions.

Financial statements for fiscal 2018. PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft scrutinised and issued an unqualified auditor's opinion on the 2018 financial statements of RWE AG, which were prepared by the Executive Board in compliance with the German Commercial Code, the financial statements of the Group, which were prepared in compliance with International Financial Reporting Standards (IFRS) pursuant to Section 315a of the German Commercial Code, the combined review of operations for RWE AG and the Group, and the accounts. In addition, PricewaterhouseCoopers found that the Executive Board had established an appropriate early risk detection system. The company had been elected independent auditor by the Annual General Meeting on 26 April 2018 and commissioned by the Supervisory Board to audit the financial statements of RWE AG and the Group.

The annual report and the audit reports for 2018 as well as documents supporting the annual financial statements were submitted to the members of the Supervisory Board in good time. Furthermore, the Executive Board commented on the documents in the Supervisory Board's balance sheet meeting of 8 March 2019. The independent auditors reported at this meeting on the material results of the audit and were available to provide supplementary information. The Audit Committee had previously concerned itself in depth with the financial statements of RWE AG and the Group, as well as audit reports, during its meeting on 7 March 2019, with the auditors present. It recommended that the Supervisory Board approve the financial statements as well as the appropriation of profits proposed by the Executive Board.

At its balance-sheet meeting, the Supervisory Board reviewed the financial statements of RWE AG and the Group, the combined review of operations for RWE AG and the Group, and the Executive Board's proposal regarding the appropriation of distributable profit and the Group's separate non-financial report. No objections were raised as a result of this review. As recommended by the Audit Committee, the Supervisory Board approved the results of the audits of the financial statements of RWE AG and the Group and approved both financial statements. The 2018 financial statements are therefore adopted. The Supervisory Board concurs with the Executive Board's proposal regarding the appropriation of profits, which envisages paying a dividend of €0.70 per share.

Changes in personnel on the Supervisory Board. There were two staffing changes on the Supervisory Board in the year under review. Reinhold Gispert and Andreas Henrich, both of whom were employee representatives, resigned from the corporate body with effect from the end of the day on 31 July and 31 August, respectively. The Essen District Court appointed Michael Bochinsky to replace Reinhold Gispert on the Supervisory Board with effect from 1 August 2018. As of 1 September, Andreas Henrich was succeeded by Martin Bröker, who had been elected Mr. Henrich's successor by the Employees Delegate Assembly on 2 March 2016. On behalf of the Supervisory Board, I thank Messrs. Gispert and Henrich for their valuable work in our corporate body and dedication to RWE.

Thanks to the employees of RWE. In keeping with tradition, I would like to dedicate the last few lines of my report to those who made the most important contribution to RWE's success and continued development: the employees. As in the past, in 2018, they proved once again that a great deal can be accomplished with expertise and commitment. My colleagues and I really appreciate this and would like to express our sincere gratitude to them for this. Last year, the groundwork was laid for a new RWE, which will stand for both stability and growth. Our company's journey will lead to a promising future, but might also be difficult at times. I am convinced that with the support of its staff, RWE will navigate this course successfully and master the huge challenges along the way.

On behalf of the Supervisory Board

Werner Brandt

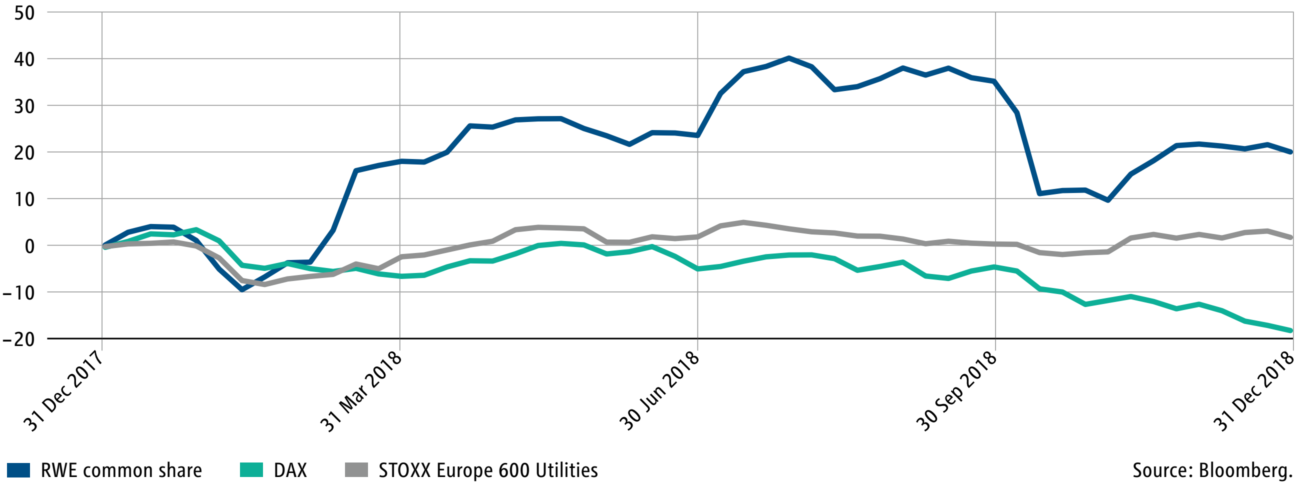
Werner Brandt
Chairman

Essen, 8 March 2019

RWE ON THE CAPITAL MARKET

Sentiment on the German stock market in 2018 was clouded by increasing economic risks. The DAX closed the year with a negative performance after six years of positive returns. RWE stock performed much better: our common shares ended the year with a gain of 20 %. A main reason was the asset swap we agreed upon with E.ON. Investors and analysts welcome the transaction, because it will give us renewable energy activities, an attractive business with outstanding growth prospects. The continued recovery of German wholesale electricity prices also had a positive impact on RWE's share price.

Performance of the RWE common share compared with the DAX and STOXX Europe 600 Utilities
% (average weekly figures)



Source: Bloomberg.

DAX markedly down due to economic cooldown. Sentiment on the German stock market deteriorated substantially in 2018: the DAX was down 18 % to 10,559 points. This was its first negative performance since 2011 and made it one of the weakest of the European share indices. Due to its strong dependence on foreign trade, the DAX was particularly hard hit by the trade conflict between the USA and other industrial nations. The emerging economic slowdown also weighed on it. In addition, some branches of industry faced difficulties, in particular the automotive sector, which is heavily represented in the DAX and had to contend with impending diesel bans. Brexit and the Italian government's unclear economic agenda also contributed to investor uncertainty. The extremely expansive monetary policy of the European Central Bank had a stabilising effect on the development of share prices.

RWE common share posts total return of 20 %. RWE stock clearly outperformed the DAX. Our common share closed 2018 at €18.97. Including the dividend of €1.50 paid at the beginning of May, it achieved a total return of 20 % for the year. This ranked it second in the DAX. RWE's common stock also displayed much better development than the sector index STOXX Europe 600 Utilities (+ 2 %). The main reason for its strong performance was the asset swap agreed with E.ON, through which we will become one of Europe's leading renewable energy companies. We have provided detailed information on this transaction on page 35 et seq. On 12 March, the first stock market trading day following the announcement of the envisaged transaction, our common share gained 9 %. Rising wholesale electricity prices also had a positive effect on the development of the share price. Our preferred share, which by far exceeded the performance of our common share with a total return of 43 %, benefited from an exceptional effect: in December, the Executive Board of RWE AG announced that it will propose to the Annual General Meeting on 3 May 2019 a 1:1 conversion of preferred shares to common shares without any payments. This announcement drove up the quotation of our preferred stock nearly to the level of that of our common stock. In October, however, RWE shares suffered a severe setback as a result of the court-ordered halt to the clearance of Hambach Forest, which will lead to production and income shortages in electricity generation from lignite (see page 36).

RWE share indicators		2018	2017	2016	2015	2014
Earnings per share[1]	€	0.54	3.09	−9.29	−0.28	2.77
Cash flows from operating activities of continuing operations per share[1]	€	7.50	−6.13	3.83	5.43	9.04
Dividend per common share	€	0.70[2]	1.50	–	–	1.00
Dividend per preferred share	€	0.70[2]	1.50	0.13	0.13	1.00
Dividend payment	€ million	430[2]	922	5	5	615
Dividend yield on common shares[3]	%	3.7	8.8	–	–	3.9
Dividend yield on preferred shares[3]	%	3.7	10.5	1.5	1.5	5.3
Common share price						
End of fiscal year	€	18.97	17.00	11.82	11.71	25.65
High	€	22.48	23.14	15.95	25.68	32.83
Low	€	15.10	11.80	10.17	9.20	24.95
Preferred share price						
End of fiscal year	€	18.84	14.33	8.72	8.94	18.89
High	€	19.20	17.46	11.61	19.62	25.61
Low	€	13.46	8.87	7.95	7.33	18.89
Number of shares outstanding (annual average)	thousands	614,745	614,745	614,745	614,745	614,745
Market capitalisation at the end of the year	€ billion	11.7	10.3	7.1	7.1	15.5

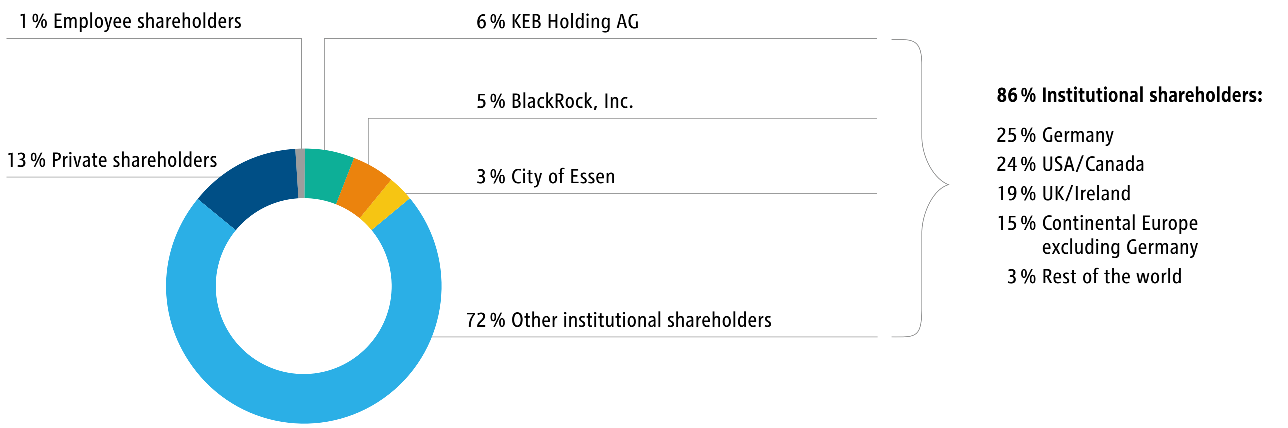
1 In relation to the annual average number of shares outstanding. The comparability of some of the figures for various fiscal years is limited due to changes in reporting (see page 40).
2 Dividend proposal for RWE AG's 2018 fiscal year, subject to the passing of a resolution by the 3 May 2019 Annual General Meeting.
3 Ratio of the dividend per share to the share price at the end of the fiscal year.

Dividend proposal for fiscal 2018. The Supervisory Board and the Executive Board of RWE AG will propose to the Annual General Meeting on 3 May 2019 a dividend of €0.70 per common and preferred share. This would cause the ordinary dividend to increase by €0.20 compared to the previous year. We paid a total dividend of €1.50 for fiscal 2017, but it included a special payment of €1.00, through which we enabled our shareholders to benefit from the nuclear fuel tax refund.

Broad international shareholder base. At the end of 2018, an estimated 86 % of the total of 614.7 million RWE shares (including 39 million non-voting preferred shares) were held by institutional investors and 14 % were owned by individuals (including employees). Institutional investors from Germany owned 25 % of RWE (previous year: 29 %). In other countries on the European continent, this investor group held 15 % of RWE's subscribed capital (previous year: 14 %). In North America, the United Kingdom and Ireland, it accounted for a combined 43 % (previous year: 40 %). RWE AG's single-largest shareholder is KEB Holding, which is backed by the City of Dortmund, followed by the US asset management company BlackRock. Based on their latest voting right notifications, the two companies held 6 % and 5 % of the subscribed capital, respectively. Third place is occupied by the City of Essen, with 3 %. The free float of our common shares considered by Deutsche Börse in terms of index weighting was 94 % when this report went to print. Only the shares held by KEB Holding were deducted. Stakes held by asset management companies like BlackRock are classified by Deutsche Börse as free float as long as they do not exceed 25 % of the capital stock.

About 1 % of our stock is owned by our current and former staff members. For years, we have enabled the personnel of our German subsidiaries to take shares in the company on preferential terms through employee share ownership plans, with such schemes being available to the staff of our UK subsidiaries since 2018. Last year, over 3,300 people, representing 21 % of all qualifying staff members, made use of this offer. They bought a total of about 226,000 common shares. We spent some €565,000 on the preferential terms and the administration of the programme. The employees of innogy SE and its subsidiaries are not included in the figures, as they qualify for an innogy stock ownership plan, which was launched in 2017.

Shareholder structure of RWE AG[1]



1 As of the end of 2018; percentages reflect shares in the subscribed capital.
Sources: RWE data and notifications of shareholders in accordance with the German Securities Trading Act (WpHG).

RWE represented on numerous stock markets. In Germany, RWE shares are traded on the stock markets in Frankfurt am Main, Düsseldorf, Berlin, Hamburg, Hanover, Munich and Stuttgart, as well as via electronic platforms such as Xetra. They are also available on some stock markets in the rest of Europe. In the USA, instead of our shares being traded, RWE is represented via American Depositary Receipts (ADRs) in a Level 1 ADR programme. ADRs are share certificates issued by US depositary banks, representing a certain number of a foreign company's deposited shares. Under RWE's programme, one ADR represents one common share.

Ticker symbols of RWE shares	Common share	Preferred share
Reuters: Xetra	RWEG.DE	RWEG_p.DE
Reuters: Frankfurt Stock Exchange	RWEG.F	RWEG_p.F
Bloomberg: Xetra	RWE GY	RWE3 GY
Bloomberg: Frankfurt Stock Exchange	RWE GR	RWE3 GR
German Securities Identification Number (WKN)	703712	703714
International Securities Identification Number (ISIN)	DE0007037129	DE0007037145
American Depositary Receipt (CUSIP Number)	74975E303	–

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Combined review of operations

1.1 STRATEGY AND STRUCTURE

Our establishment and IPO of innogy in 2016 were but the first steps on the way to a new RWE. Now we are taking another major step by exchanging our financial investment in innogy for a leading operating position in renewable energy. The basis for this is a transaction agreed with E.ON in March 2018, through which the two companies will realign themselves. Once the asset swap has been completed, we will expedite the expansion of renewable energy – with annual net capital expenditure of about €1.5 billion. We will take on a new role as an all-rounder in electricity generation, ensuring security of supply with our flexible power stations, while playing an active part in the transformation of the energy system which will increase climate protection.

Planned asset swap with E.ON: laying the foundation for a new RWE. RWE is in the midst of a transformation through which the company is giving itself a new operational and organisational setup. The basis for this is an agreement reached with E.ON in March 2018 pursuant to which the two companies will conduct an extensive exchange of business activities and shareholdings. It is envisaged that E.ON will acquire our financial investment of 76.8 % in innogy while we will receive nearly the entire renewables business of E.ON and innogy. Furthermore, we will receive a 16.67 % shareholding in E.ON, the non-controlling interests of the E.ON subsidiary PreussenElektra in our Gundremmingen (25 %) and Emsland (12.5 %) nuclear power stations, innogy's gas storage business, and innogy's 37.9 % stake in the Austrian energy utility Kelag. We will also make a one-off cash payment of €1.5 billion to E.ON as part of the transaction. The business activities and equity interests will be transferred with retrospective economic effect to 1 January 2018. We are confident of being able to complete the asset swap by the end of 2019.

RWE will become Europe's No. 3 in renewable energy. The transaction with E.ON will give us approximately 9 GW of zero-carbon electricity generation capacity from renewable sources, mostly from onshore and offshore wind farms. This will make us Europe's No. 3 in renewables and the world No. 2 in offshore wind. In addition to generation assets, we will receive a large portfolio of growth projects in various stages of development. Here again, the focus is on wind energy, followed by photovoltaics. Renewable energy will account for more than half of the RWE Group's adjusted EBITDA as early as the first year after the completion of the asset swap with E.ON, making this business our strongest income generator.

Refinement of RWE's strategy. Concurrently to the implementation of the asset swap with E.ON, we have begun to develop the key points of our future renewable energy strategy. We presented the first results of our deliberations to the Supervisory Board of RWE AG and our employees at the end of 2018. We intend to rapidly expand the leading position in renewable energy that we will obtain through the transaction. To this end, we plan to invest about a net €1.5 billion every year. These funds should be sufficient to increase capacity by between 2 GW and 3 GW per annum. Our technological focus rests on wind energy, photovoltaics and storage solutions. Geographically, we will concentrate on markets in Europe, the Americas and the Asia-Pacific region. We will maintain the integrated business model pursued by innogy and E.ON to date, meaning that our new projects will cover the entire value chain from development to construction and operation wherever possible. To ensure efficient management, we will divide the renewable energy business into the following business fields: (1) Onshore Wind and Photovoltaics in Europe and Asia-Pacific, (2) Onshore Wind and Photovoltaics in the Americas and (3) Global Offshore Wind. These activities will be spearheaded by a six-member management team, including three chief operating officers, each in charge of one of the aforementioned business fields.

In parallel to our growth ambitions in renewable energy, we want to maintain our leading position in conventional electricity production. With our power plant fleet – one of the largest in Europe – we are making an indispensable contribution to ensuring a reliable supply of electricity that satisfies demand in our core markets, i. e. Germany, the United Kingdom and the Benelux region. Wind turbines and PV installations cannot accomplish this due to their strongly fluctuating load. Electricity storage techniques are not yet able to meet the technical and economic requirements necessary to be used for ensuring the supply of electricity on a large scale. This is why conventional generation capacity that is capable of adjusting to the fluctuations of wind and solar feed-ins will be needed for a long time to come.

Energy trading will also remain one of RWE's core areas of activity, not least due to its strong connection to the generation business. Our trading company RWE Supply & Trading is in charge of marketing the electricity of our power stations while procuring the fuel and emission allowances needed to produce it. In this role, combined with the commercial optimisation of our generation asset dispatch, it makes a major contribution to the Group's operational success.

Our deliberations concerning the strategy of the new RWE have not yet been finalised. For example, we still have to determine the dividend policy we intend to pursue and the leverage we will aim for. We will be able to reach decisions on the details of our strategy once the asset swap with E.ON has been completed and we have operational control of the new activities. After that, we want to provide comprehensive information on our new strategy.

RWE in fiscal 2018: Group structure featuring four segments. In the transitional period leading up to the completion of the transaction, the RWE Group is divided into four segments (divisions), which are described in detail below. In addition to the three RWE operating divisions Lignite & Nuclear, European Power and Supply & Trading, they consist of the innogy activities that will remain with us.

(1) Lignite & Nuclear. This is where we report our German electricity generation from lignite and nuclear power as well as our lignite mining in the Rhineland. These activities are managed by our subsidiary RWE Power. This segment also encompasses our equity holdings in the Dutch nuclear power plant operator EPZ (30 %) and the German company URANIT (50 %), which holds a 33 % stake in the uranium enrichment specialist Urenco. Our 51 % interest in Hungary-based Mátra, which generates electricity from lignite, was also included in this segment until it was sold in March 2018.

Lignite and nuclear power plants are primarily used to generate base-load power due to their relatively low and stable fuel costs. Their profitability is primarily determined by the price level on the wholesale market. Electricity prices were on a downward trend until 2016, after which they recovered. A massive cost cutting exercise enabled us to curb the resulting earnings shortfalls. Our ongoing efficiency-enhancement programme in conventional power generation is designed to cut annual expenditure by a total of €300 million compared to 2016. Of this sum, €200 million and €100 million are allocable to the Lignite & Nuclear and European Power segments, respectively. We aim to conclude the programme by the end of 2019. We have already achieved the planned savings for the most part.

Lignite and nuclear power stations will lose importance within our generation portfolio even though their earnings prospects have improved. This is mainly due to the energy policy framework in Germany. Nuclear energy is subject to a legally binding phase-out roadmap, which stipulates a latest possible shutdown date for every single plant. Two RWE stations are still online: Gundremmingen C and Emsland. We can operate these units until the end of 2021 and the end of 2022, respectively, after which they must be closed.

Electricity generation from lignite is also subject to a time limit. This results from the global and national climate protection goals. Germany wants to reduce greenhouse gas emissions in the energy sector by slightly more than 60 % by 2030 compared to the level in 1990. We have made a major contribution to this in the past and will continue to do so in the future. For example, we are participating in the lignite security standby scheme, which involves eight power plant units – including five of RWE's – being gradually taken off the market from 2016 to 2019 and being used as the last resort to ensure security of supply for four years each, before they are decommissioned. On 30 September 2017, our Frimmersdorf Units P and Q were taken off the grid, followed twelve months later by Units E and F at Niederaussem. Neurath's Unit C is scheduled to follow suit at the end of September 2019. This will cause our carbon dioxide emissions in the Rhenish lignite mining region to drop by about 15 % compared to 2015.

We expect to have to take further lignite units offline early in the coming years. This is a consequence of the proposals submitted by the Growth, Structural Change and Employment Commission, on which we provide detailed information on page 33. The body recommends a complete exit from coal by 2038. It envisages the capacity of lignite-fired power stations on the market being reduced to a total of 15 GW by the end of 2022. This would represent a decline of nearly 5 GW compared to the end of 2017. The objective is to have only 9 GW remaining on the market in 2030. The federal government is expected to follow these recommendations. The timing and choice of the stations that will be shut down remains to be clarified. Talks will be held with the companies to this end. We believe we should receive appropriate compensation – as recommended by the Commission – for our plants that are affected by the measures.

(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 has resulted in a significant decline in the use of some of these assets compared to the beginning of the decade. In some cases, their margins are far below the levels prevailing at that time. We therefore shut down several hard coal-fired power stations or saw to it that they were closed. Examples are Voerde A and B on the Lower Rhine, which were taken offline in April 2017. We held a stake of 25 % in these units and marketed their electricity generation. We have temporarily taken some gas-fired power plants off the grid that could no longer cover their fixed operating costs, for example the Dutch Moerdijk 1 unit as of 1 February 2018. They can come back online as soon as market conditions allow. Besides temporary and permanent power plant closures, we have taken additional measures to cut costs and will continue to do so in the future. As set out earlier, we aim to reduce expenses in the European Power segment by €100 million via our ongoing efficiency-enhancement programme, most of which we have accomplished.

Despite the persistent pressure from consolidation, we believe the European Power segment has long-term growth prospects. We expect that secured generation capacity will become tight, causing our stations to become more profitable. In the long run, this should benefit gas-fired power plants in particular. In light of the slight improvement in market prospects, we have put some mothballed stations back online or decided to return them to service, as was the case with the Dutch Claus C gas-fired power plant, which is scheduled to resume power production at full capacity in 2020, following about six years of inactivity.

In terms of installed capacity, gas is already our most important fuel, and its share in our generation portfolio will probably grow even more. Political decisions play a major role. The governments in our most important generation markets, i. e. Germany, the United Kingdom and the Netherlands, are pursuing ambitious climate protection goals and are relying on a rapid phase-out of electricity production from coal to achieve them. Therefore, 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.

The proportion of our electricity generation accounted for by hard coal should continue to decline in 2019, in part because we will decommission the coal unit of Gersteinwerk in Werne (Westphalia) in the spring. In addition, we are currently converting our two Dutch hard coal-fired power stations Amer 9 and Eemshaven for biomass co-firing. We have been granted up to €2.6 billion in state subsidies due to the required expenditure and the much higher price of biomass compared to hard coal. We will receive these funds over a period of eight years, enabling biomass shares of 80 % at Amer 9 and 15 % at Eemshaven. The conversion work is making good progress and we are confident that we will be able to establish the technical prerequisites for achieving these quotas before the end of this year.

(3) Supply & 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. Our subsidiary mainly trades electricity, natural gas, coal, oil, CO_2 certificates and biomass. RWE Supply & Trading increasingly conducts these activities outside of Europe: it already runs trading floors in New York, Singapore and Shanghai. Another of the company's activities consists of marketing the electricity from RWE power stations and procuring the fuel and emission allowances required to produce it. One objective is to limit price risks. On top of that, RWE Supply & Trading is in charge of the commercial optimisation of our power plant dispatch. The resulting earnings are reported in the generation segments. The company 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 sophisticated risk management concepts.

Another focal point of RWE Supply & Trading's activities is the gas business. The company supplies gas to companies outside of the RWE Group. To this end, it enters into long-term supply agreements with producers, organises gas transportation by booking pipelines and optimises the timing of deliveries using leased gas storage facilities. The company also concludes transactions involving liquefied natural gas (LNG). The objective is to take advantage of differences in price between regional gas markets which are not connected via pipelines. 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, because the greater the size and diversification of the procurement and supply portfolios, the greater the chances are to commercially optimise them.

RWE Supply & Trading also leverages its expertise to make short to medium-term investments in energy assets or energy companies, for which value-enhancing measures can be taken in order to realise high returns upon resale (referred to as principal investments). At the end of 2018, RWE Supply & Trading had a portfolio of ten investments, a large portion of which was in the USA.

(4) innogy – continuing operations. This is the segment in which we report all of the innogy assets that should remain within the RWE Group over the long term: renewables, gas storage and the 37.9 % stake in the Austria-based power utility Kelag. Once E.ON has acquired our majority interest in innogy, it will return the aforementioned activities to us.

innogy ranks among Europe's leading renewable energy companies. In terms of generation capacity, our subsidiary's strongest presence is currently in Germany and the United Kingdom, followed by Spain, the Netherlands and Poland. In terms of energy sources, its focus is on onshore and offshore wind, followed by hydroelectric power and photovoltaics. innogy further expanded its generation capacity last year. One milestone was the inauguration of the Galloper large-scale UK North Sea wind farm, in which innogy holds a 25 % stake. Furthermore, the company has initiated the continued expansion of its wind power capacity by beginning the onshore work on Triton Knoll, another large-scale wind farm in the UK North Sea. Our subsidiary holds a 59 % stake in it. In addition, innogy acquired a project portfolio with over 2 GW in the USA and secured subsidies under the German Renewable Energy Act for the Kaskasi offshore wind project in Germany. We report on the projects mentioned here in detail on page 37 et seq.

With Belectric Solar & Battery, a subsidiary acquired in early 2017, innogy is also one of the largest international suppliers of ground-mounted solar panel arrays and battery storage facilities with a presence in Europe, the Middle East, North Africa, India, Australia, South America and the USA. Photovoltaics is one of the fastest growing technologies in the energy sector and has become profitable without subsidies in many markets since its introduction. In addition to the development and construction of ground-mounted solar farms, Belectric also handles operation and maintenance. Since its inception in 2001, the company has already set up solar panel arrays with a total capacity of about 2 GW. It is currently building such a facility in Australia, which on completion will probably be the country's largest to date (see page 38). Moreover, by manufacturing battery storage units, Belectric is making a major contribution to distributed power supply and will play a pivotal role in stabilising electricity grids in the future.

Besides the renewable energy and electricity storage business, we will continue innogy's gas storage activities. Our subsidiary currently owns eleven gas storage facilities, of which five, with a combined capacity of 1.6 billion cubic metres, are located in Germany, and six, with a total capacity of 2.5 billion cubic metres, are situated in the Czech Republic. innogy leases the capacities to companies such as RWE Supply & Trading, which use them for timing arbitrage transactions. Storage units are filled in the warm months, when little gas is needed to heat buildings, and gradually emptied in the cold season, when demand is high. The income achieved through such arbitrage transactions and, in turn, storage capacity auctions depends on the seasonal differences in gas prices. The differences in price between summer and winter gas are much smaller today than they have been in the past. However, we believe that periods of scarcity and price spikes will become more frequent again in the future, in part due to rising demand for gas used to generate electricity. Therefore, we feel there is a good chance of achieving attractive returns in the gas storage business once again.

It is also envisaged that innogy's minority interest in Kelag will remain in the RWE Group. Headquartered in Klagenfurt (Carinthia), Kelag is a leading Austrian energy utility. Its activities cover all stages of the value chain, from electricity generation, energy trading and distribution system operation to the sale of electricity, gas and innovative energy solutions. Kelag primarily produces its electricity from renewable sources such as hydro, wind and photovoltaics. The minority interest in the company is therefore a good complement to our future renewable energy activities.

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 following fiscal year and planned figures for the years thereafter. 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 if published forecasts need to be modified.

The main key performance indicators we use in managing our business are adjusted EBITDA, adjusted EBIT, adjusted net income, and net debt. As set out in more detail on page 40, the business activities of our subsidiary innogy are considered in these figures either in full or in part, although we classify this company as a pure financial investment. For management purposes, we therefore also use key figures calculated in deviation from IFRS consolidation principles: our majority interest in innogy is recognised in the 'other financial assets' line item on the balance sheet and we only consider the dividend received on the income statement. More detailed information on this can be found on page 58.

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: capital gains or losses, temporary effects from the fair valuation of derivatives, impairments and other material special items are shown in the non-operating result. Subtracting operating depreciation and amortisation from adjusted EBITDA yields adjusted EBIT. Net income corrected to exclude all major special items ('adjusted net income'), is another key operating indicator. However, we will determine this figure solely using the method deviating from IFRS consolidation principles until the transaction with E.ON has been completed. Adjusted EBIT and adjusted net income are key performance indicators regarding the variable compensation of the Executive Board and executives (see page 63 et seqq.).

We primarily use the internal rate of return for evaluating the attractiveness of 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. 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. 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.

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. We are making use of the findings from this exchange to revise our CR strategy. This involves identifying our major sustainability challenges and determining how we can overcome them. We still believe that contributing to achieving national and international climate protection goals through continuous emission reductions is a key task. Our carbon dioxide emissions have dropped steadily in the last six years, in part because we took coal-fired power plants offline. We believe that this trend will continue. Furthermore, we aim to be a driving force in the creation of a sustainable energy system by spurring the expansion of renewable energy.

Further information on our measures in relation to CR can be found in our separate non-financial statement in accordance with Section 315b, Paragraph 3 of the German Commercial Code, which will be published as part of our CR Report in April 2019 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

Those who are innovative need not be afraid of change. This also holds true for companies in a changing market environment – companies like RWE. We have a whole host of development projects looking for new technical solutions. Our goal is to make opencast mines more profitable, power plants less emissions-intensive as well as develop and refine future-oriented uses of lignite and carbon dioxide. In addition, we support start-ups and receive important stimulus for our business by working with them. In our daily operations, we benefit from the ingenuity and entrepreneurial spirit of our employees. Once again, they had thousands of good ideas in 2018, which will allow us to achieve millions of euros in savings.

With about 520 inventions, we are in the leading pack of European utilities. RWE is innovative in many ways. Our motivation is to remain competitive in an environment undergoing substantial change as well as to be a driving force behind this transformation. With a tally of around 1,760 patents and patent applications, based on roughly 520 inventions, the RWE Group is in the vanguard of Europe's most innovative utilities. These figures also consider all of the activities of our subsidiary innogy SE. Last year, we worked on about 360 research and development (R&D) projects. In many of these projects, we co-operate with companies or research institutes and usually only have to bear a portion of the costs. The RWE Group's operating R&D spending including innogy amounted to €116 million in 2018 (previous year: €182 million). A total of about 600 of the Group's 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. RWE AG is responsible for the R&D activities of the areas of the Group under its management. Its measures are therefore 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 converting lignite and carbon dioxide for use as starting materials for the chemical industry. Furthermore, we work with start-ups, the ideas of which have the potential to help us make further progress. Since 2016, R&D activities in the fields of renewable energy, grids and retail have been the responsibility of innogy SE.

In this chapter, we present a small selection of RWE AG's important R&D projects, followed by an overview of our co-operation with new companies as well as a brief insight into the innovative work done by innogy. We end with an example of how valuable our employees' ideas are to us.

The transformation of mining: increasingly automated and digital. Opencast lignite mining is a complex, multi-stage process, involving the use of numerous heavy-duty machines: huge bucketwheel excavators dig out the coal and the topsoil (known as the overburden) from the terraced opencast mines and deposit it on conveyor belts, on which it is often transported for several kilometres. The coal is then temporarily stored in a bunker before being transported by rail or conveyor belts to the surrounding power stations and refining plants. At the same time, the overburden is transported to the other side of the opencast mine where mining has already been completed. Here, stackers use it to fill the depression resulting from coal extraction. Automation and digitisation enable the processes described above to be rendered much simpler and more efficient. We began automating heavy machinery components as early as the 1990s, and we have made substantial headway in this area since then. We are also making good progress in terms of digitisation. For instance, we are currently working on a digital, three-dimensional representation of opencast mine operations. As is the case for automobile navigation devices, a satellite is used to determine the current position of our heavy machinery, while sensors monitor the material flow on the conveyor belts. This transparency offers multiple benefits: control centre personnel receive precise information as to the location of the on-site machinery and the progress of the work performed using it, thereby creating a reliable basis for resource planning. Excavator operators can monitor the exact job data via a display, enabling them to control their machine as efficiently as possible. Furthermore, workers around the stacker operators are able to preplan their daily activities, based on the information on the overburden that is already on its way over via the conveyor belt. Above and beyond this, the 3D visualisation of the working environment makes it easier for them to adhere to the specified heights for backfilling and modelling the surfaces for recultivation. By taking the measures described above, we are lifting our opencast mines to a new technological level, establishing major prerequisites for being able to operate them profitably in the future as well.

New opportunities for CO_2 use: carbon dioxide is turned into methanol. For some time now, we have been working on various processes to enable us to separate carbon dioxide from power plant flue gases (CO_2 washing). At the Coal Innovation Centre in Niederaussem, we have developed one of the world's leading technologies in this field together with BASF and Linde. This technology has been tested in a pilot plant and has proven its efficiency over more than 70,000 operating hours since 2009 with carbon capture rates of 90 %. Now we are taking the next step: we use the carbon dioxide from the pilot plant to produce fuel and feedstock for the chemical industry, which can be used to replace fossil fuels such as crude oil and natural gas. We are doing this within the scope of four projects that are subsidised by the EU. One of them is MefCO_2 (Methanol from CO_2). Its purpose is to show how carbon dioxide, water and electricity can be used to make methanol, which is traditionally produced with natural gas or coal, on a large technical scale. A wide variety of chemical products are based on methanol, one of the most commonly produced chemicals in the world, which is also suitable as a long-term storage medium for renewable energy. Therefore, the benefits of conversion extend far beyond simply reducing industrial CO_2 emissions. Nine partners from seven European countries are involved in MefCO_2, amongst them industrial companies, universities and research institutes. The project was launched in 2014, and we joined it in 2017 during the project partners' search for a site for a demonstration plant that could be used to convert carbon dioxide into methanol. Today, the plant is located at Niederaussem. It went into operation in early 2019 and has a production capacity of about 1 metric ton of methanol per day, making it one of the largest CO_2 utilisation plants in Europe.

The path to carbon-neutral economic cycles: an opportunity for the coal mining regions. Many experts believe that human intervention in the climate can only be limited effectively if the global social and economic system successfully makes the shift to largely closed carbon cycles. Ideally, only as much carbon enters the atmosphere as is bound by other processes at the same time. However, this is not without its own challenges. The crux of the matter is that we will ultimately continue to rely on electricity in the future and we will also want to live in warm homes. In addition, industry remains reliant on carbon-based raw materials. The transition to the circular carbon economy is a herculean task, which cannot be accomplished without investment. RWE has been co-operating with the Fraunhofer Institute for Environmental, Safety and Energy Technology (Fraunhofer UMSICHT) in Oberhausen and Bochum Ruhr University since September 2018 to develop the technical and systemic framework necessary for a circular carbon economy. Our goal is to establish a centre of competence for carbon conversion which brings together the know-how, equipment and components as well as research work. We are focusing on regions in which the phase-out of carbon-intensive technologies will result in the demise of established industrial structures. The centre, which will be called ITZ CC (Innovation and Technology Centre for Carbon Conversion), will initiate structural change in the Rhenish lignite mining region and the Ruhr area by way of technologies and know-how relating to the use of carbon. The objective is to build a bridge from conventional to innovative carbon usage and make a contribution to new industries replacing old ones.

A key method in transitioning to the circular carbon economy is the gasification of carbonaceous material. We intend to dedicate ourselves intensively to this process at the Niederaussem Innovation Centre. We are doing this as part of an initiative of the Fraunhofer Institute named Carbon Chains (IK2). The project is based on the fact that coal and other carbonaceous materials can be used to produce raw materials for the chemical industry and for fuels through gasification. What is special about this method is that, during the combustion process, rather than carbon dioxide and water vapour, carbon monoxide and hydrogen are produced. The latter are building blocks of a synthesis gas that is already being used in the production of fuels, plastics and fine chemicals. From 2020 onwards, pilot plants are due to be built in Niederaussem to develop suitable gasification, processing and synthesis technologies. We use lignite, which is increasingly losing importance as a fuel for generating electricity, as a base raw material. Its use in the production of basic materials will open up exciting long-term prospects to the Rhenish coal mining region. In addition, waste products, residual materials and biomass can also be converted through gasification. In this way, previously unused carbon sources could be integrated in order to supply industry with raw materials.

Lower mercury emissions thanks to rotary hearth furnace coke. We want to operate our power plants in as an environmentally-friendly manner as possible and legislation gives us strict guidelines in this regard, e. g. in relation to mercury emissions. In 2021, they will be subjected to new EU limits making the framework conditions for the operation of our lignite-fired power plants stricter than ever. We are already able to successfully separate and extract most of the mercury contained within flue gases so, as a result, our plants are already well below the current upper limits. Independently of this, we have been investing in intensive research for some years now, in order to identify ways which allow us to further reduce mercury emissions cost effectively. We have been giving much consideration to a process which makes use of furnace coke from lignite. We are already using this substance to extract mercury at our refining plants and then use it to manufacture lignite briquettes or lignite dust for the cement and lime industries. Tests in a pilot plant at the Coal Innovation Centre at the Niederaussem power station show that lignite-based furnace coke can also help reduce emissions from power plants. We mixed finely ground furnace coke with water and sprayed the resulting mixture into one of the power station's smoke stacks (wet spraying). This results in the mercury attaching itself to the fine furnace coke particles; both materials are extracted by the electrostatic precipitator and disposed of. The tests indicate a significant reduction in mercury emissions. The findings gained have since influenced the construction of a large-scale demonstration plant, also located in Niederaussem, which took up operation at the beginning of 2019. This is where wet spraying will be compared to the alternative method of dry spraying in a long-term test. We intend to implement the more suitable of the two technologies in other lignite-fired power stations.

Detailed information on these projects and other RWE R&D ventures can be found at www.rwe.com/innovation.

Promoting new companies and their ideas. In addition to working on our own research projects, we also support fledgling, innovative companies. RWE has been involved in the third High-Tech Gründerfonds (HTGF III) since 2017. HTGF is Germany's largest start-up financer. It acquires stakes in firms that make commercial use of technological progress and has invested in over 500 companies since 2005, being part of numerous success stories. HTGF is a public-private partnership: its group of investors includes the Federal Ministry of Economics and Energy, the KfW Group, Fraunhofer Gesellschaft and numerous companies. RWE has been investing in venture capital funds since 2006. This allows us to more easily identify start-ups with ideas that could be interesting for our business. To deepen our ties to the founder scene and pave the way for potential co-operations, we held our first Start-up Day in 2018. A large number of the attendees were attracted through our involvement in HTGF. The valuable talks and contacts resulting from the event have encouraged us to hold at least one further Start-up Day in 2019.

Innovation at innogy: contributing to the success of the energy transition. Our subsidiary innogy is pursuing a broad range of innovation projects designed to contribute to making the energy transition a success. They are described in more detail at www.innogy.com/innovation. An example of a project that turned out especially well is the development of the Smart Wind Farm Output Controller (SWOC), a remote control for onshore wind farms. SWOC is a cube, no larger than a hat box, with integrated software. It enables any wind turbine variant to be controlled from several locations. Thanks to SWOC, the operators of the grids which receive the electricity can ramp down production, thereby protecting powerlines from overload. Direct marketers of wind energy can also ramp down output, for example if there is an oversupply of power on the market resulting in negative electricity prices. The control box makes wind turbine operation more flexible and efficient. innogy has already started using these devices for its German and Dutch wind farms and intends to upgrade solar farms with the intelligent switch cubes.

We leverage the experience and know-how of our employees. Another source of useful ideas can be found within our daily operations. Many of our employees pass on their observations from their day-to-day activities, thereby enabling the company to progress. Last year, employees of the Group submitted approximately 2,000 suggestions for ways in which to improve the business to their idea managers. We estimate the economic benefit of their suggestions for the first year of implementation to be €2.6 million. The suggestions can make operating procedures both more efficient and environmentally friendly, while being less dangerous than before. For example, workers in the Rhenish lignite mining region observed that the process of refuelling vehicles and machines was much too cumbersome: the tank lorry drivers would climb atop the tank, hose in hand, in order to refuel the vehicles and machines through their top-mounted filler necks using a conventional pump nozzle. Besides being hazardous, this resulted in small residual amounts of fuel escaping and seeping into the ground. The employees therefore suggested retrofitting the vehicles and machines for pressure fuelling. There are several advantages to this solution: the filler necks can be mounted where they are more convenient to reach, the fixed connection between the hose and the tank prevents fuel from overflowing, and fuelling times are reduced considerably. These benefits were so compelling that the ball soon got rolling. At the beginning of 2019, where technically possible and sensible, all track vehicles in the Rhenish opencast mine and even some emergency back-up generators for heavy-duty equipment were converted to pressure refuelling.

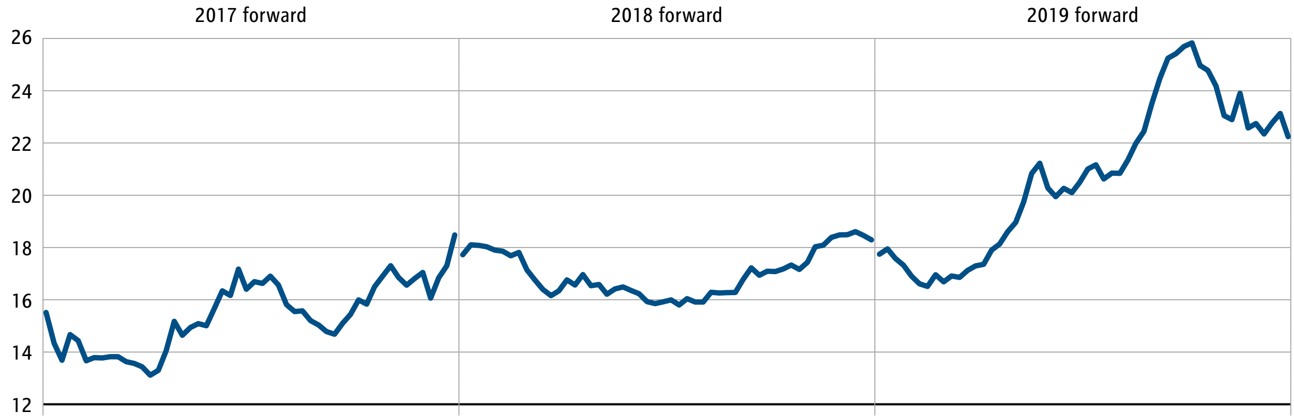
1.3 ECONOMIC ENVIRONMENT

The global economic upswing continued in 2018, but lost some steam over the course of the year. The economic trend stimulated demand for commodities and contributed to the increase in the price of gas and coal compared to the previous year. Furthermore, a reform of the European Emissions Trading System caused a rapid increase in CO_2 certificate prices. These developments were responsible for the recovery of wholesale electricity prices in 2018, which began at the beginning of 2016. However, this has not had a significant affect on RWE's earnings so far, because we had sold forward most of our electricity generation for 2018 in earlier years when prices were still far below the current level.

Eurozone posts 2 % economic growth. The global economy continued its upward trend in 2018, but lost some momentum during the year. One reason was the trade conflict between the USA and other nations, in particular China. Based on initial estimates, global economic output was a respectable 3 % higher in 2018 than in the previous year. The Eurozone may well have recorded approximately 2 % growth. Germany, the currency area's largest economy, appears to have recorded a gain of just 1.5 %, whereas the Netherlands occupied one of the top spots among the euro countries, posting an expansion of about 2.5 %. In the United Kingdom, our most important market outside the currency union, gross domestic product rose by nearly 1.5 %. Brexit and the associated risks slowed the UK economy.

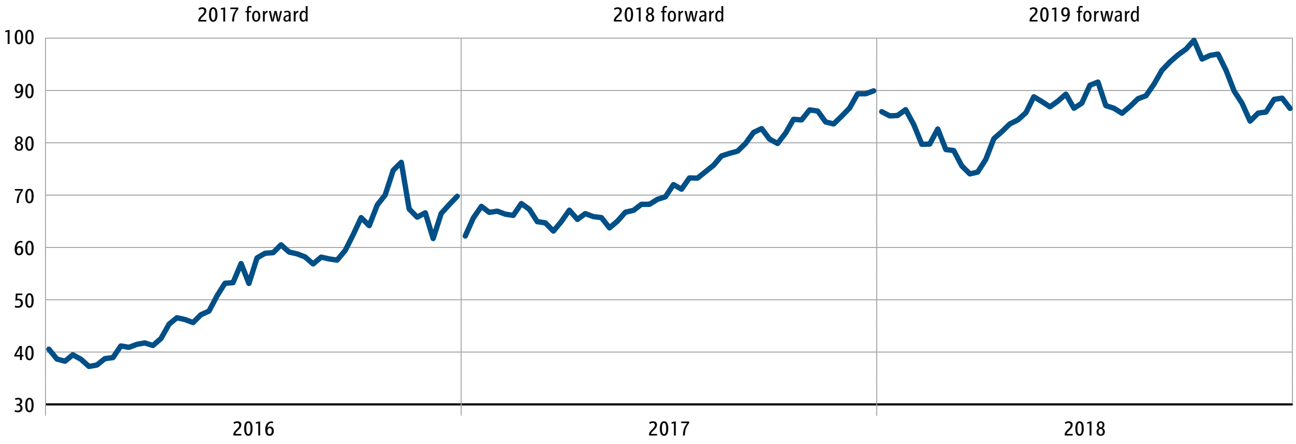
German electricity consumption flat. Economic growth stimulated demand for electricity, whereas the trend towards energy savings had an opposing effect. According to proforma calculations by the German Association of Energy and Water Industries (BDEW), German electricity usage was roughly on a par year on year. Data available for the UK indicates that the country did not experience a significant change compared to 2017, either. Conversely, power consumption is estimated to have risen by 2 % in the Netherlands, with the country's above-average growth probably playing a role.

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



Source: Bloomberg.

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

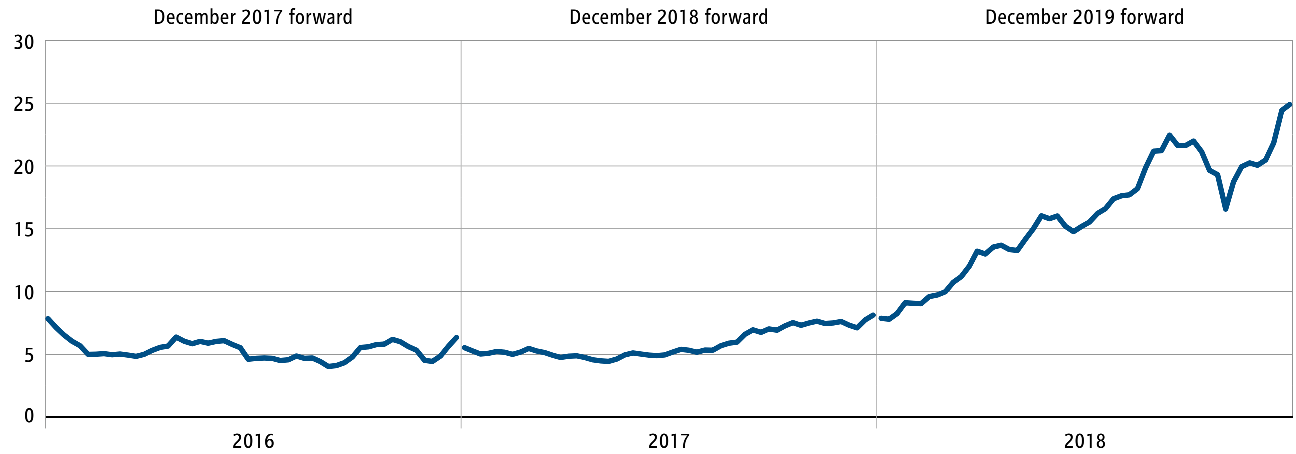


Source: RWE Supply & Trading.

Hard coal and gas quotations up year on year. In addition to demand for electricity, the development of fuel costs also determines power plant deployment. In the financial year that just came to a close, the freely tradeable energy sources of most importance to us, i. e. gas and hard coal, were much more expensive than a year before: gas spot prices at the Dutch Title Transfer Facility (TTF) averaged €23 per MWh, up €6 compared to 2017. In TTF forward trading, contracts for delivery in the following calendar year (2019 forward) were settled for €21 per MWh. By comparison, in 2017 the price paid for the 2018 forward was €17. Gas prices were influenced in part by oil quotations, which were higher than in 2017 overall. Furthermore, the positive economic cycle came to bear.

Hard coal trading developed as follows: including freight and insurance, hard coal imports via the ARA ports (Amsterdam/Rotterdam/Antwerp) were settled at an average of US$92 (€78) per metric ton in spot trading in 2018, an increase of US$8 compared to 2017. The 2019 forward (API 2 Index) traded at US$87 (€74) per metric ton, US$13 higher than the comparable figure for the previous year. This was in part due to the dynamic economy in the Asia-Pacific region and its stimulating effect on demand for coal.

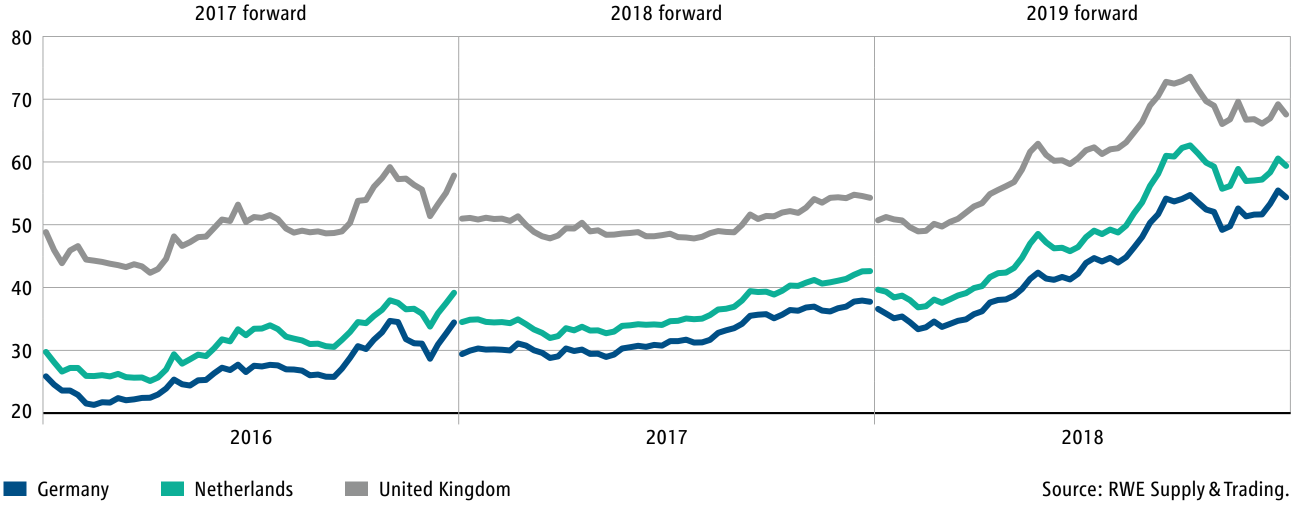
Forward prices of CO_2 emission allowances (EU Allowances)
€/metric ton of CO_2 (average weekly figures)



Source: RWE Supply & Trading.

Reform of European Emissions Trading System causes rapid increase in CO_2 certificate prices. An important cost factor of fossil fuel-fired power stations is the procurement of CO_2 emission allowances. The price of an EU Allowance (EUA), which confers the right to emit one metric ton of carbon dioxide, tripled to €25 over the course of the year. The average for 2018 was €16, which was €10 more than in 2017. These figures relate to contracts for delivery in December of the following year. There continue to be many more emission allowances on the market than companies need to cover their carbon dioxide emissions. However, in the meantime the EU has adopted a package of measures enabling it to significantly reduce the surplus of certificates from 2019 onwards (see page 32). This has apparently given many market participants a reason to expect a reduction in available emission allowances, which has made them more expensive and resulted in early purchases. Consequently, EUAs have risen in price even before the package of reforms was implemented.

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

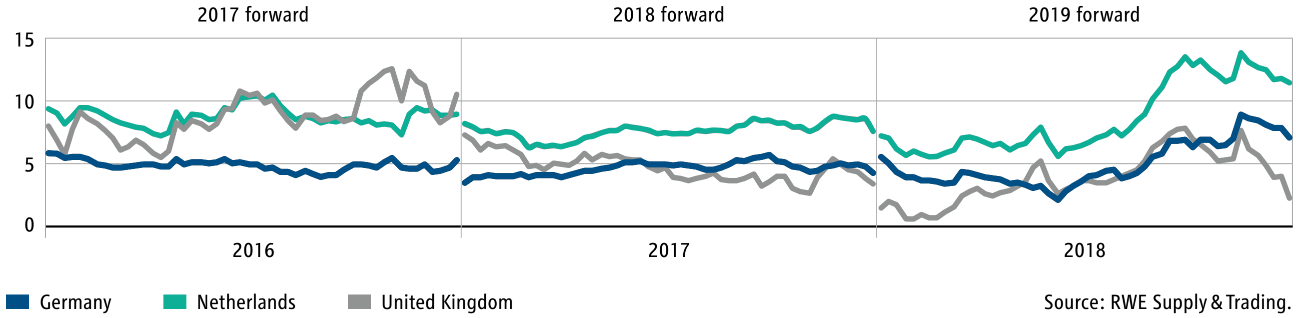


Source: RWE Supply & Trading.

Wholesale electricity prices continue upward trend. The rise in fuel and emission allowance prices was reflected in the development of wholesale electricity prices, which continued to trend upwards. Last year, base-load power traded for an average of €44 per MWh on the German spot market, up €10 on the figure recorded in 2017. Significant price increases were also observed on RWE’s two other major generation markets: quotations on the UK spot market advanced by £12 to £57 (€65) per MWh and by €14 to €53 per MWh in the Netherlands.

Forward markets displayed the following development: last year, the average quotation of the 2019 base-load forward in Germany was €44 per MWh, €12 more than what was paid for the 2018 forward in 2017. The price of base-load power in year-ahead forward contracts rose by £10 to £54 (€61) per MWh in the United Kingdom and by €13 to €49 per MWh in the Netherlands.

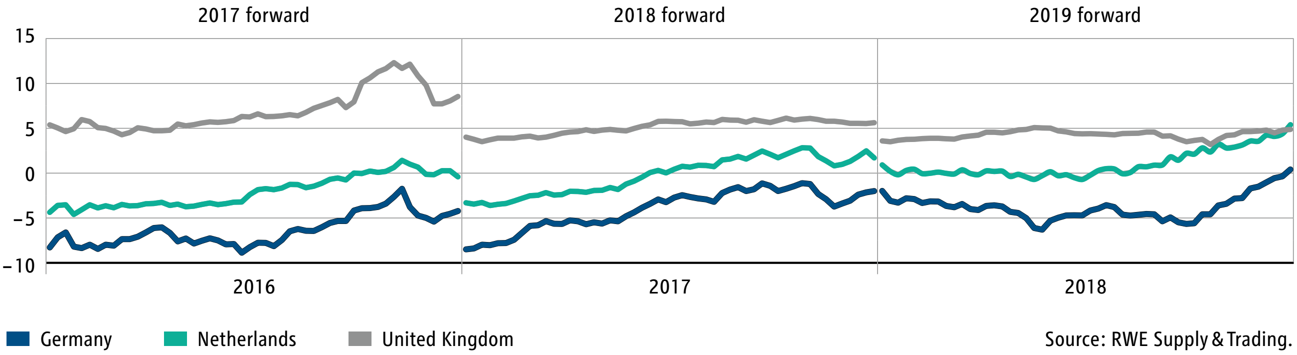
Clean dark spreads[1] forward trading
€/MWh (average weekly figures)



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 40 %; 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 50 %; including CO_2 tax in the UK.

Rise in German generation margins. Power plant margins 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 2016, based on the respective year-forward transactions. In Germany and the Netherlands, clean dark spreads and clean spark spreads grew somewhat after a moderate first six months. For the full year, they therefore slightly exceeded the 2017 level. By contrast, in the UK, clean spark spreads and clean dark spreads were slightly and significantly lower than their respective averages in the previous year.

Fuel costs for lignite-fired and nuclear power stations are generally more stable as we source uranium via long-term contracts at firm conditions and produce lignite from our own opencast mines. The rise in wholesale power prices caused realisable nuclear energy margins to increase substantially. By contrast, the margins of lignite-fired power stations only improved slightly as the price of both electricity and CO_2 emission allowances rose.

Decline in income from RWE power stations. 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 was determined by the conditions at which we concluded forward contracts for 2018 years in advance. We conducted such sales relatively early on for our lignite and nuclear power plants, which mostly cover the need for base-load electricity, realising lower prices than in the contracts for 2017. Given that generation costs were virtually stable, the margins of these stations dropped accordingly. We typically conduct forward sales of electricity produced by hard coal and gas-fired power plants with a smaller lead time. As a result, we benefited more from the recovery of prices in wholesale electricity trading. However, we had to pay much more for fuel. Therefore, overall the margins realised in forward contracts also deteriorated for these stations.

Wind speeds below average in Central Europe and the United Kingdom. The utilisation and profitability of renewable generation assets greatly depend on weather conditions. Wind speeds are particularly important to innogy. At the company's generation sites in Central Europe and the United Kingdom they were much lower than the average of the last 30 years. By contrast, they matched the long-term average in Italy and Spain. Wind speeds recorded at all innogy sites were lower than in 2017. The utilisation of run-of-river power stations strongly depends on precipitation and melt water volumes. In Germany, our main hydroelectric power region, these volumes were below the long-term average and the level observed in 2017.

1.4 POLITICAL ENVIRONMENT

Climate protection remains at the top of the energy policy agenda. The European Union has fundamentally reformed the European Emissions Trading System and set itself an ambitious goal regarding the expansion of renewable energy through to 2030. In addition, Germany and the Netherlands are setting the course for an early coal phase-out. The government in The Hague presented a first bill in this respect in May 2018. Berlin is set to follow suit soon, orientating itself towards the proposals of a state commission, which at the beginning of 2019 recommended a German exit from coal by 2038. It further envisages the number of coal-fired power plants on the market being reduced significantly by 2022. It is foreseeable that the proposals will have serious ramifications for RWE's lignite business.

Reform of European Emissions Trading System decided. In February and March 2018, the European Parliament and the Council of Ministers decided to fundamentally reform the European Emissions Trading System (ETS). This was preceded by trilateral talks held by representatives of the two bodies and the European Commission. The objective of the reform, which entered into force in April 2018, 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 a total of 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 to 2030. Until then, the reduction rate will be 1.74 %. Another objective of the amendment to the ETS is to reduce the existing glut of allowances on the market. This will be done by transferring a much larger volume of allowances into the 'market stability reserve' (MSR) compared to what was prescribed by former legislation. The MSR, which has been used since the beginning of the year, is a tool capable of providing more flexibility in bringing the supply of certificates in line with demand. The new regulation envisages reducing the number of certificates placed on the market via auctions accounting for 24 % of the surplus annually from 2019 to 2023 and transferring them to the MSR. It also envisages cancelling MSR emission allowances exceeding the auctioned volume in the preceding year from 2023 onwards. In addition, it will allow member states to cancel certificates in exchange for emission reductions resulting from national measures leading to power plant closures.

EU Winter Package: new energy efficiency and renewables expansion goals. At the end of 2018, the European Parliament and the Council of Ministers adopted new versions of the directives concerning renewable energy and energy efficiency as well as a regulation for monitoring progress in climate and energy policy. The legal acts entered into force on 24 December after they were published in the Official Journal of the European Union. They are part of a legislative package entitled 'Clean Energy for all Europeans' (also referred to as the 'Winter Package'), which has largely been adopted. In the package, the EU has set itself an ambitious goal in relation to the expansion of renewable energy, which is envisaged to cover at least 32 % of energy demand by 2030. The EU currently aims to achieve a share of 20 % by 2020. The target in respect of energy efficiency is also ambitious: the EU intends to reduce its primary energy consumption by 32.5 % by 2030, relative to the development under normal circumstances. Furthermore, the member states are obliged to present national energy and climate plans for the period running until 2030 and to develop long-term climate-protection strategies by the end of 2019. Germany has already fulfilled these requirements.

EU limits participation of coal-fired power plants in capacity mechanisms. The EU also achieved a breakthrough by amending the Electricity Market Directive and the Electricity Market Regulation, which are also part of the Winter Package. The European Parliament and the Council of Ministers agreed on a joint position in December. Both of these bodies intend to introduce provisions to the EMR which national governments must comply with if they are introducing capacity mechanisms or have already done so. Participation of power plants emitting more than 550 g CO_2/kWh in such mechanisms will be very limited in the future. The prerequisite for this is that they do not emit more than 350 kg CO_2 per kilowatt of installed capacity per year. A modern lignite-fired power plant achieves this threshold after a maximum of 375 hours under full load, whereas a modern hard coal-fired power station hits this mark after no more than 470 hours. In concrete terms, this means that coal-fired power plants cannot participate in a general capacity market under full load, but can be part of back-up schemes envisaging a small number of operating hours. An example of such rules is the existing lignite security stand-by regime, which is conceivable under the new EU regulations in the future. The ceiling of 550 grams will apply to new power plants as of 1 January 2020. Existing assets will be subject to transitional arrangements until the middle of 2025. Capacity agreements already in place and contracts concluded during the current year will be entirely unaffected by the threshold values. This is the concession made by the EU in particular to Poland: the country has already introduced a general capacity market including coal-fired power stations. The amendments to the Electricity Market Directive and the Electricity Market Regulation require formal approval from the European Parliament and the Council of Ministers to enter into force. This is expected to happen in the first half of 2019.

Commission for structural change proposes roadmap for German coal phase-out. An accelerated coal phase-out is materialising in Germany, our most important generation market. In January 2019, following lengthy consultations, the Growth, Structural Change and Employment Commission established by the German government presented a concept for the country achieving its climate protection goals in the energy sector avoiding structural upheaval, social hardship or jeopardising security of supply. The body, which consists of representatives from industry, trade unions, the scientific community, associations, civic initiatives and environmental organisations, recommends that Germany phase out coal by no later than 2038. However, it envisages reviewing the feasibility of this goal in 2032 and possibly bringing the exit date forward to 2035. In addition, the Commission has set milestones for the coal phase-out: it envisages the total capacity of lignite and hard coal-fired power stations on the market being reduced to 15 GW each by the end of 2022 through shutdowns or conversions. Compared to the end of 2017, this corresponds to a decrease of at least 12.5 GW, of which nearly 5 GW and 7.7 GW will be accounted for by lignite and hard coal, respectively. These figures include shutdowns that have already occurred or have been announced as well as lignite-fired units which had not yet been placed on security stand-by at the end of 2017. The objective is to have lignite and hard coal-fired power stations with a total capacity of only 9 GW and 8 GW (excluding back-up capacity) on the market in 2030. Moreover, the Commission recommends removing emission allowances matching the additional CO_2 savings from the national auction budget, as otherwise the certificates no longer needed for the decommissioned power plants would be available to other participants in the European Emissions Trading System, enabling additional emissions from their assets.

The Commission further proposes that the German government conduct reviews in 2023, 2026 and 2029 involving an analysis of the effects of measures taken by then on security of supply, electricity prices, climate protection and structural development in the affected regions and that countermeasures be initiated if necessary. It is also recommended that policymakers implement the phase-out roadmap in agreement with the operators and grant them appropriate compensation. The Commission also deems it desirable that Hambach Forest be preserved. With respect to relocations in the opencast mining regions, the states are being asked to enter into dialogue with the affected residents in order to avoid social and financial hardship. Layoffs and undue social and economic disadvantages for the workers should be prevented, in part by paying them an adjustment allowance.

By and large, the Commission's proposals met with the approval of politicians and stakeholder groups. It was viewed positively that widespread consensus has now been reached, which can serve as a basis for policymakers in order to establish planning certainty for companies, employees and regions. Observers therefore anticipate that the German government will implement the main points of the Commission's concept. This would have serious ramifications for our Rhenish lignite business. RWE has already taken four power plant units offline prematurely under the security stand-by scheme, with a further block to follow at the end of September 2019. Additional shutdowns are therefore all the more difficult and result in burdens going far beyond the lost electricity revenue. For instance, we would have to implement substantial job cuts and introduce redundancy programmes for the affected workers at short notice. If opencast mines are closed early, new recultivation concepts would have to be developed and the mining provisions would have to be increased as they would be used earlier. Additional costs would be incurred if Hambach Forest were preserved, provided that this is at all technically feasible. In addition, substantial investments are needed in order to adapt opencast mines and power plants to a new operating concept. We can only reliably estimate the burdens we will face when the government presents specific plans and initiates talks with us. We welcome the fact that the Commission has recognised the need to pay power plant operators adequate compensation and has also considered the knock-on costs for the opencast mines.

Netherlands plans exit from coal-fired generation. There is also a high probability of an early coal phase-out in the Netherlands. The government adopted a bill to this end in May. It envisages power plants dating back to the 1990s being prohibited from running on hard coal from 2025 onwards. The ban will enter into force five years later for newer stations. This would mean that, in the Netherlands, power would no longer be produced from coal starting in 2030. This objective has also been set out in the coalition agreement signed by the four governing parties under Prime Minister Mark Rutte in October 2017. Following a public consultation in the summer of 2018, the government revised the draft law and submitted an as yet unpublished new version to the Dutch State Council, a constitutional body that advises the government. The parliament is scheduled to decide on the draft in the spring of 2019. Five hard coal-fired power stations are still in operation in the Netherlands, with two belonging to us: Amer 9 and Eemshaven. The former has a net installed capacity of 631 MW and was commissioned in 1993. According to the draft law of May, this power plant would have to stop generation from coal at the end of 2024. The Eemshaven power station is a 1,554 MW twin unit, which we have been operating since 2014. It would be subject to the later exit date, which is the end of 2029. Amer 9 and Eemshaven would have to be shut down or operated only using alternative fuels. Both stations are being retrofitted for co-firing biomass. We are receiving subsidies for this, with which we are financing the investment outlay and the additional cost of sourcing the fuel. A full conversion to biomass would result in substantial additional burdens. In our dialogue with policymakers, we are discussing the options for compensation for the financial disadvantages that we would suffer as a result of the planned coal phase-out and will take legal recourse to this end if necessary.

Dutch government intends to introduce CO_2 emissions price floor. In addition, the government in The Hague wants to flank the European Emissions Trading System with a national carbon tax in the electricity sector. The objective is to prevent the total cost per metric ton of carbon dioxide emitted from falling below a predefined floor even if certificate prices are low. The introduction of the levy is part of a national climate accord, which is likely to be adopted this year. In the convention, the government intends to agree measures with environmental associations, trade unions and energy companies through which the country can achieve its ambitious emission-reduction goals. Initial plans envisaged the tax guaranteeing a minimum price of €18 per metric ton of carbon dioxide when it is introduced in 2020 and gradually lifting the floor to €43 by 2030. However, the government was criticised for this. A state-commissioned study reached the conclusion that the reform would only make a small contribution to reducing emissions and could jeopardise security of supply. For the same reasons, the energy sector opposed the levy, referring to the significant rise in prices in European emissions trading in the meantime. Despite this, policymakers did not want to abandon the undertaking entirely. Following talks with the energy companies and environmental associations, a much lower floor was established, along with a more gradual increase than the one planned originally. It starts at €12.30 in 2020 and rises incrementally to €31.90 in 2030. The path is based on estimates regarding the future development of prices in European emissions trading. It is assumed that certificate quotations will rise substantially and exceed the pre-determined CO_2 floor along the entire path.

1.5 MAJOR EVENTS

Fiscal 2018 was an eventful year for us. Through the asset swap agreed with E.ON, we have set the course towards a new RWE, which will rank among Europe's leading producers of electricity from renewable sources. In addition, our subsidiary innogy passed further milestones in the expansion of its wind and solar power capacity. The past year was less pleasing for our lignite business: the Münster Higher Administrative Court ordered a temporary halt to the clearance of Hambach Forest, which will curtail our opencast mining activities and reduce our electricity generation. In this chapter, we present the major events that occurred in 2018 and the beginning of 2019. We focus on events that have not been commented on in detail elsewhere in this report.

Events in the fiscal year

Extensive asset swap agreed: E.ON will acquire innogy – RWE will become Europe's No. 3 in renewables. RWE and E.ON have jointly set the course for a fundamental redistribution of their business activities. RWE will become Europe's No. 3 in renewable energy while E.ON will enlarge its grid and retail operations. The two companies envisage that this will be achieved through a substantial asset swap, which was contractually agreed on 12 March 2018. According to the deal, E.ON will acquire RWE's 76.8 % stake in innogy SE. In return, RWE will receive the following assets: (1) a 16.67 % stake in E.ON which will be created by way of a capital increase from authorised capital in exchange for a contribution in kind; (2) nearly all of E.ON's and innogy's renewable energy activities; (3) the minority interests held by the E.ON subsidiary PreussenElektra in the RWE-operated nuclear power stations Gundremmingen and Emsland of 25 % and 12.5 %, respectively; (4) innogy's gas storage business and (5) the 37.9 % stake in the Austrian energy utility Kelag held by innogy. The deal also involves RWE paying €1.5 billion to E.ON. It is envisaged that the transfers take retrospective economic effect from 1 January 2018. The transaction was based on a valuation of our 76.8 % stake in innogy of €40 per share when the contract was concluded. This corresponds to a premium of 28 % on the closing quotation of the innogy share on 22 February (€31.29), the last figure that was largely unaffected by takeover speculation. The €40 per share includes the dividends of innogy SE for fiscal 2017 and 2018, to which RWE will continue to be entitled.

Through the transaction, RWE will become an all-rounder in electricity production, making a major contribution to security of supply with its flexible power stations while spurring the transition of the energy sector towards climate-friendly electricity production. We will not only broaden our operating base, but also establish a more robust financial position. The renewables business is characterised by a large portion of stable regulated income. After the transaction closes, it should contribute more than half of the RWE Group's adjusted EBITDA. Our leverage factor, which represents the ratio of net debt to adjusted EBITDA, will then probably be below 3.0. More detailed information on the effects of the transaction on our business model can be found on page 18 et seq.

We are confident of being able to complete the asset swap by the end of 2019. It will be carried out in several steps, some of which have already been taken:

- On 27 April 2018, E.ON made a voluntary public offer to innogy's minority shareholders for the acquisition of their shares. At €40 per share minus the innogy dividends for the 2017 and 2018 fiscal years, the offer price was in line with the conditions underlying the transaction between E.ON and us. When the acceptance deadline expired on 25 July 2018, 9.4 % of the shares in innogy were tendered to E.ON.

- On 18 July, RWE and innogy as well as E.ON and innogy reached agreements to co-operate in implementing the transaction. innogy's management has committed to supporting the implementation of the asset swap – also vis-à-vis the capital market. It is envisaged that the integration will be a transparent process in which all employees are treated as equally as possible, irrespective of the company they currently work for. Another objective is that the integration plays to the strengths of each company. The agreement paves the way to the early joint planning of the integration measures and an expedited completion of the transaction.

- On 22 January 2019, we registered the acquisition of the business activities and shareholdings to which we are entitled with the European Commission and received clearance from Brussels on 26 February. This was preceded by an advance review lasting several months through which the Commission gained an accurate picture of the effects of the transaction on competition. E.ON registered the acquisition of innogy with the Commission on 31 January 2019. Furthermore, national antitrust approvals must be obtained. One relates to the acquisition of the financial investment in E.ON. Requests for this clearance were filed with the German Cartel Office on 28 January 2019 and with the UK Competition and Markets Authority (CMA) on 25 February 2019. We received the go-ahead from the German Cartel Office on 26 February 2019, the day on which we also received approval from the Commission.

It is envisaged that the transaction be completed in two steps as soon as all of the necessary approvals have been obtained from the relevant competition and regulatory authorities. First, E.ON will receive our 76.8 % shareholding in innogy and the agreed €1.5 billion in cash and we will acquire the 16.67 % stake in E.ON as well as the minority interests in the Gundremmingen and Emsland nuclear power stations. Second, E.ON will transfer to us its own and innogy's renewable energy activities, innogy's gas storage business, and the shareholding in Kelag.

German Court orders temporary halt to clearance of Hambach Forest – RWE anticipates decline in earnings due to curtailment of opencast mining operations. On 5 October, the Münster Higher Administrative Court ruled in summary proceedings that RWE Power may not clear Hambach Forest, which is near Cologne, for the time being. This will lead to a massive curtailment of lignite production from the Hambach opencast mine. We anticipate annual volume shortfalls of 10 million to 15 million metric tons over the medium term (2019 to 2021). This will probably reduce adjusted EBITDA by €100 million to €200 million per year. The clearance of Hambach Forest is part of the mine's main operating plan for 2018 to 2020, which was approved in March 2018 by the relevant district government under an immediate implementation order. Thereupon, the BUND environmental activist group filed a motion to set aside the immediate implementation, which was denied by the Cologne Administrative Court. An appeal lodged by BUND against the Cologne ruling was allowed by the Münster Higher Administrative Court in October, which ordered the temporary halt to the clearance of Hambach Forest, during which the other opencast mining operations could be continued. The reasons given by the Court for its decision were that the matter could not be clarified in expedited proceedings due to the complexity of the legal situation.

Whether and when Hambach Forest can be cleared must now be decided in the principal proceedings, which are pending before the Cologne Administrative Court. The main question is whether the remainder of the forest, which covers about 200 hectares, is subject to the protective provisions applicable to flora and fauna habitats (FFH areas) under European law. According to an expert opinion published by the Kiel Institute for Landscape Ecology at the beginning of 2018, this is not the case. The same conclusion was reached by the Cologne Administrative Court in an earlier lawsuit filed by BUND concerning the general operating plan for 2020 to 2030. The case was dismissed on 24 November 2017. On 5 October 2018, the Münster Higher Administrative Court granted the motion for an appeal by BUND against this decision. As a result, both the Cologne Administrative Court and the Münster Higher Administrative Court are addressing the FFH issue in principal proceedings. It remains to be seen when a final ruling will be handed down, but it is possible that this will not happen before the end of 2020. However, it cannot be ruled out that the matter is placed on the agenda of the federal government beforehand. The preservation of Hambach Forest is deemed desirable in the final report of the Growth, Structural Change and Employment Commission published on 26 January 2019. We provide detailed information on the recommendations of the Commission to the federal government on page 33.

Electricity generated from Hambach lignite corresponds to about 15 % of demand in the state of North Rhine-Westphalia. It is not only the power plants at the Neurath and Niederaussem sites that are connected to the opencast mine, but also refining factories, which supply a large number of small and medium-sized enterprises with lignite products for their electricity and heat generation. There are currently about 4,600 RWE employees working in the Hambach mining area as well as in the downstream power stations and businesses. In addition, personnel in the supply chain are affected.

EU Court shelves UK capacity market. In mid-November, the General Court of the Court of Justice of the European Union declared that the approval of the UK capacity market granted by the European Commission was invalid. The judges found that the Commission should have conducted an extensive investigation before giving the go-ahead for the state aid. The UK capacity market has been suspended since the ruling. This means that no capacity payments may be made under existing agreements and no new capacity auctions may be held until the Commission has reapproved the subsidies. This caused the capacity payments we received in the year under review to be about €50 million lower than expected. The UK Department for Business, Energy and Industrial Strategy (BEIS) declared that it will do everything within its power to regain approval for the capacity market as soon as possible. This may happen during the current year. The European Commission has since initiated an in-depth investigation through which it intends to clarify whether the UK capacity market qualifies for state aid under EU regulations. If the Commission grants the UK's original request for approval again, capacity payments could be resumed. Although we are confident that the UK capacity market can be continued in its current form, we have not budgeted any payments for the year under review. We had been granted a total of approximately €180 million in capacity payments for 2019 in earlier auctions.

Niederaussem E and F units placed on security standby. On 30 September, we took two 300 MW units (E and F) of the Niederaussem lignite-fired power plant offline as planned. These units have been placed on lignite security stand-by and can be brought back onto the grid within ten days to bridge electricity shortages. These security stand-by regulations were enshrined in law in 2016 for environmental reasons. Under the regime, a total of eight lignite units with a combined 2.7 GW must be taken off the market from 2016 to 2019 and placed on standby as the last resort to ensure security of supply for four years each until they are shut down for good. Five of the eight stations, which have a total capacity of 1.5 GW, belong to RWE. In 2017 – also at the end of September – we placed units P and Q of the Frimmersdorf power plant on security standby. Unit C of the Neurath power station will follow suit in 2019.

RWE sells majority stake in Hungarian generator Mátra. RWE and the energy utility EnBW jointly sold their stakes of 51 % and 21.7 % in Hungarian power producer Mátrai Erőmű ZRt. (Mátra for short). The transaction was completed in March 2018. The buyer is a consortium consisting of Czech Republic-based EP Holding and Hungarian investor Lőrinc Mészáros. Mátra specialises in producing lignite and generating electricity from this fuel. At the end of 2017, the company had slightly more than 2,000 people on its payroll and a net generation capacity of about 840 MW. Mátra is no longer of strategic importance to us, because we want to focus our conventional electricity generation business on our core markets Germany, the United Kingdom and the Benelux region.

Dutch Claus C gas-fired power station to go back online. Claus C, our mothballed Dutch gas-fired power plant in Maasbracht, will return to operation. This was decided by the Executive Board of RWE Generation in October. The station has a net installed capacity of 1,304 MW and, at 58 %, meets the highest efficiency standards. It was commissioned in 2012 but taken offline two years later due to its lack of profitability. The reasons for it coming back online are improved market conditions and rising demand for flexible generation capacity. Commercial opportunities could also arise as Belgium intends to phase out nuclear energy and would therefore need additional generation capacity. Claus C could be connected directly to the Belgian grid thanks to its proximity to the border. However, the power station will probably not be fully operational again until the autumn of 2020, because extensive maintenance work has to be carried out first.

Unlike Claus C, the neighbouring gas-fired power plant Claus A will not go back online. The station, which has a net installed capacity of 610 MW, was taken off the grid in March 2012 and shut down for good in 2018. It would not have been worthwhile to reactivate it given its technical condition. In addition, we temporarily took the Moerdijk 1 gas-fired power station offline as of 1 February 2018, a decision that was made for economic reasons in 2016. Moerdijk 1 is located south of Rotterdam in the Dutch province of North Brabant and has a net installed capacity of 348 MW.

UK's Galloper offshore wind farm completed. Our subsidiary innogy expanded its electricity generation capacity from renewables with the completion of Galloper, a large-scale wind farm in the UK North Sea. It consists of 56 turbines with a total capacity of 353 MW. innogy owns 25 % of the wind farm, operates it and was mainly responsible for its development and construction. Galloper has been fully online since March 2018 and has the capability to supply about 380,000 UK households. The total investment in Galloper amounted to £1.5 billion.

RWE subsidiary innogy partners up for Triton Knoll offshore wind project. In line with its strategy of carrying out large-scale wind projects with partners, innogy sold stakes of 25 % and 16 % in the Triton Knoll offshore project to the Japanese energy groups J-Power and Kansai Electric Power. innogy retains the majority of Triton Knoll (59 %). The transaction was contractually agreed in August and closed in September. Triton Knoll is a wind farm with a capacity of approximately 860 MW which is due to be built in the North Sea off the English coast. innogy and its new partners will invest a total of around £2 billion to this end. A large portion of this sum (£1.75 billion) will be provided by an international consortium of banks. innogy developed Triton Knoll and will also be responsible for the construction, operation and maintenance of the wind farm. Once project financing had been secured, work began in September on the onshore grid connection. If the project progresses as planned, the 90 wind turbines could be commissioned successively from 2021 onwards. The state has guaranteed a payment of £74.75 per MWh for the electricity fed into the grid. The subsidy period is 15 years.

Acquisition of a major wind project pipeline in the USA. innogy also aims to grow its renewable energy business outside of Europe. Our subsidiary took a major step in accomplishing this in 2018. In July, it purchased a portfolio of wind power projects in the USA. The envisaged turbines have a total capacity of over 2 GW. The seller is the UK investment company Terra Firma Capital Partners. The acquired portfolio encompasses more than 20 projects across eight states that have progressed to various degrees. innogy has already taken the final investment decision on one of the projects: in November 2018, our subsidiary gave the go-ahead for the construction of the Scioto Ridge wind farm in the US state of Ohio, which is scheduled to take its full capacity of 242 MW online by the end of 2020. It will be able to supply about 60,000 Ohio homes with green electricity.

Subsidies for wind farm in German North Sea secured. In the spring of 2018, innogy set the stage for a further attractive offshore wind project. The company secured state subsidies for the Kaskasi wind farm under the German Renewable Energy Act at an auction. The decision on the construction of Kaskasi is scheduled to be taken in 2020. It is expected to have a generation capacity of 325 MW and could begin operating in 2022. Its location in the vicinity of Heligoland has good wind conditions and moderate water depths. Another advantage is its proximity to innogy's existing wind farm Nordsee Ost.

innogy to build Australia's largest solar farm. In September, innogy decided to invest in the Limondale ground-mounted solar array in the state of New South Wales in Australia. The solar farm should have a total net installed capacity of 349 MW when it is commissioned in the middle of 2020. This would currently make it the largest solar farm in Australia. Belectric, the company acquired by innogy in early 2017, is responsible for construction and will also handle Limondale's operation and maintenance.

Solar developer Birdseye grants innogy exclusive rights to projects in the USA. In June 2018, innogy agreed to join forces with US-based Birdseye Renewable Energy to develop solar projects. The partnership encompasses 13 projects with a total capacity of about 440 MW, which have been initiated by Birdseye and are in various stages of development. As a result of the agreement, innogy has secured the right of first refusal to acquire projects from the pipeline as soon as they have reached construction maturity. Moreover, innogy and Birdseye want to explore further opportunities to work together.

Events after the close of the fiscal year

Commission publishes recommendations concerning German coal phase-out. In January 2019, the Growth, Structural Change and Employment Commission set up by the German government submitted its final report. Consisting of representatives of industry, trade unions, associations, the scientific community, civic initiatives and environmental organisations, the report advocates an exit from German electricity generation from coal by 2038. It envisages the capacity of the lignite and hard coal-fired power stations on the market being reduced to a total of 15 GW each through shutdowns or conversions by as early as the end of 2022. The Commission further envisages that by 2030, lignite and hard coal power plants on the market will have a combined capacity of 9 GW and 8 GW, respectively. The federal government now intends to present a package of laws on the basis of the recommendations and conduct talks with the affected companies. We provide detailed information on the Commission's recommendations and the consequences they may have for RWE on page 33.

STEAG acquires majority stake in Bergkamen hard coal-fired power plant from RWE. As of 1 January 2019, we sold our 51 % shareholding in the Bergkamen hard coal-fired power station to the Essen-based energy utility STEAG. The buyer previously owned 49 % of the plant and exercised a contractual purchase option. The parties agreed to keep the price confidential. The power station has been in operation since 1981 and has a generation capacity of 720 MW. RWE was in charge of commercial management, while STEAG was responsible for technical plant management. The disposal of the stake put an end to a contract that obliged us to purchase electricity produced by the station.

RWE sells Belgian CHP station. A further divestment was completed when we sold the Inesco CHP station in Belgium to the UK chemicals group INEOS at the end of February 2019. The plant is eleven years old and located in a chemical park operated by INEOS near Antwerp. It is gas-fired, has a net electric capacity of 133 MW and supplies the companies situated in the chemical park with steam and demineralised water in addition to electricity. One of the reasons for our decision to sell the station was its tight integration in the business activities of INEOS.

German government takes over interim storage for radioactive waste from RWE. As of 1 January 2019, we transferred the interim storage facilities for highly radioactive waste on the sites of our Emsland, Biblis and Gundremmingen nuclear power plants to BGZ, the state-owned company responsible for interim storage. The legal basis for this is the law on the reassignment of responsibility for nuclear waste disposal which was passed at the end of 2016, pursuant to which the government assumed responsibility for processing and financing interim and final nuclear waste storage. German power plant operators gave the government €24.1 billion for this. In the middle of 2017, these funds were paid into a public-law fund for financing nuclear waste disposal. Responsibility for shutting down and safely dismantling the stations remains with the companies. They are also responsible for packaging the radioactive waste properly before it is handed over to BGZ. A total of eleven decentralised interim storage facilities were transferred from the nuclear power plant operators to BGZ as of 1 January 2019. The interim storage facilities for low and medium-radioactive waste are to follow at the beginning of 2020, including two at RWE's Biblis site.

RWE cancels £750 million hybrid bond. At the beginning of February 2019, we announced that we will cancel our £750 million hybrid bond as of 20 March 2019 without replacing it with fresh hybrid capital. The bond had been issued seven years earlier. It has a 7 % coupon and a theoretically perpetual tenor. We are exercising our right to cancel it at the earliest possible date. In doing so, we are taking account of RWE's solid financial position and the significantly improved earnings prospects resulting from the planned asset swap with E.ON.

RWE acquires Czech grid investment from innogy for resale to E.ON. At the end of February 2019, RWE purchased the majority stake in the Czech gas network operator innogy Grid Holding (IGH) held by innogy SE. We had committed to this as part of the exchange of business activities and equity interests agreed with E.ON. We had also undertaken to sell on the stake in IGH to E.ON. We are financing the temporary acquisition using cash and a bank credit line secured for this purpose. innogy held a 50.04 % interest in IGH, with the remainder being owned by the Australian financial service provider and infrastructure investor Macquarie.

1.6 NOTES ON REPORTING

The asset swap agreed with E.ON requires a methodological change in reporting before it is implemented. International Financial Reporting Standards (IFRS) require us to state the innogy activities that will no longer be part of the RWE Group following the transaction separately when presenting our business performance. We have set out the consequences this has in detail in this chapter. Furthermore, we explain how the new IFRS 9 and IFRS 15 accounting standards affect our consolidated financial statements.

New presentation of innogy's activities. As set out on page 19 et seqq., our financial reporting is based on a Group structure with four segments. Whereas the first three segments (Lignite & Nuclear, European Power and Supply & Trading) are unchanged from 2017, the fourth segment has been adjusted due to the asset swap agreed with E.ON. In the past, we presented innogy in this segment in its entirety. Now, we consider only those parts of the company that are due to remain within the RWE Group in the long run. Accordingly, the new segment is called 'innogy – continuing operations'. The other parts of innogy, which will be transferred to E.ON, are presented outside of this segment as 'discontinued operations'. This primarily applies to the distribution grid and retail businesses.

The recognition of 'discontinued operations' has substantial effects on the income statement, the balance sheet and the cash flow statement:

- We recognise the innogy business assigned to E.ON in the income statement only in condensed form under 'income from discontinued operations'. It is no longer considered in the Group's revenue, adjusted EBITDA, adjusted EBIT, non-operating result, financial result, or taxes on income. Prior-year figures are adjusted accordingly.

- On the consolidated balance sheet, discontinued operations have been combined under 'assets held for sale' and 'liabilities held for sale'. In accordance with IFRS, we are maintaining the presentation of the previous year's balance sheet figures.

- In the cash flow statement in the consolidated financial statements, we present the cash flows from discontinued operations for the reporting and prior-year periods separately. We take a different approach in the condensed cash flow statement in the review of operations. Here, we only state cash flows from continuing operations.

The change in reporting caused some of the statements made in our forecasts for 2018, which we published on page 83 et seqq. of the 2017 Annual Report, to become irrelevant. Amongst other things, this relates to our statements regarding adjusted EBITDA and capital expenditure. We brought these forecasts in line with our new reporting method in the report on the first half of 2018. The forecast concerning adjusted net income also became irrelevant: this key performance indicator will not be determined for the time being, as it is only of limited informational value during the transitional period until the completion of the asset swap with E.ON.

In the 2017 Annual Report, we also made forecasts in relation to key performance indicators in which innogy was considered as a pure financial investment instead of as a fully consolidated company. These figures are not in compliance with IFRS. We explain how we calculate them on page 58. There is no need for methodological adjustments here until the asset swap with E.ON has been completed. Therefore, we maintained our forecasts relating to adjusted EBITDA and adjusted net income, the latter of which continues to be determined based on the above distinction.

Change in revenue recognition due to adoption of IFRS 15. In the 2018 fiscal year, we began applying the new accounting standard IFRS 15 'Revenue from Contracts with Customers'. One of the consequences is that changes in the fair value of commodity derivatives, which occur before the contracts are realised, are now recognised in other operating income instead of in revenue or the cost of materials. Therefore, our 2018 revenue is lower, particularly in the gas business. Prior-year figures have not been adjusted.

Financial instruments have stronger effect on earnings due to adoption of IFRS 9. We also started to apply the new accounting standard IFRS 9 'Financial Instruments' in 2018. This results in changes to the classification and measurement of financial instruments and to the recognition of impairments based on expected credit losses. Again, prior-year figures have not been adjusted. Changes in the fair value of some of our securities, which previously had no effect on profit or loss, were recognised on the income statement for the first time in 2018. Furthermore, the recognition of expected credit losses reduced the value of our assets. In consequence, net debt was slightly higher.

Forward-looking statements. This annual report contains forward-looking statements regarding the future development of the RWE Group and its companies as well as of the economic and political environment. 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 289f as well as Section 315d of the German Commercial Code is an exception.

1.7 BUSINESS PERFORMANCE

The RWE Group achieved its operating earnings goal for 2018: at €1.5 billion, adjusted EBITDA was within the forecast range. We had to contend with some unexpected burdens. For example, the temporary suspension of the UK capacity market caused us to lose contractually committed capacity payments. Furthermore, utilisation of innogy's wind farms was low due to the weather. The strongest effect was felt from the market-induced decline in our generation margins, which we had already considered in our forecast. Efficiency-enhancing measures cushioned the earnings shortfalls somewhat. The continued expansion of innogy's wind energy capacity also had a positive impact.

Business performance in 2018: what we forecast and what we accomplished

Outlook vs. actual € million	2017 actual	Outlook for fiscal 2018[1]	2018 actual	Forecast fulfilled?
Adjusted EBITDA	2,149	1,500–1,800	1,538	Yes
Lignite & Nuclear	671	350–450	356	Yes
European Power	463	300–400	334	Yes
Supply & Trading	271	100–300	183	Yes
innogy - continuing operations	785	700–800	699	Actual < Outlook

1 See page 83 et seq. of the 2017 Annual Report and page 26 of the interim report on the first half of 2018.

Electricity production 12 % down on previous year. In the financial year that just came to a close, the RWE Group produced 176.0 billion kWh of electricity. In 2018, 38 % of our electricity generation was from lignite, 27 % from gas, 16 % from hard coal, 12 % from nuclear, and 6 % from renewables. Our electricity production was 12 % lower than in the previous year. We recorded declines across all generation technologies. Nuclear power production (–8.5 TWh) was primarily affected by the fact that we had to take Gundremmingen B (1,284 MW) offline at the end of 2017 as part of the German nuclear phase-out. Volumes declined in electricity generation from lignite (–7.0 TWh) due to the sale of our majority interest in Mátra in Hungary. The decommissioning of four 300 MW units in the Rhenish lignite mining region and their placement in legally mandated security standby (two on 30 September 2017 and two on 30 September 2018) also came to bear. Unfavourable market conditions resulted in a decline in production volume from our gas-fired power stations (–5.7 TWh). Furthermore, we mothballed Moerdijk 1 in the Netherlands for economic reasons. The drop in generation from hard coal (–1.9 TWh) was caused in part by the closure of the Voerde A/B dual unit (1,390 MW) as of 1 April 2017. In addition, our Aberthaw hard coal-fired power plant in the UK was only in use occasionally due to market conditions. Unusually low wind speeds in the United Kingdom and Central Europe caused renewable energy volumes to drop (–0.5 TWh). This was contrasted by the positive effects of commissioning new wind turbines.

In addition to our in-house generation, we procure electricity from external suppliers. In the year being reviewed, these purchases totalled 49.0 billion kWh (previous year: 36.6 billion kWh). In-house generation and power purchases combined for 225.0 billion kWh (previous year: 236.8 billion kWh).

Power generation	Gas		Lignite		Hard coal		Nuclear		Renewables		Pumped storage, other		Total	
Billion kWh	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017
Lignite & Nuclear	–	–	67.2	74.2	–	–	21.8	30.3	–	–	0.2	0.7	89.2	105.2
European Power	47.2	52.9	–	–	27.4	29.3	–	–	1.1	1.1	2.3	2.4	78.0	85.7
of which:														
Germany[1]	5.5	7.4	–	–	13.0	13.3	–	–	0.7	0.7	2.3	2.4	21.5	23.8
United Kingdom	33.2	32.4	–	–	0.5	2.6	–	–	0.4	0.4	–	–	34.1	35.4
Netherlands/Belgium	5.5	9.3	–	–	13.9	13.4	–	–	–	–	–	–	19.4	22.7
innogy - continuing operations	–	–	–	–	–	–	–	–	8.8	9.3	–	–	8.8	9.3
RWE Group	**47.2**	**52.9**	**67.2**	**74.2**	**27.4**	**29.3**	**21.8**	**30.3**	**9.9**	**10.4**	**2.5**	**3.1**	**176.0**	**200.2**

1 Including electricity from generation assets not owned by RWE that we can deploy at our discretion on the basis of long-term use agreements. In 2018, it amounted to 5.0 billion kWh (previous year: 6.3 billion kWh), of which 2.3 billion kWh (previous year: 3.5 billion kWh) were from hard coal-fired power stations.

One of Europe's biggest power producers, with 41.7 GW in generation capacity. At the end of 2018, we had a total installed power generation capacity of 41.7 GW, giving us a leading market position in Europe. This figure includes power plants that we took offline temporarily for economic reasons and the four lignite units we put into security standby. Our generation capacity declined by 1.6 GW over the course of the past year. This was because we sold our majority interest in the Hungarian lignite-based power producer Mátra and shut down the Dutch Claus A gas-fired power plant (see page 37). A positive effect was felt from innogy's commissioning of new wind turbines, primarily in the United Kingdom.

In terms of generation capacity, gas is our major source of energy. At the end of 2018, it accounted for 34 %. Lignite was in second place with 25 %, followed by hard coal, with 17 %. Renewables and nuclear energy had a share of 10 % and 7 %, respectively. The geographic focus of our generation business is Germany, where 61 % of our installed capacity is located. The United Kingdom and the Netherlands follow, accounting for shares of 23 % and 12 %, respectively.

Power generation capacity As of 31 Dec 2018, in MW	Gas	Lignite	Hard coal	Nuclear	Renewables	Pumped storage, other	Total	Total 31 Dec 2017
Lignite & Nuclear	400	10,255	–	2,770	7	27	13,459	14,297
European Power	13,686	–	7,210	–	331	2,679	23,906	24,727
of which:								
Germany[1]	3,767	–	3,675[2]	–	55	2,375	9,872	10,125
United Kingdom	6,676	–	1,560	–	55	304	8,595	8,541
Netherlands/Belgium	2,456	–	1,975	–	221	–	4,652	5,274
Turkey	787	–	–	–	–	–	787	787
innogy - continuing operations	235	–	10	–	3,955	137	4,337	4,245
RWE Group	**14,321**	**10,255**	**7,220**	**2,770**	**4,293**	**2,844**[3]	**41,703**[3]	**43,269**

1 Including generation capacity not owned by RWE that we can deploy at our discretion on the basis of long-term use agreements. As of the end of 2018, it amounted to a net 2,986 MW, including hard coal-fired power stations with a total capacity of 783 MW.
2 The Bergkamen hard coal-fired power plant (720 MW) is still included in this figure: we sold our 51% stake in the station as of 1 January 2019 (see page 39).
3 Including small capacities at RWE Supply & Trading.

Significant decline in CO_2 emissions. Last year, our power stations emitted 118.0 million metric tons of carbon dioxide. Compared to 2017, our CO_2 emissions declined by 13.8 million metric tons, or 10 %. This resulted from the decline in our electricity generation from coal and gas. By contrast, specific emissions, i. e. carbon dioxide emissions per megawatt hour of electricity generated, rose from 0.66 to 0.67 metric tons. This was mainly because last year we produced much less zero-carbon electricity from our nuclear power stations owing to the decommissioning of Gundremmingen B.

We purchase most of the emission allowances we need on the market. This is because, since the beginning of the third emissions trading period, which started on 1 January 2013, the countries of Western Europe have only allocated free CO_2 certificates to energy utilities in exceptional cases. Of our emissions in EU countries (116.9 million metric tons) in the year being reviewed, we were only able to cover 1.3 million metric tons with such state allocations.

Emissions balance	CO_2 emissions		Free allocation of CO_2 certificates		Shortage of CO_2 certificates	
Million metric tons of CO_2	2018	2017	2018	2017	2018	2017
Lignite & Nuclear	79.4	88.5	0.7	0.7	78.7	87.8
European Power[1]	38.6	43.3	0.6	0.6	36.9	41.3
of which:						
Germany[2]	13.0	14.1	0.6	0.6	12.4	13.5
United Kingdom	12.4	14.0	–	–	12.4	14.0
Netherlands/Belgium	12.1	13.8	–	–	12.1	13.8
innogy - continuing operations	–	–	–	–	–	–
RWE Group	**118.0**	**131.8**	**1.3**	**1.3**	**115.6**	**129.1**

1 Includes the CO_2 emissions of our gas-fired power station in the Turkish town of Denizli, which amounted to 1.1 million metric tons in 2018 (previous year: 1.4 million metric tons). As Turkey does not participate in European emissions trading, we do not need emission allowances for these volumes.
2 Including figures relating to generation capacity not owned by RWE that we can deploy at our discretion on the basis of long-term use agreements. In 2018, these stations emitted a total of 2.0 million metric tons of CO_2 (previous year: 3.1 million metric tons).

86.3 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 mining region, which is west of Cologne, we produced 86.3 million metric tons of lignite last year (previous year: 91.3 million metric tons), of which 74.2 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.

Electricity sales 5 % lower – gas sales 5 % higher. The RWE Group's continuing operations sold 216.1 billion kWh of electricity and 67.0 billion kWh of gas to external customers. Most of these volumes are allocable to the Supply & Trading segment. Electricity sales experienced a drop of 5 %, in part due to the decline in the amount of in-house production sold by RWE Supply & Trading on the wholesale market. Further volume shortfalls were recorded as a result of the sale of the Hungarian lignite-based power producer Mátra, which sold its generation independently. A positive effect was felt from RWE Supply & Trading winning new industrial and corporate customers. This affected both electricity and gas sales and was the main reason why the latter were 5 % higher year on year.

External revenue € million	2018	2017	+/– %
Lignite & Nuclear	1,132	1,259	–10.1
European Power	925	923	0.2
Supply & Trading	10,190	10,517	–3.1
innogy - continuing operations	1,124	1,087	3.4
Other, consolidation	17	36	–52.8
RWE Group (excluding natural gas tax/electricity tax)	**13,388**	**13,822**	**–3.1**
Natural gas tax/electricity tax	141	131	7.6
RWE Group	**13,529**	**13,953**	**–3.0**

External revenue by product[1] € million	2018	2017	+/– %
Electricity revenue	**10,090**	**10,430**	**–3.3**
of which:			
Lignite & Nuclear	303	451	–32.8
European Power	542	594	–8.8
Supply & Trading	8,447	8,628	–2.1
innogy - continuing operations	799	755	5.8
Gas revenue	**1,565**	**1,795**	**–12.8**
of which:			
Supply & Trading	1,502	1,738	–13.6
innogy - continuing operations	47	48	–2.1
Other revenue	**1,733**	**1,597**	**8.5**
RWE Group (excluding natural gas tax/electricity tax)	**13,388**	**13,822**	**–3.1**

1 Immaterial electricity revenue in the 'other, consolidation' item and immaterial gas revenue in the European Power segment is not stated separately.

External revenue down 3 % on previous year. In the year being reviewed, we posted external revenue of €13,388 million (excluding natural gas and electricity tax). This represents a decline of 3 % compared to 2017. At €10,090 million, our electricity revenue was also 3 % lower than in the preceding year. The decline in sales volume came to bear. The Group's gas revenue dropped by 13 % to €1,565 million. It therefore trended against delivery volumes, in part due to a decrease in revenue from the realisation of hedging transactions. Furthermore, our initial adoption of IFRS 15 played a role, because it caused certain items to no longer be recognised in revenue (see commentary on page 40).

Adjusted EBITDA € million	2018	2017	+/– %
Lignite & Nuclear	356	671	–46.9
European Power[1]	334	463	–27.9
Supply & Trading	183	271	–32.5
innogy - continuing operations	699	785	–11.0
Other, consolidation	–34	–41	17.1
RWE Group	**1,538**	**2,149**	**–28.4**

1 In the period under review, €102 million was attributable to the UK (previous year: €205 million).

Adjusted EBITDA of €1.5 billion in line with expectations. Our adjusted earnings before interest, taxes, depreciation and amortisation (adjusted EBITDA) amounted to €1,538 million. This confirmed our August 2018 forecast envisaging a range of €1.5 billion to €1.8 billion (see page 26 of the interim report on the first half of 2018). As set out on page 40, during the year we had to adjust our forecast for 2018 that we published in the 2017 Annual Report, because the asset swap agreed with E.ON required us to change our reporting. Adjusted EBITDA was 28 % lower than in 2017. Shrinking margins and volumes in conventional electricity generation were the main reasons. Furthermore, Supply & Trading and innogy – continuing operations delivered lower earnings.

The following developments were observed in the segments:

- Lignite & Nuclear: This division's adjusted EBITDA totalled €356 million, which is within the forecast range of €350 million to €450 million. It represents a decline of 47 % compared to the previous year. A major reason for this is that we realised lower wholesale prices for the generation from our lignite-fired and nuclear power stations than in 2017. We had already sold forward nearly all of the production of these plants in earlier years. The closure of unit B of the Gundremmingen nuclear power station at the end of 2017 also had a negative effect on earnings. Savings achieved through our efficiency-enhancement programme cushioned the aforementioned burdens slightly.

- European Power: We recorded €334 million in adjusted EBITDA in this segment. This confirmed our forecast, which envisaged a range of €300 million to €400 million. Compared to 2017, we recorded a decline of 28 %. One reason was that EBITDA in the previous year included capital gains on property sales. In addition, the margins of our gas and hard coal-fired power stations shrank. The suspension of the UK capacity market caused the payments which we received for the availability of our stations to be significantly lower than planned. However, at €47 million, they were higher than in 2017 (€16 million). Efficiency-enhancing measures had a positive effect on earnings.

- Supply & Trading: Here, adjusted EBITDA totalled €183 million, which is within the forecast range of €100 million to €300 million. Earnings therefore decreased by 32 % relative to 2017, caused in part by a weaker trading performance. In addition, we recognised a value adjustment for an equity stake acquired by RWE Supply & Trading within the scope of its principal investments (see page 21). Fortunately, we were able to pick up where we left off in terms of earnings in the gas business.

- innogy – continuing operations: Adjusted EBITDA posted by the innogy business remaining with RWE amounted to €699 million, which was just below the forecast range of €700 million to €800 million. One of the reasons for this was the unexpectedly low electricity production due to unfavourable wind conditions. Compared to 2017, adjusted EBITDA decreased by 11 %. In addition to the weather conditions, the positive impact of income resulting from the revaluation of innogy's stake in the Triton Knoll offshore wind project in the prior year did not recur. Furthermore, start-up costs were incurred in the year under review, which will result in revenue later on. A positive effect was felt from innogy's commissioning of new wind turbines and realisation of higher prices for electricity and green energy certificates.

Adjusted EBIT € million	2018	2017	+/– %
Lignite & Nuclear	77	399	–80.7
European Power[1]	37	155	–76.1
Supply & Trading	177	265	–33.2
innogy - continuing operations	349	398	–12.3
Other, consolidation	–21	–47	55.3
RWE Group	**619**	**1,170**	**–47.1**

1 In the year under review, –€48 million was attributable to the UK (previous year: €40 million).

Reconciliation to net income characterised by the non-recurrence of exceptional income from 2017. The reconciliation from adjusted EBITDA to net income in 2017 was characterised by the substantial exceptional income in Germany from the nuclear fuel tax refund, whereas there were no such positive effects in 2018. This led to a significant deterioration in the non-operating result and the financial result.

As expected, adjusted EBIT recorded by the RWE Group declined considerably, falling by 47 % to €619 million. This figure differs from adjusted EBITDA in that it does not include operating depreciation and amortisation, which amounted to €919 million (prior year: €979 million).

Non-operating result € million	2018	2017	+/– € million
Disposal result	–25	107	–132
Impact of derivatives on earnings	–146	–480	334
Other	10	1,322	–1,312
Non-operating result	**–161**	**949**	**–1,110**

The non-operating result, in which we recognise certain effects which are not related to operations or to the period being reviewed, totalled –€161 million (prior year: €949 million). Its components developed as follows:

- Disposals of investments and assets resulted in a net book loss of €25 million compared to the book gain of €107 million posted in the previous year. The loss was incurred in connection with the sale of our 51 % stake in the Hungarian company Mátra in March 2018. This caused charges resulting from the conversion of Mátra's financial statements to euros, which were recognised in equity until the transaction, to have an effect on earnings. Capital gains on property sales were unable to offset this effect.

- The 'impact of derivatives on earnings' totalled –€146 million, as opposed to –€480 million in the previous year. We use derivatives to hedge price risks. Pursuant to IFRS, these types of financial instruments are recognised at fair value at the corresponding balance-sheet date, whereas transactions which are hedged with them are only recognised as a profit or loss when they are realised. This results in temporary effects on earnings, which are neutralised over time.

- The earnings stated under 'other' amounted to €10 million, which was much less than the high figure recorded in the preceding year (€1,322 million), which benefited from the nuclear fuel tax refund. In the year under review, a positive effect came from the write-up performed by innogy on its Polish wind farms due to a rise in the price of electricity and green energy certificates and the resulting improvement in the earnings prospects of the stations. This was contrasted by smaller burdens resulting in part from the accrual of provisions for partial retirement measures and costs associated with the execution of the asset swap with E.ON. Moreover, we recognised an impairment for the Staythorpe gas-fired power station in the UK because a slight downward correction had to be made to the expected earnings from this plant.

Financial result € million	2018	2017	+/– € million
Interest income	166	197	–31
Interest expenses	–180	–298	118
Net interest	**–14**	**–101**	**87**
Interest accretion to non-current provisions	–264	–226	–38
Other financial result	–131	264	–395
Financial result	**–409**	**–63**	**–346**

Our financial result deteriorated by €346 million to –€409 million. Its components changed as follows:

- Net interest improved by €87 million to –€14 million, above all due to lower interest expenses. One of the reasons for this was our cancellation and buyback of hybrid bonds in the prior year (see page 54 of the 2017 Annual Report).

- The interest accretion to non-current provisions curtailed earnings by €264 million, having a bigger effect than in 2017 (–€226 million). One contributing factor was the reduction in the discount rate we use to calculate nuclear provisions. The resulting increase in the net present value of the obligations was recognised in part as an expense in the interest accretion.

- The 'other financial result' amounted to –€131 million, which was much lower than the preceding year's figure (€264 million). The latter figure was unusually high, because it contained the interest we were granted for the nuclear fuel tax payments we had made until 2016 and were refunded thereafter. Furthermore, in the year under review, there was a decline in the quotations of marketable securities which were recognised through profit or loss due to the initial adoption of IFRS 9, as explained on page 41. In the previous year, such changes in fair value had been recognised without an effect on earnings. Smaller losses from the sale of securities provided some relief.

Reconciliation to net income		2018	2017	+/– %
Adjusted EBITDA	€ million	**1,538**	**2,149**	**–28.4**
Operating depreciation, amortisation and impairment losses	€ million	–919	–979	6.1
Adjusted EBIT	€ million	**619**	**1,170**	**–47.1**
Non-operating result	€ million	–161	949	–117.0
Financial result	€ million	–409	–63	–549.2
Income from continuing operations before taxes	€ million	**49**	**2,056**	**–97.6**
Taxes on income	€ million	–103	–333	69.1
Income from continuing operations	€ million	**–54**	**1,723**	**–103.1**
Income from discontinued operations	€ million	1,127	592	90.4
Income	€ million	**1,073**	**2,315**	**–53.7**
of which:				
Non-controlling interests	€ million	679	373	82.0
RWE AG hybrid capital investors' interest	€ million	59	42	40.5
Net income/income attributable to RWE AG shareholders	€ million	**335**	**1,900**	**–82.4**
Earnings per share	€	0.54	3.09	–82.5
Number of shares outstanding (annual average)	millions	614.7	614.7	–

At €49 million, income from continuing operations before tax was far below the comparable figure for 2017 (€2,056 million). Income taxes amounted to €103 million. The effective tax rate was therefore above the theoretical normal level. The reason for this was that RWE AG's tax group did not capitalise any deferred tax assets unless they were matched by deferred tax liabilities. This was because we are unlikely to be able to use the deferred tax claims in the foreseeable future. They can only be used in coming fiscal years if tax gains are achieved against which the claims can be netted. There is currently no sufficient certainty that this will occur in RWE AG's tax group.

After taxes, we posted income from continuing operations of –€54 million (prior year: €1,723 million). Income from discontinued operations amounted to €1,127 million, a significant gain compared to 2017 (€592 million). This is primarily a result of IFRS accounting rules: they stipulate that we no longer consider depreciation or amortisation for discontinued operations from their separate statement as of 30 June 2018 onwards. By contrast, the preceding year's income included depreciation and amortisation for a full twelve months and was further curtailed by an impairment recognised for the UK retail business.

Income from non-controlling interests rose by €306 million to €679 million. In the previous year, impairments recognised for the Hungarian power producer Mátra led to a decline in the earnings of RWE and the co-owners, which did not recur. In addition, we state much higher income for innogy in RWE's consolidated financial statements. Accordingly, there was also a rise in the income allocable to the minority shareholders of our subsidiary, which hold a total stake of 23.2 %.

The portion of earnings attributable to hybrid capital investors amounted to €59 million (prior year: €42 million). This sum corresponds to the finance costs related to our £750 million hybrid bond. This bond, which was called in the beginning of 2019, did not have a predefined fixed tenor. Associated proceeds were therefore classified as equity according to IFRS. RWE's remaining hybrid capital is classified as debt and we record interest accrued on it in the financial result.

As a consequence of the above developments, net income decreased considerably compared to 2017, falling to €335 million (prior year: €1,900 million). Based on the 614.7 million in RWE shares outstanding, earnings per share amounted to €0.54 (prior year: €3.09).

Capital expenditure on property, plant and equipment and on intangible assets € million	2018	2017	+/– € million
Lignite & Nuclear	230	269	–39
European Power	245	147	98
Supply & Trading	13	7	6
innogy – continuing operations	592	285	307
Other, consolidation	–1	–2	1
RWE Group	**1,079**	**706**	**373**

Capital expenditure on financial assets € million	2018	2017	+/– € million
Lignite & Nuclear	–	1	–1
European Power	4	1	3
Supply & Trading	37	30	7
innogy – continuing operations	141	153	–12
Other, consolidation	–1	11	–12
RWE Group	**181**	**196**	**–15**

Significant rise in capital expenditure on renewables. In the financial year that just came to a close, RWE recorded capital expenditure of €1,260 million, up €358 million, or 40 % compared to 2017. Spending on property, plant and equipment and on intangible assets increased by 53 % to €1,079 million. The considerable rise was primarily attributable to innogy's continuing operations, in particular the large-scale Triton Knoll and Limondale projects, on which we report on page 38. In the European Power segment, the conversion of the Dutch hard coal-fired power stations Amer 9 and Eemshaven to biomass co-firing drove up capital spending. Furthermore, there was a rise in expenditure on maintenance. We spent €181 million on financial assets, 8 % less than in 2017. A large portion of the funds was used by innogy to acquire a portfolio of onshore wind projects in the USA (see page 38).

Workforce[1]	31 Dec 2018	31 Dec 2017	+/– %
Lignite & Nuclear	11,292	13,132	–14.0
European Power	2,738	2,656	3.1
Supply & Trading	1,267	1,156	9.6
innogy – continuing operations	2,192	1,952	12.3
Other[2]	259	210	23.3
RWE Group	**17,748**	**19,106**	**–7.1**

1 Converted to full-time positions.
2 This item exclusively comprises employees of the holding company RWE AG.

Lower headcount due to sale of Mátra. As of 31 December 2018, the RWE Group's continuing operations had 17,748 people on the payroll, of which 15,101 were employed in Germany and 2,647 worked at locations abroad. Part-time positions were considered in these figures on a pro-rata basis. The workforce in Germany expanded by 582 staff members compared to the end of 2017. By contrast, elsewhere in the Group, 1,940 employees left the company, predominantly due to the sale of our majority stake in the Hungarian power producer Mátra (see page 37). In purely operating terms, i. e. disregarding such consolidation effects, our headcount rose by 702. Personnel figures do not include apprentices or trainees. At the end of 2018, 666 young adults were learning a profession at RWE, compared to 615 in the previous year. This information relates exclusively to the RWE Group's continuing operations.

1.8 FINANCIAL POSITION AND NET WORTH

RWE's financial position and net worth is fundamentally solid despite the difficult framework conditions in our business. This is demonstrated by the credit ratings issued by Moody's and Fitch: both rating agencies confirmed their investment grade rating of RWE last year. The good operating and financial prospects arising from the planned acquisition of the renewable energy activities of E.ON and innogy were among the influential factors. In fiscal 2018, we generated very high operating cash flows of €4.6 billion. However, this was largely due to temporary effects. The Group's net debt declined to €19.3 billion and amounted to a mere €4.4 billion excluding the innogy activities that are up for sale.

Responsibility for procuring funds. Responsibility for financing within the RWE Group lies with the parent company RWE AG and its operationally independent subsidiary innogy. The two companies procure funds for the business that they control. They act independently of each other in doing so. Companies which are controlled by RWE AG or innogy SE only raise debt capital in specific cases, for example if it is advantageous economically to make use of local credit 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, it strengthens our position when negotiating with banks, business partners, suppliers and customers.

Tools for raising debt capital. RWE AG and innogy SE have a wide range of tools which they can use in addition to cash flows from operating activities to meet their financing needs.

- Debt Issuance Programmes (DIPs) give the companies latitude in procuring debt capital on the capital market for the long term. A DIP is a framework prospectus for the flexible issuance of bonds. RWE AG's current programme enables us to make issuances with a total nominal value of €10 billion. The innogy DIP has a maximum financing volume of €20 billion.

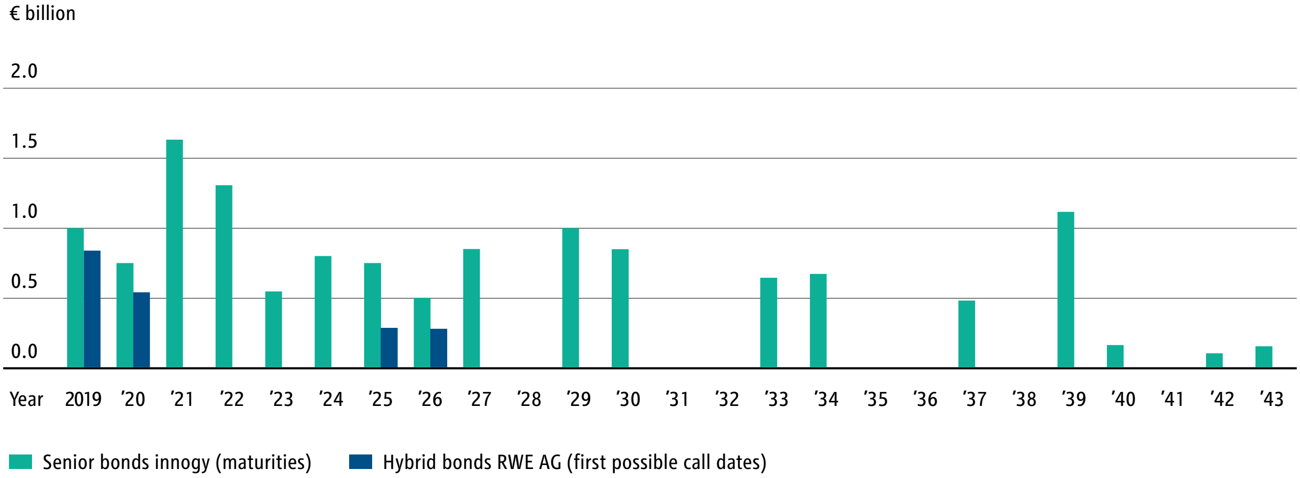
- RWE AG has a Commercial Paper Programme for short-term refinancing that enables it to raise funds equivalent to up to US$5 billion on the money market. We intermittently used a maximum of €0.8 billion of this headroom in the year under review. innogy also launched a Commercial Paper Programme. It has a funding framework of €3 billion. Up to €1.1 billion thereof was used in the financial year that just ended.

- To secure liquidity, RWE AG and innogy SE can resort to lines of credit granted them by international bank syndicates. RWE AG has such a credit line with a volume of €3 billion which expires in March 2021. It has not been used so far. The same holds true for innogy's syndicated credit line, with which our subsidiary can cover up to €2 billion in financing needs. Its original tenor expires in October 2022 and can be prolonged twice for a year at a time subject to the banks' approval. innogy has already received the approval of nearly the whole of the bank consortium for a first extension through to October 2023. Moreover, the credit line can be topped up by €1 billion. This option is also subject to the approval of the consortium of banks.

Bond volume increases to €15.2 billion. At the end of 2018, the Group (including innogy) had bonds with a total nominal volume of an equivalent of €15.2 billion outstanding, compared to €14.0 billion a year before. The total of 26 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 66 % in euros and 34 % in sterling on the balance-sheet date. At the end of the year, the senior bonds outstanding had an average remaining maturity of 8.5 years.

As of 31 December 2018, the volume of bonds commercially and legally attributable to RWE AG amounted to €1.9 billion. It was essentially unchanged compared to the previous year. RWE AG's long-term debt financing is primarily based on four hybrid bonds with outstanding volumes of £750 million (7 % coupon; earliest possible redemption in March 2019), €539 million (2.75 %; October 2020), €282 million (3.5 %; April 2025) and US$ 317 million (6.625 %; March 2026). We will redeem the first of the above bonds, with a volume of £750 million, on 20 March 2019, without replacing it with new hybrid capital (see page 39). We do not plan to issue senior bonds for the time being.

RWE Group bonds: maturities/first possible call dates (as of 31 Dec 2018)



By the end of 2018, innogy had a total of €13.3 billion in outstanding bonds, €1.2 billion more than a year before. These include a total of 21 senior bonds in euros (13), sterling (6), US dollars (1) and yen (1). innogy conducted three new placements in the financial year that just came to a close. The company started by issuing a €1 billion bond with a tenor of 11.5 years and a coupon of 1.5 % in January. This was followed by two further placements in May: one with a volume of €500 million, a tenor of eight years and a coupon of 1.625 %, and another, also with a volume of €500 million, with a tenor of 4.5 years and a coupon of 0.75 %. The latter bond was topped up to €750 million soon thereafter. The issuances were contrasted in July 2018 by the redemption of a 15-year bond with a nominal volume of €980 million and a coupon of 5.125 %.

Shortly after the end of the year under review, innogy took advantage of the favourable interest rates to issue another bond. At the end of January 2019, the company placed paper with a nominal volume of €750 million, a tenor of 4.5 years and a coupon of 0.75 %. One of the purposes of the issuance is to refinance liabilities as they mature.

RWE AG's borrowing costs reflect decline in refinancing via commercial paper. In 2018, the cost of debt for RWE AG was 3.4 %, as opposed to 2.5 % in the preceding year. These figures were calculated for the liabilities allocable to the Group parent from bonds, commercial paper and bank loans at the end of the year. Only hybrid bonds classified as debt pursuant to International Financial Reporting Standards (IFRS) were considered. The rise in the cost of capital was primarily due to our reduction to zero of short-term financing via low-interest commercial paper due to high operating cash flows by the end of 2018. innogy's cost of debt dropped from 4.1 % to 3.6 %. One reason was that the bonds issued during the year being reviewed have relatively small coupons due to the development of market interest rates, whereas the redeemed bond had a much higher yield.

Credit rating of RWE AG (as of 31 Dec 2018)	Moody's	Fitch
Non-current financial liabilities		
Senior debt	Baa3	BBB
Subordinated debt (hybrid bonds)	Ba2	BB+
Current financial liabilities	P-3	F2
Outlook	Stable	Stable

Rating agencies confirm RWE's investment grade rating. The level of our borrowing costs partially depends on the rating agencies' assessment of our creditworthiness. Moody's and Fitch are currently providing such credit ratings for RWE. Another leading agency, 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. Before discontinuing its rating of RWE, Standard & Poor's had issued us a rating of BBB– for long-term financing, which is investment grade. This is the same category as the credit assessments of our current rating agencies. The RWE ratings by Moody's and Fitch are Baa3 and BBB, respectively. Once our envisaged asset swap with E.ON was announced, the two agencies reviewed our creditworthiness in 2018, confirming their assessments – both with a stable outlook. Fitch even raised its rating of our short-term financial debt by one notch to F2.

By contrast, innogy continues to receive credit ratings from all three of the aforementioned agencies, which are each one notch higher than for RWE, with a stable outlook. The creditworthiness of our subsidiary is rated BBB at Standard & Poor's, Baa2 at Moody's and BBB+ at Fitch (with a rating of A– for its senior bonds). 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 2018 Annual Report.

Cash flow statement[1] € million	2018	2017	+/– € million
Funds from operations	138	–3,971	4,109
Change in working capital	4,473	200	4,273
Cash flows from operating activities of continuing operations	**4,611**	**–3,771**	**8,382**
Cash flows from investing activities of continuing operations	**–2,999**	**3,750**	**–6,749**
Cash flows from financing activities of continuing operations	**–1,559**	**–997**	**–562**
Effects of changes in foreign exchange rates and other changes in value on cash and cash equivalents	13	–19	32
Total net changes in cash and cash equivalents	**66**	**–1,037**	**1,103**
Cash flows from operating activities of continuing operations	4,611	–3,771	8,382
Minus capital expenditure[2]	–1,246	–902	–344
Plus proceeds from divestitures/asset disposals[2]	74	234	–160
Free cash flow	**3,439**	**–4,439**	**7,878**

1 All items relate solely to continuing operations.
2 This item solely relates to transactions with an effect on cash.

Extraordinarily high operating cash flows due to received collateral. In the past fiscal year, our continuing operations generated €4,611 million in cash flows from operating activities. This was much more than the negative figure recorded in the prior year (–€3,771 million), which was significantly curtailed by the endowment of the German nuclear energy fund. However, our operating cash flows also improved disregarding this effect. The fact that we obtained high variation margins in connection with forward contracts for electricity, commodities and CO_2 certificates in 2018 played a major role. Variation margins are payments with which transaction partners offset profit and loss positions resulting from the daily revaluation of active contracts. However, their influence on cash flows is temporary and ends once the transactions are realised.

Investing activities of our continuing operations resulted in cash outflows of €2,999 million. In addition to the capital expenditure presented on page 50, purchases of securities also made a contribution, whereas proceeds on sales of property, plant and equipment and financial assets had a counteracting effect. In the previous year, we recorded substantial cash inflows of €3,750 million, which largely resulted from the sale of securities. We used the funds to make our contribution to the nuclear energy fund.

Financing activities of our continuing operations resulted in cash outflows of €1,559 million (previous year: €997 million). €1.0 billion thereof was used to make dividend payments to RWE shareholders, co-owners of fully consolidated RWE companies and hybrid investors. In the period under review, we redeemed €2.8 billion and issued €1.6 billion in financial debt. In addition, there were proceeds from the sale of minority stakes in the Triton Knoll offshore wind project (see page 37 et seq.).

On balance, the aforementioned cash flows from operating, investing and financing activities increased our cash and cash equivalents by €66 million.

The significant variation margins mentioned above were also reflected in free cash flow, which amounted to €3,439 million. By contrast, the figure recorded in the preceding year (–€4,439 million) was characterised by the contribution to the nuclear energy fund.

Net debt[1] € million	31 Dec 2018	31 Dec 2017	+/– € million
Cash and cash equivalents	3,523	3,933	–410
Marketable securities	3,863	5,131	–1,268
Other financial assets	2,809	1,863	946
Financial assets	**10,195**	**10,927**	**–732**
Bonds, other notes payable, bank debt, commercial paper	1,657	15,099	–13,442
Hedge transactions related to bonds	12	27	–15
Other financial liabilities	1,107	2,102	–995
Financial liabilities	**2,776**	**17,228**	**–14,452**
Net financial debt	**7,419**	**–6,301**	**13,720**
Provisions for pensions and similar obligations	3,287	5,420	–2,133
Surplus of plan assets over benefit obligations	–213	–103	–110
Provisions for nuclear waste management	5,944	6,005	–61
Mining provisions	2,516	2,322	194
Provisions for dismantling wind farms	362	359	3
Adjustment for hybrid capital	–88	–77	–11
Plus 50 % of the hybrid capital stated as equity	470	470	–
Minus 50 % of the hybrid capital stated as debt	–558	–547	–11
Net debt of continuing operations	**4,389**	**–**	**–**
Net debt of discontinued operations	**14,950**	**–**	**–**
Net debt	**19,339**	**20,227**	**–888**

1 As of the balance-sheet date, discontinued operations were recognised in the collective item 'net debt of discontinued operations', whereas at the end of 2017, they were still included in the individual items of the table.

Net debt slightly down on 2017. As of 31 December 2018, our net debt amounted to €19.3 billion, of which €4.4 billion was allocable to continuing operations and the remainder was allocable to discontinued operations. We only disclose the figures for the Group as a whole for the previous year. Our net debt dropped by €0.9 billion compared to 2017. Therefore, our forecast of March 2018, which envisaged a moderate increase, was not confirmed. The main reason was the unexpectedly high cash inflows from variation margins. Operating cash flows of continuing operations (€4.6 billion) and of discontinued operations (€2.0 billion) reduced net debt, whereas investing activities (€1.2 billion and €1.7 billion) and dividend payments (€1.0 billion and €0.5 billion) had a counteracting effect. In addition, pension provisions rose by €0.8 billion and €0.7 billion, respectively. One reason is that the plan assets which cover the majority of the pension obligations declined due to negative market developments.

Slightly higher off-balance-sheet obligations from electricity and fuel. 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 €27.9 billion for fuel (previous year: €25.8 billion) and €7.8 billion for electricity (previous year: €6.8 billion). These figures are based on assumptions regarding the prospective development of commodity prices. For further information on our off-balance-sheet obligations, please see page 151 in the Notes.

Group balance sheet structure	31 Dec 2018		31 Dec 2017	
	€ million	%	€ million	%
Assets				
Non-current assets	18,595	23.2	45,694	66.2
of which:				
Intangible assets	2,193	2.7	12,383	17.9
Property, plant and equipment	12,409	15.5	24,947[1]	36.1
Current assets	61,513	76.8	23,365	33.8
of which:				
Receivables and other assets[2]	12,254	15.3	12,487	18.1
Assets held for sale	40,496	50.6	128	0.2
Total	**80,108**	**100.0**	**69,059**	**100.0**
Equity and liabilities				
Equity	14,257	17.8	11,991	17.4
Non-current liabilities	20,007	25.0	36,774	53.3
of which:				
Provisions	15,863	19.8	19,249	27.9
Financial liabilities	1,998	2.5	14,414	20.9
Current liabilities	45,844	57.2	20,294	29.3
of which:				
Provisions	2,615	3.3	5,137	7.4
Financial liabilities	766	1.0	2,787	4.0
Other liabilities[3]	9,667	12.1	12,259	17.8
Liabilities held for sale	32,796	40.9	111	0.2
Total	**80,108**	**100.0**	**69,059**	**100.0**

1 Figure adjusted due to the assignment of investment property to property, plant and equipment.
2 Including financial accounts receivable, trade accounts receivable and income tax refund claims.
3 Including trade accounts payable and income tax liabilities.

Equity ratio records slight increase to 17.8 %. As of the cut-off date for the financial statements, we had a balance-sheet total of €80.1 billion, compared to €69.1 billion as of 31 December 2017. We have subsumed the innogy assets that are to be transferred to E.ON over the long term separately under the items 'assets held for sale' (€40.5 billion) and 'liabilities held for sale' (€32.8 billion). In line with IFRS, prior-year figures were not adjusted. This was a major reason why certain balance-sheet items decreased substantially: on the assets side, intangible assets were €10.2 billion and property, plant and equipment was €12.5 billion down year on year; on the equity and liabilities side, financial liabilities declined by €14.4 billion, with provisions falling by €5.9 billion. The change in the reporting did not have an impact on the development of the balance-sheet total. Its increase of €11.0 billion relative to 2017 was primarily driven by the rise in the value of commodity derivatives. The RWE Group's equity climbed by €2.3 billion to €14.3 billion, with its share of the balance sheet total (equity ratio) also rising, advancing by 0.4 percentage points to 17.8 %.

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

The financial statements of RWE AG primarily reflect the business performance of its subsidiaries. On the whole, the electricity margins achieved by our generation companies RWE Power and RWE Generation deteriorated last year. Furthermore, the financial statements for fiscal 2017 benefited from the positive one-off effect of the nuclear fuel tax refund. At €0.5 billion, RWE AG's net profit was therefore significantly lower year on year. However, it gives us enough leeway to pay an attractive dividend: the Executive Board and the Supervisory Board of RWE AG will propose to the Annual General Meeting taking place in May that a dividend of €0.70 per share be paid for fiscal 2018.

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) € million	31 Dec 2018	31 Dec 2017
Assets		
Financial assets	25,166	24,901
Accounts receivable from affiliated companies	3,669	4,811
Other accounts receivable and other assets	479	505
Marketable securities and cash and cash equivalents	4,864	3,951
Total assets	**34,178**	**34,168**
Equity and liabilities		
Equity	5,654	6,104
Provisions	2,700	2,368
Accounts payable to affiliated companies	23,169	22,623
Other liabilities	2,655	3,073
Total equity and liabilities	**34,178**	**34,168**

Income statement of RWE AG (abridged) € million	2018	2017
Income from financial assets	1,091	2,268
Net interest	−391	−339
Other income and expenses	−227	−345
Taxes on income	−1	−172
Net profit	**472**	**1,412**
Transfer to other retained earnings	−42	−490
Distributable profit	**430**	**922**

Assets. RWE AG had €34.2 billion in total assets as of 31 December 2018, just as much as in the previous year. Major changes occurred on the assets side of the balance sheet, e. g. a decline in accounts receivable from affiliated companies. One reason for this was that RWE Power transferred to us its 2017 profit, which was unusually high due to the nuclear fuel tax refund received from the government. There was an increase in marketable securities and cash and cash equivalents, in part because our subsidiary RWE Supply & Trading received substantial amounts of collateral relating to forward transactions involving electricity, commodities and CO_2 certificates (see page 53). On the equity and liabilities side of the balance sheet, there was a rise in provisions for pensions. A downward adjustment to the discount rates used to calculate the net present values of obligations and value adjustments of the assets covering the pension obligations came to bear here. There was a rise in liabilities to affiliated companies arising from our obligation to assume their losses. By contrast, other liabilities dropped, in part because we eliminated short-term refinancing via commercial paper by the balance-sheet date. Equity also decreased, as did the equity ratio, in view of the unchanged amount of total assets. As of 31 December 2018, the equity ratio was 16.5 % as opposed to 17.9 % in the previous year. The special dividend of €1 per share paid by RWE AG for fiscal 2017 played a role in the decline.

Financial position. RWE AG is set up solidly in financial terms and has a number of flexible financing tools at its disposal. This is reflected in our long-term credit ratings, which are investment grade. A detailed presentation of RWE's financial position and financing activity in the year under review has been made on page 51 et seqq.

Earnings position. RWE AG's earnings position deteriorated compared to 2017. This was primarily due to factors reflected in income from financial assets, which declined by €1,177 million to €1,091 million. As set out earlier, RWE Power benefited from the nuclear fuel tax refund in fiscal 2017. This one-off effect did not recur. Moreover, margins in conventional electricity generation and energy trading declined.

Net interest deteriorated by €52 million to –€391 million. The main reason for this was the aforementioned value adjustments of the assets covering the pension obligations.

The net amount from other income and expenses improved by €118 million to –€227 million because expenses from the reversal of deferrals in the previous year did not recur. Burdens in the year under review resulted in part from project costs in connection with the impending asset swap with E.ON on which we report in detail on page 35 et seq.

With a tax expense of €1 million (previous year: €172 million), RWE AG achieved a net profit of €472 million in fiscal 2018 (previous year: €1,412 million).

The distributable profit of €430 million corresponds to the planned dividend payment to our shareholders. The Supervisory Board and the Executive Board of RWE AG will propose to the Annual General Meeting on 3 May 2019 that a dividend of €0.70 be paid per share for fiscal 2018.

Outlook for 2019. RWE AG's earnings prospects largely depend on the business performance of its subsidiaries. Our current assessments make us confident of being able to achieve a net profit in 2019 that is slightly higher than in 2018.

Corporate governance declaration in accordance with Section 289f and Section 315d of the German Commercial Code. On 15 February 2019, the Executive Board of RWE AG issued a corporate governance statement in accordance with Section 289f and Section 315d of the German Commercial Code. It is published on the internet at www.rwe.com/corporate-governance-declaration.

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

Since its IPO in October 2016, our subsidiary innogy has been able to conduct its business activities independently. Consequently, we consider it as a purely financial investment. Therefore, our company planning also considers Group figures which better reflect this status than those determined by applying IFRS consolidation principles. We calculate these figures by recognising innogy in the financial assets on the balance sheet and based on the dividend it pays to us on the income statement. Adjusted EBITDA calculated in this manner amounted to €1.5 billion in 2018, which was in line with our expectations. Net debt amounted to €2.3 billion, which was lower than we had assumed initially.

Full consolidation reflects economic status of RWE investment in innogy only 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. This approach must also be applied to our 76.8 % stake in innogy, whereas we recognise the business activities of this company, which will be transferred to E.ON as a result of the asset swap, separately as 'discontinued operations'. 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. This is documented by a comprehensive agreement which stipulates that our subsidiary can act independently in business matters and that RWE AG may only exercise its influence by way of the legally mandated bodies, i. e. the Supervisory Board and the Annual General Meeting.

Adjusted figures. For planning purposes, we therefore adopt a presentation that does not conform with IFRS consolidation principles and better represents the actual relationship between RWE AG and innogy. This involves assigning the investment in 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 of €38.40 established by the conditions governing the impending sale to E.ON. The Group's earnings figures consider innogy only based on the dividend for RWE, which amounted to €683 million in 2018. In addition, the change in accounting also has an indirect effect on our figures, because business transactions between the rest of the Group and innogy are treated as transactions with third parties.

Adjusted EBITDA in line with expectations. The following is an overview of some key financial indicators calculated applying the aforementioned method. Adjusted EBITDA amounted to €1,521 million (prior year: €2,066 million) and adjusted net income totalled €591 million (prior year: €973 million). Therefore, the actual figures were within the forecast ranges of €1.4 billion to €1.7 billion and €0.5 billion to €0.8 billion, respectively (see page 85 of the 2017 Annual Report). Net debt amounted to €2,280 million (prior year: €4,510 million), which was less than planned. At the start of the year, we had anticipated a slight increase. The significant drop was a result of unexpectedly high cash inflows from variation margins (see page 53).

Key figures for the RWE Group including innogy as a financial investment that is not fully consolidated[1] € million	2018	2017	+/– %
Adjusted EBITDA	1,521	2,066	–26.4
Adjusted EBIT	953	1,474	–35.3
Income before taxes	305	2,320	–86.9
Net income	265	2,160	–87.7
Adjusted net income	591	973	–39.3
Net financial assets	9,266	6,070	52.7
Net debt	2,280	4,510	–49.4

1 Figures not calculated according to IFRS requirements. 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. 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.

1.11 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 relating to adjustments to the capital structure by the Executive Board or 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 2018, no holding in RWE AG exceeded 10 % of the voting rights.

Limitation of share transfers. Within the scope of the employee share plan of RWE AG, 196,560 RWE common shares were issued to employees in the financial year that just ended. These securities must be held until 31 December 2019.

Last year, employee stock purchase plans were also launched for the first time in the United Kingdom. Employees of RWE Generation UK plc, RWE Technology UK Limited and RWE Supply & Trading GmbH UK Branch qualified for them. A total of 29,452 RWE common shares were purchased under these plans. These shares are subject to a five-year holding period starting from their respective issue dates.

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 in favour of amendments to the Articles of Incorporation that only concern the wording without changing the content.

RWE AG authorisation to implement share buybacks. Pursuant to a resolution passed by the Annual General Meeting on 26 April 2018, 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 25 April 2023. 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, they 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 and 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 to issue new shares. Pursuant to the resolution passed by the Annual General Meeting on 26 April 2018, 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 25 April 2023, 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 them 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 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: 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, 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. A similar rule applies to the credit line we were granted in connection with the temporary acquisition of the 50.04 % stake in innogy Grid Holding (see page 39).

Effects of a change of control on Executive Board and executive remuneration. 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 them. In such a case, they are free to resign from their position within six months of the change of control with cause by giving three months' notice. In addition, they can request the termination of their employment contract and receive a one-off payment.

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

The Strategic Performance Plan presented on page 64 et seq. stipulates 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 paid out, shall be paid out early. The payout amount shall correspond to the number of performance shares multiplied by the sum of the average closing price of the RWE common share on the last 30 trading days prior to the announcement of the change of control and the amount of dividend paid out per share until then, calculated starting from the time when the number of performance shares was finally granted. All performance shares granted on a preliminary basis at the time of the change of control shall expire without replacement or compensation.

1.12 REMUNERATION REPORT

Performance-oriented and transparent supervisory and management board remuneration are fundamental to good corporate governance. This is ascribed great importance in particular by institutional investors. In this chapter, we have provided information on the structure and level of the remuneration 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 remuneration systems.

Structure of Supervisory Board remuneration

Fundamentals. 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 remuneration of €300,000 per fiscal year. His Deputy receives €200,000 per fiscal year. The other members of the Supervisory Board receive fixed remuneration of €100,000 and additional compensation for committee mandates according to the following rules.

Members of the Audit Committee receive additional remuneration of €40,000. This payment is increased to €80,000 for the Chair of this committee. With the exception of the Nomination Committee, the members of which do not receive additional remuneration, the members and the Chairs of all the other Supervisory Board committees receive an additional €20,000 and €40,000 in remuneration, 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. Remuneration 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. Some 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 commitment 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 relinquish their compensation met this self-imposed obligation for their compensation for 2017. For the new members who joined the Board in 2018, this self-imposed obligation applies for the first time to the remuneration for fiscal 2018, which was paid out at the start of fiscal 2019.

Level of Supervisory Board remuneration

Remuneration for fiscal 2018. In total, the remuneration of the Supervisory Board (excluding out-of-pocket expenses) amounted to €3,480,000 in fiscal 2018 (previous year: €3,637,000). Of this sum, €460,000 (previous year: €459,000) was remuneration paid for mandates on committees of the Supervisory Board and €720,000 (previous year: €877,000) was remuneration paid for mandates at subsidiaries.

The remuneration of all individuals who have served on the Supervisory Board in 2017 and/or 2018 is shown in the following table.

Supervisory Board remuneration[1]	Fixed remuneration		Remuneration for committee offices		Remuneration for mandates at subsidiaries[2]		Total remuneration[3]	
€ '000	2018	2017	2018	2017	2018	2017	2018	2017
Dr. Werner Brandt, Chairman	300	300	–	–	–	300	300	600
Frank Bsirske, Deputy Chairman	200	200	–	–	200	200	400	400
Michael Bochinsky (since 1 August 2018)	42	–	17	–	–	–	59	–
Reiner Böhle	100	100	20	20	–	120	120	240
Sandra Bossemeyer	100	100	20	20	–	–	120	120
Martin Bröker (since 1 September 2018)	33	–	–	–	–	–	33	–
Ute Gerbaulet (since 27 April 2017)	100	68	–	–	–	–	100	68
Reinhold Gispert (27 April 2017 to 31 July 2018)	58	68	23	26	–	14	81	108
Arno Hahn (until 27 April 2017)	–	32	–	13	–	18	–	63
Andreas Henrich (until 31 August 2018)	67	100	–	–	–	–	67	100
Prof. Dr. Hans-Peter Keitel	100	100	20	20	–	–	120	120
Dr. h.c. Monika Kircher	100	100	–	–	–	–	100	100
Martina Koederitz (20 April 2016 to 27 April 2017)	–	32	–	–	–	38	–	71
Monika Krebber	100	100	20	20	120	67	240	187
Harald Louis	100	100	20	20	20	40	140	160
Dagmar Mühlenfeld	100	100	20	20	–	–	120	120
Peter Ottmann	100	100	20	20	–	–	120	120
Günther Schartz	100	100	20	20	–	–	120	120
Dr. Erhard Schipporeit	100	100	80	80	300	–	480	180
Dr. Wolfgang Schüssel	100	100	40	40	–	–	140	140
Ullrich Sierau	100	100	40	40	–	–	140	140
Ralf Sikorski	100	100	40	40	50	50	190	190
Marion Weckes	100	100	40	40	–	–	140	140
Leonhard Zubrowski	100	100	20	20	30	30	150	150
Total[3]	**2,300**	**2,301**	**460**	**459**	**720**	**877**	**3,480**	**3,637**

1 Supervisory Board members who joined or retired from the corporate body during the year receive prorated remuneration.
2 Remuneration 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 remuneration

Executive Board remuneration. 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 remuneration system described in the following has been applied since 1 October 2016. It is made up 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 remuneration. In the financial year that just ended, Rolf Martin Schmitz and Markus Krebber 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. His tenure on the Executive Board expires on 30 June 2021. Markus Krebber was appointed to this corporate body for an initial period of three years with effect from 1 October 2016 and has been in charge of finance since 15 October 2016. In December 2018, his appointment was extended by five years through to 30 September 2024.

Non-performance-based Executive Board remuneration

Fixed compensation and pension instalments. The members of the Executive Board of RWE AG receive a fixed annual salary, which is paid in twelve monthly instalments. As a second fixed remuneration component, they are entitled to a pension instalment for every year of service, which is determined on an individual basis, unless – as is the case with Rolf Martin Schmitz – they belonged to the Executive Board before the pension instalment was introduced and have therefore received a pension commitment (see page 67).

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 65th birthday.

When retiring, Executive Board members can choose a one-time payment or 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.

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

Performance-based Executive Board remuneration

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 (EBIT minus the non-operating result) and is determined as set out in the next paragraph.

The Supervisory Board sets a target as well as a floor and a ceiling 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 exactly at the pre-defined floor, target achievement is 50 %; if it is at the ceiling, target achievement is 150 %. Target achievement is adjusted linearly if adjusted EBIT is between the two limits. If it is below the floor, no company bonus is paid. If the ceiling is exceeded, the maximum target achievement remains 150 %. The rules of the remuneration system for the Executive Board stipulate that the Supervisory Board may make adjustments to adjusted EBIT. Such adjustments can relate to gains on disposals, changes in provisions, as well as impairments and their consequences.

The performance of each Executive Board member 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 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 fiscal year, the Supervisory Board evaluates the individual performance of the Executive Board members relative to the three criteria above 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.

Adjusted EBIT, the target figure used to determine the company bonus, was revised per a Supervisory Board resolution of September 2018. In the past, innogy SE, in which we hold a 76.8 % stake, was considered as a fully consolidated subsidiary in determining EBIT, in accordance with International Financial Reporting Standards (IFRS). As set out on page 40, the envisaged asset swap with E.ON required methodological accounting adjustments to be made, as a result of which adjusted EBIT according to the old definition no longer exists. When measuring performance, we now use an adjusted EBIT that reflects RWE's current situation better and is determined on a continuous basis. In so doing, deviating from IFRS consolidation principles, innogy is considered as a purely financial investment. More detailed information on this approach can be found on page 58. The change in the composition of adjusted EBIT made it necessary to revise the target parameter for performance measurement retrospectively. This was decided by the Supervisory Board of RWE AG in September 2018.

The German Corporate Governance Code (GCGC) recommends prohibiting retrospective changes to performance targets and reference parameters (Item 4.2.3, Paragraph 2, Sentence 8). In our Declaration of Compliance, which was published on 21 September 2018, we stated that we deviated from the Code in this point. However, we do not believe that we acted contrary to the basic intention of the recommendation, as the update to the target figures was methodological in nature and occasioned by German stock corporation law.

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 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. The link between compensation and the development of the share price over the long term 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, in which they are informed of their personal gross allocation amount. The preliminary number of performance shares is calculated by dividing the grant amount by the average closing quotation of the RWE share over 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 RWE for the year. The actual figure is compared to a pre-defined target figure. The procedure is similar to the approach taken when determining the company bonus. The Supervisory Board pre-defines a target, a floor and a ceiling for adjusted net income, orienting 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 adjusted net income is exactly at the floor, 50 % of the conditionally granted performance shares is fully allocated; if it is at the ceiling, the final grant amounts to 150 %. If adjusted net income is below the floor, all of the conditionally granted performance shares from the tranche lapse. If the ceiling is exceeded, the maximum grant remains 150 %.

The fully vested performance shares are fully paid out in cash to the Executive Board member 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 final number of performance shares multiplied by the sum of the average closing quotation of the RWE common share over the last 30 days of trading on Xetra before the end of the vesting period and the cumulative dividend paid during the holding period. However, a cap applies in this case as well: even in the event of an 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 obliged 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.

The performance shares remain unaffected after an Executive Board member leaves the body at the end of their contract and are paid out as planned at the end of the 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 provision which gives the Supervisory Board the power to punish infractions by Executive Board members, for example serious violations of the company's Code of Conduct, by reducing or completely voiding ongoing SPP tranches.

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 ceilings and floors were also determined. The SPP conditions stipulate that the Supervisory Board may retrospectively adjust the target and threshold values only to a very limited extent in precisely defined cases. Such adjustments are permissible if they take account of the effects of capital measures, acquisitions, divestments and regulatory changes, which were not yet known or unforeseeable when the figures were determined. As set out in the commentary on the bonus, in 2018, we changed the method used to determine the figures due to the envisaged asset swap with E.ON. This also affected adjusted net income, which we had derived from the IFRS net income in the past and now determine in the manner described on page 58, i. e. by considering innogy as a pure financial investment. Accordingly, the target figures for adjusted net income for the 2018 and 2019 SPP tranches were also adjusted retrospectively.

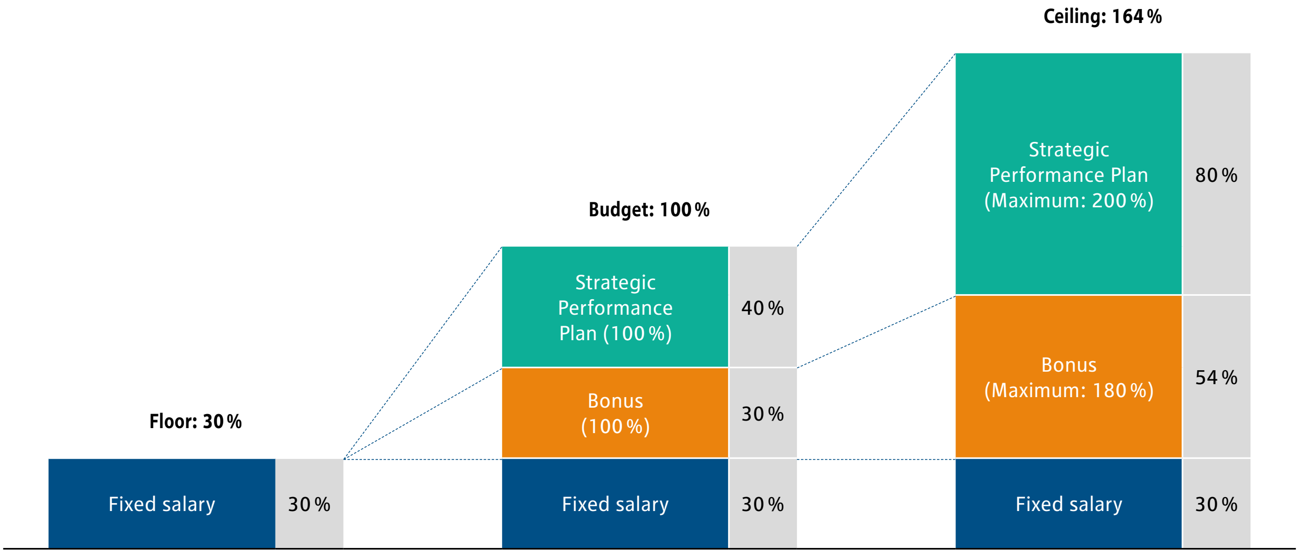
We published information on this deviation from the German Corporate Governance Code in the aforementioned statement of compliance on 21 September 2018.

Remuneration 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 remuneration 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 remuneration, i. e. the bonus. As a long-term compensation component, the SPP accounts for about 40 % of total remuneration.

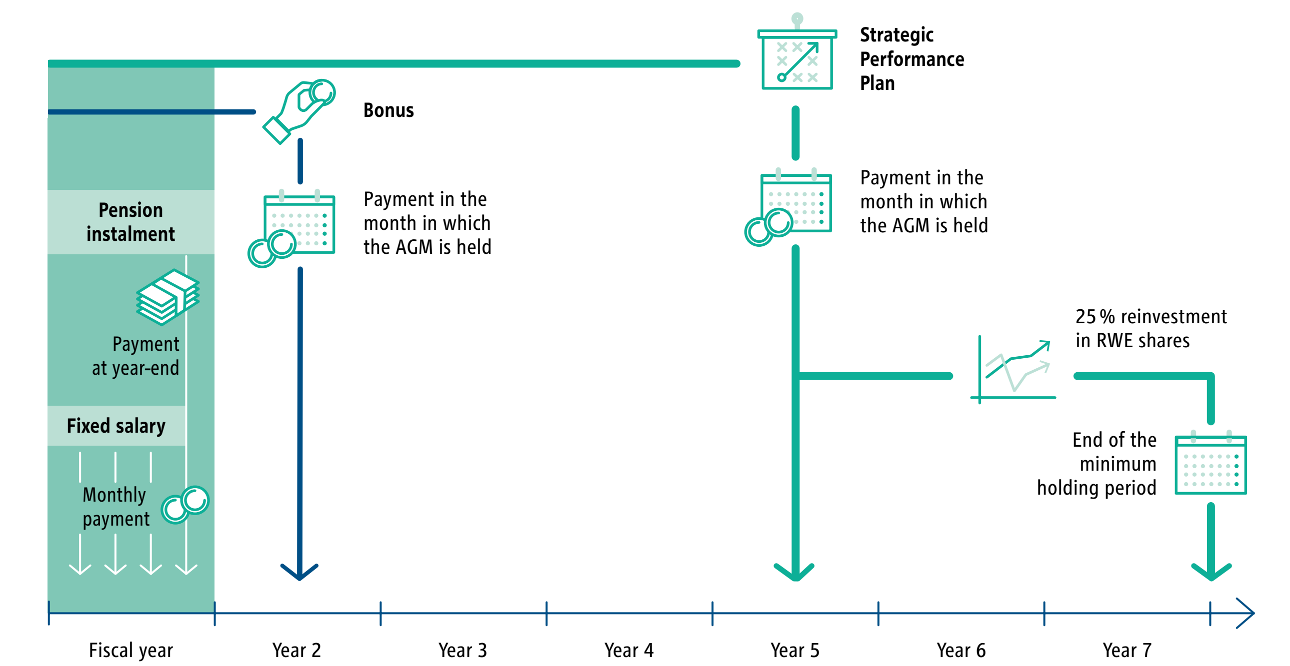
Limitation of Executive Board remuneration. As set out earlier, the level of variable compensation components is limited. The company bonus amounts to a maximum of 150 % of the contractually agreed bonus budget. Multiplying this by the individual performance factor (0.8 to 1.2), it is possible to reach 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. Due to the above maximum values, there is also a cap on total compensation (see diagram overleaf).

Range of Executive Board remuneration



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 remuneration 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 2018, 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 59, permanent disability, early termination or non-extension of his employment contract by the company. In the event of death, his surviving dependants are entitled to 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 of 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 contract, Executive Board members receive a one-off payment equalling the compensation due until the end of the term of their contract: however, this amount will not be higher than three times their total contractual annual remuneration. The share-based payments under the SPP are not included in this payment.

In the event of a change of control, all of the fully granted 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 of Executive Board mandate 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 remuneration

Total amount of the remuneration components for 2018. The following section presents the remuneration granted to the Executive Board members of RWE AG for their work in fiscal 2018. It was calculated in compliance with the rules set out in the German Commercial Code.

Total Executive Board compensation for the past fiscal year amounted to €6,880,000. The previous year's figure was €7,274,000 and included the emoluments of Uwe Tigges, who resigned from the Executive Board at the end of April 2017.

In 2018, non-performance-based components, i. e. the fixed salary of the Executive Board members, fringe benefits and the pension instalment, amounted to €2,246,000 (previous year: €2,342,000). Pursuant to the German Commercial Code, the annual service cost of the pension commitment to Rolf Martin Schmitz is not recognised as remuneration, as opposed to the pension instalment of €300,000 paid to Markus Krebber (previous year: €255,000).

In 2018, performance-based components amounted to a total of €4,634,000 (previous year: €4,932,000). Of this, €2,284,000 (previous year: €2,365,000) was attributable to the bonus for fiscal 2018 paid directly and €2,350,000 (previous year: €2,567,000) to the allocation of performance shares under the SPP.

As set out on page 64, last year we started calculating adjusted EBIT, the yardstick for determining the level of the bonus, using a new method that considers innogy as a purely financial investment. Therefore, the target for 2018 was adjusted retrospectively, to €831 million (target achievement of 100 %) with a floor of €131 million (target achievement of 50 %) and a ceiling of €1,531 million (target achievement of 150 %). The new figures were also determined on the basis of the medium-term planning prepared in 2017. We actually achieved adjusted EBIT of €953 million. The adjusted EBIT figure was adjusted by –€49 million to €904 million. The adjustment relates to changes in the amortisation periods of certain assets and valuation effects regarding provisions. The adjustment leads to a target achievement of 105 % for the company bonus.

Calculation of the 2018 company bonus	Adjusted EBIT € million	Target achievement %
Target	**831**	**100**
Floor	131	50
Ceiling	1,531	150
Actual	**953**	**–**
Adjustments[1]	−49	–
Adjusted actual	**904**	**105**

1 See commentary above.

As set out above, the company bonus resulting from this target achievement is multiplied by a personal performance factor. Based on the assessment of the personal goals, the collective performance of the Executive Board as a whole as well as the targets relating to corporate responsibility and employee motivation, the Supervisory Board set the performance factor for Rolf Martin Schmitz and Markus Krebber at 1.2. This results in a bonus of 126 % of the contractually agreed budget. The Supervisory Board acknowledged that the Executive Board made better progress than expected in implementing the strategic and financial goals established in advance. In particular, the substantial progress made in transforming RWE into a leading renewable energy company was recognised. On the whole, feedback from the capital market on the initiated transformation of the company has been positive. The annual employee opinion survey proves that personnel motivation improved even further from a level that was already high, despite the challenging environment.

The following table summarises the short-term remuneration paid in accordance with the German Commercial Code for fiscal 2018.

Short-term Executive Board remuneration	Dr. Rolf Martin Schmitz		Dr. Markus Krebber		Uwe Tigges until 30 April 2017		Total	
€ '000	2018	2017	2018	2017	2018	2017	2018	2017
Non-performance-based remuneration								
Fixed remuneration	1,160	960	750	750	–	250	1,910	1,960
Fringe benefits (company car, accident insurance)	20	15	16	20	–	7	36	42
Other payments (pension instalments)	–	–	300	255	–	85	300	340
Total	**1,180**	**975**	**1,066**	**1,025**	**–**	**342**	**2,246**	**2,342**
Performance-based remuneration								
Direct bonus payment	1,271	1,168	718	643	–	213	1,989	2,024
Remuneration for mandates[1]	115	138	180	203	–	–	295	341
Bonus	**1,386**	**1,306**	**898**	**846**	**–**	**213**	**2,284**	**2,365**
Total	**2,566**	**2,281**	**1,964**	**1,871**	**–**	**555**	**4,530**	**4,707**

1 In 2018, the remuneration for exercising intragroup supervisory board offices was fully set off against the bonus.

Share-based payment according to the Strategic Performance Plan. In fiscal 2018, Rolf Martin Schmitz and Markus Krebber were granted performance shares under the SPP of RWE AG (see the following overview). 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 adjusted net income in fiscal 2018. The target figure (€49 million) was derived from the 2016 medium-term plan and corresponds to an allocation of 100 %. The floor is –€351 million, and the ceiling is €449 million. Similar to adjusted EBIT, a downward adjustment to €233 million was made to the figure actually achieved (€591 million). Accordingly, the allocation was 123 %. The adjustments were made pursuant to the SPP conditions in order to eliminate unplanned exceptional effects. For example, we recognised substantial impairments for power plants in the 2016 consolidated financial statements, which had not been included in the medium-term plan at the time and have resulted in a significant decrease in depreciation. We eliminated this effect on depreciation.

Calculation of the 2018 tranche of the Strategic Performance Plan	Adjusted net income € million	Target achievement %
Target	**49**	**100**
Floor	–351	50
Ceiling	449	150
Actual	**591**	**–**
Adjustments[1]	–358	–
Adjusted actual	**233**	**123**

1 See commentary above.

Long-term incentive payment Strategic Performance Plan		Dr. Rolf Martin Schmitz			Dr. Markus Krebber		
Tranche	Year	2018	2017	2016	2018	2017	2016
Company		RWE AG	RWE AG	RWE AG	RWE AG	RWE AG	RWE AG
Grant date		1 Jan 2018	1 Jan 2017	1 Jan 2016	1 Jan 2018	1 Jan 2017	1 Jan 2016
Fair value at grant date	€ '000	1,250	1,250	769	1,100	988	247
Share price (average)	€	18.80	11.62	13.78	18.80	11.62	13.78
Number of performance shares allocated on a provisional basis		**66,489**	**107,573**	**55,787**	**58,511**	**84,983**	**17,915**
Measurement date of performance conditions		31 Dec 2018	31 Dec 2017	31 Dec 2017	31 Dec 2018	31 Dec 2017	31 Dec 2017
Target achievement in relation to adjusted net income	%	123	115	115	123	115	115
Final number of fully granted performance shares		81,781	123,709	64,155	71,969	97,730	20,602
End of the vesting period		31 Dec 2021	31 Dec 2020	31 Dec 2019	31 Dec 2021	31 Dec 2020	31 Dec 2019

Long-term incentive payment Strategic Performance Plan		Uwe Tigges until 30 April 2017		
Tranche	Year	2018	2017	2016
Company		innogy SE	innogy SE	innogy SE
Grant date		1 Jan 2018	1 Jan 2017	1 Jan 2016
Fair value at grant date	€ '000	–	329	706
Share price (average)	€	–	32.07	37.13
Number of performance shares allocated on a provisional basis		**–**	**10,264**	**19,021**
Measurement date of performance conditions		–	31 Dec 2017	31 Dec 2017
Target achievement in relation to adjusted net income	%	–	88	88
Final number of fully granted performance shares		–	9,032	16,738
End of the vesting period		–	31 Dec 2020	31 Dec 2019

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	2018	2017
Dr. Rolf Martin Schmitz	1,413	592
Dr. Markus Krebber	934	393
Uwe Tigges (until 30 April 2017)	–	124
Total	**2,347**	**1,109**

Obligations under the former pension scheme. The service cost of pension obligations to Rolf Martin Schmitz amounted to €536,000 in 2018 (previous year: €538,000). This is not a remuneration 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 IFRS amounted to €13,370,000 (previous year: €12,391,000). The present value of the pension obligation determined according to the German Commercial Code totalled €10,534,000 (previous year: €9,287,000). The pension obligation for 2018 increased by €1,248,000 (previous year: decrease of €607,000).

Based on the emoluments qualifying for a pension as of 31 December 2018, the projected annual pension of Rolf Martin Schmitz on retiring from the company as of the expiry of his appointment amounted to €556,000 (unchanged from the previous year). 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 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 remuneration.

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 irrelevant that the payment will not be made until the following year. 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 Executive Board bonuses are stated in the reporting year in the benefits received table.

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

Benefits granted	Dr. Rolf Martin Schmitz Chief Executive Officer since 15 October 2016				Dr. Markus Krebber Chief Financial Officer since 15 October 2016			
€ '000	2017	2018	2018 (Min)	2018 (Max)	2017	2018	2018 (Min)	2018 (Max)
Fixed remuneration	960	1,160	1,160	1,160	750	750	750	750
Pension instalment	–	–	–	–	255	300	300	300
Fringe benefits	15	20	20	20	20	16	16	16
Total fixed remuneration	**975**	**1,180**	**1,180**	**1,180**	**1,025**	**1,066**	**1,066**	**1,066**
One-year variable remuneration	**1,100**	**1,100**	**0**	**1,980**	**713**	**713**	**0**	**1,283**
Bonus	1,100	1,100	0	1,980	713	713	0	1,283
Multi-year variable remuneration	**1,250**	**1,250**	**0**	**2,500**	**988**	**1,100**	**0**	**2,200**
SPP 2017 tranche (term: 2017–2020)	1,250	–	–	–	988	–	–	–
SPP 2018 tranche (term: 2018–2021)	–	1,250	0	2,500	–	1,100	0	2,200
Total variable remuneration	**2,350**	**2,350**	**0**	**4,480**	**1,701**	**1,813**	**0**	**3,483**
Total	**3,325**	**3,530**	**1,180**	**5,660**	**2,726**	**2,879**	**1,066**	**4,549**
Service cost	538	536	536	536	–	–	–	–
Total remuneration	**3,863**	**4,066**	**1,716**	**6,196**	**2,726**	**2,879**	**1,066**	**4,549**

Benefits received	Dr. Rolf Martin Schmitz Chief Executive Officer since 15 October 2016		Dr. Markus Krebber Chief Financial Officer since 15 October 2016	
€ '000	2018	2017	2018	2017
Fixed remuneration	1,160	960	750	750
Pension instalment	–	–	300	255
Fringe benefits	20	15	16	20
Total fixed remuneration	**1,180**	**975**	**1,066**	**1,025**
One-year variable remuneration	**1,386**	**1,306**	**898**	**846**
Bonus[1]	1,386	1,306	898	846
Multi-year variable remuneration	**0**	**0**	**0**	**0**
Total variable remuneration	**1,386**	**1,306**	**898**	**846**
Total	**2,566**	**2,281**	**1,964**	**1,871**
Service cost	536	538	–	–
Total remuneration	**3,102**	**2,819**	**1,964**	**1,871**

1 The bonus includes remuneration for exercising intragroup supervisory board offices; also see the table 'Short-term Executive Board remuneration' on page 68.

1.13 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. For instance, we may have to shut down further lignite power plants prematurely in Germany. However, we expect to receive adequate compensation in such an event. Through the envisaged transaction with E.ON, we intend to improve and stabilise our operating earnings power. However, the RWE Group already rests on a solid foundation in both financial and organisational terms. An important part of this foundation is our risk management, which has proven itself over many years, enabling us to identify, assess and control risks and opportunities systematically.

Responsibility for risk management at RWE. Responsibility for risk management within the RWE Group lies with two companies: RWE AG, which manages the risks of the companies subordinate to it that do not belong to the innogy Group, and innogy SE, which has been accountable for the management of its own risks and those of its subsidiaries since its IPO in October 2016. This distribution of tasks will remain until the sale of our stake in innogy to E.ON, which we intend to complete in 2019. However, we have adopted a new approach to recording RWE AG's risk exposure due to innogy. Until the beginning of 2018, we faced a significant risk of our 76.8 % stake in the company losing value as a result of decreasing share prices. Such declines in the share price no longer represent a notable risk because the acquisition of our share in innogy by E.ON was agreed upon at a fixed price. This would only change if the transaction failed, a scenario that has the potential to cause substantial damage, but is unlikely.

The following is a detailed presentation of RWE AG's risk management. Corresponding information regarding our subsidiary innogy can be found in its 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: Controlling & Risk Management (Chair), Finance & Credit Risk, Accounting, Legal and Corporate Business Development. 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.

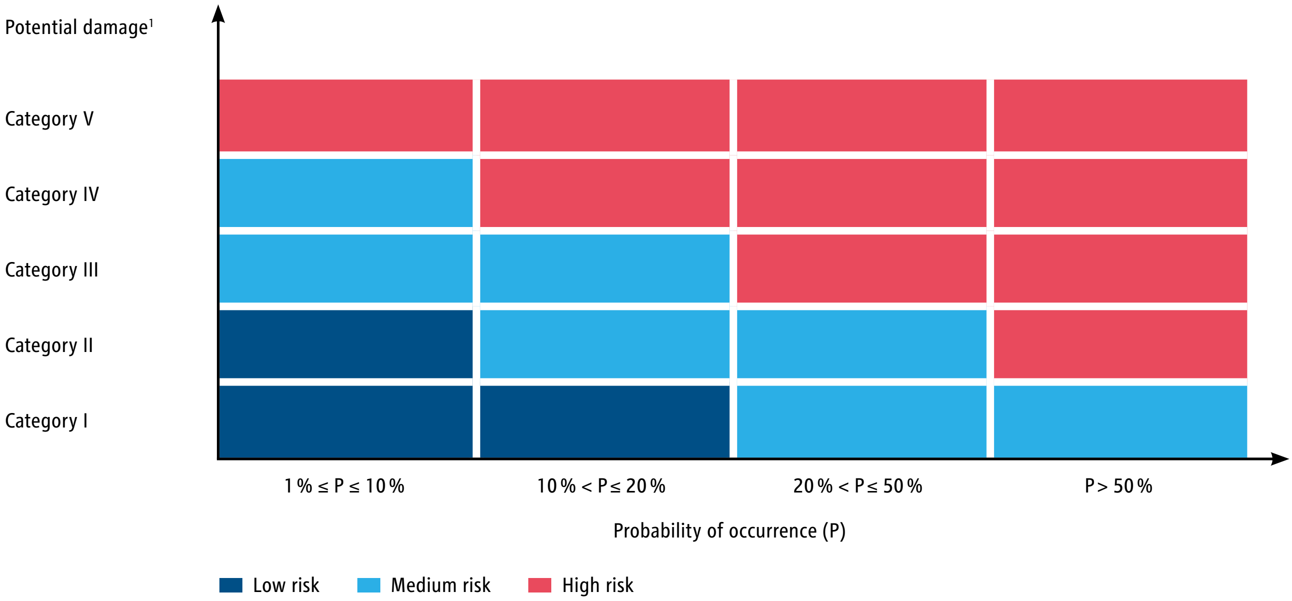
A number of additional organisational units and committees have been entrusted with risk management tasks:

- 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, which also reports to the CFO, is tasked with limiting the risk of material misstatements in financial reporting. It has an accounting-related internal control system for this purpose. Our activities for securing the quality of financial reporting are supported by a committee consisting of officers from Accounting and other departments of relevance to accounting. More detailed information can be found 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.
- Risks from changes in commodity prices are monitored by RWE Supply & Trading in so far as they relate to the conventional electricity generation, energy trading and gas businesses.
- 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.

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 corporate standards. The Internal Audit Department regularly assesses the quality and functionality of our risk management system.

RWE AG risk matrix



Potential damage[1]	Earnings risks[2] Potential impact on net income quantified as a percentage of adjusted EBITDA[3] and/or equity[4]	Indebtedness/liquidity/equity risks[2] 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 % and < 40 % of adjusted EBITDA	≥ €1billion and < €2 billion
Category I	< 20 % of adjusted EBITDA	< €1 billion

1 Aggregated figure for 2019 to 2021.
2 innogy is not included in the figures as a fully consolidated company, but as a purely financial investment (see page 58).
3 Average for 2019 to 2021 derived from the medium-term plan.
4 Equity as of 30 September 2018 (€18,918 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 if possible. We analyse the material 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. 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 calculate the effects of risks on net income as percentages of adjusted EBITDA and equity. We apply the non-IFRS method in which innogy is recognised as a purely financial investment in calculating these key figures, as set out on page 58. We classify the potential influence on net debt and equity based on fixed threshold values.

Risk classes	Classification of the highest single risk	
	31 Dec 2018	31 Dec 2017
Market risks	Medium	Medium
Regulatory and political risks	High	High
Legal risks	Medium	Medium
Operational risks	Medium	Medium
Financial risks	Medium	High
Creditworthiness of business partners	Medium	Medium
Other risks	High	Low

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. Single risks, to which innogy is exposed and on which we receive reports twice a year, are not recorded here. We currently classify two risks as 'high'. These are the 'regulatory and political risks', the overall assessment of which did not change compared to the previous year, and the 'other risks', which were in the 'low' category in the prior year and became much more significant in the year under review. The latter is due to the fact that we have recorded the potential failure of the envisaged asset swap with E.ON under 'other risks' since 2018. We believe that this is unlikely, but we realise that the damage potential is high. Therefore, we classify this risk as 'high'. In exchange, the market value risk associated with our financial stake in innogy became of secondary importance. In the previous year, it was classified as 'high', with the same therefore applying to the 'financial risks' in general. Since then, the highest risks of this class have been 'medium'.

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 attractive and, in some cases, even unprofitable. In such events, we may have to recognise impairments or form provisions. Since 2016, wholesale electricity prices have increased significantly in our most important generation markets, Germany, the United Kingdom and the Netherlands. This was primarily due to the recovery in prices of commodities, especially hard coal and gas. CO_2 emission allowances have also become much more expensive. It cannot be ruled out that this trend ends and electricity becomes much cheaper again. However, there is also a chance that wholesale electricity prices continue to rise and that generation margins improve.

  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. The increased use of batteries could result in households with photovoltaic units increasingly being self-sufficient in terms of energy, causing a drop in demand for electricity generated using conventional techniques. Conversely, the electrification of the heating and transportation sector would create additional demand. On the supply side, the continued expansion of renewable energy will put wholesale electricity prices under pressure. However, secured generation capacity should continue to drop. Therefore, we expect increasingly frequent periods of shortages with high electricity prices – especially in Germany.

  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.

  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. In compliance with risk thresholds, 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 with third parties are concluded only if the associated 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 the price risks of commodity positions in the trading business of RWE Supply & Trading may not rise above €40 million. In the past financial year, it averaged €12 million (previous year: €10 million), and the daily maximum was €19 million (previous year: €15 million). In addition, limits derived from the aforementioned VaR thresholds have been set for every 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.

In the middle of 2017, we pooled the management of our gas portfolio and the 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 in 2018 was €4 million (previous year: €3 million), and the daily maximum was €7 million (previous year: €4 million).

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 2019, only minor market price risks remain for this year. Opportunities for additional profits arise, because we are able to adapt our power plant deployment to short-term market developments flexibly.

To a certain extent, financial instruments used to hedge commodity positions are considered through the statement of 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 on page 142 et seqq in the Notes to the consolidated financial statements.

In the UK generation business, our earnings depend not only on the development of the price of electricity, fuel and emission allowances, but also on the level of the payments we receive for participating in the national capacity market. The capacity payments are determined in annual auctions. Major differences can occur depending on supply and demand. In the auctions held so far, the range has been between €6.95/kW (2017/2018) and €22.50/kW (2020/2021; before adjusting for inflation). However, as set out on page 36 et seq., the UK capacity market has been suspended for the time being and must be approved again by the European Commission.

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 dependent on a stable, reliable framework. Stricter emissions thresholds for the electricity sector can result in massive declines in earnings, if the transition periods are too short and power plants have to be taken offline early. In the lignite industry, this could also have negative effects on the upstream opencast mines. This kind of risk emanates, inter alia, from the German Climate Action Plan 2050. According to the Plan, by 2030 the energy sector must lower its emissions by more than 60 % compared to the level of 1990. In January 2019, the Growth, Structural Change and Employment Commission charged by the federal government submitted recommendations on how to accomplish this in detail (see page 33). The body speaks out in favour of phasing out electricity generation from coal-fired power plants in Germany by 2038. It also envisages further stations being shut down or converted for alternative fuel firing by the end of 2022. We expect the federal government to follow the Commission's recommendations and demand that we close further lignite units. We cannot make any forecasts regarding the extent or timing of the burdens that we will be facing until the federal government has submitted specific plans after speaking with us. It is still unclear when this will happen. However, we firmly believe that we will receive adequate compensation for the revenue shortfalls and the additional costs. In addition, we see that the framework conditions for the lignite business could become more reliable.

In the Netherlands, the new government aims to phase out electricity generation from coal by 2030 and submitted a draft law for this purpose in May 2018 (see page 33 et seq.). It envisages that we shut down or completely convert our Amer 9 and Eemshaven power stations for biomass firing by the end of 2024 and the end of 2029, respectively. This is still pending a decision by parliament. Earnings could be curtailed significantly if the government implemented its plans. In such an event, we would endeavour to ensure that we received appropriate compensation and take legal recourse if necessary.

In addition to the exit from coal, the Dutch government seeks to introduce a CO_2 tax (see page 34). The levy is to supplement the European Emissions Trading System and ensure a minimum price of carbon dioxide emissions from power stations. This could lead to substantial disadvantages for Dutch power plant operators. Furthermore, there is a danger that security of supply might be jeopardised. In dialogue with policymakers, the energy companies have pointed out that these risks exist and that prices in European emission allowance trading are already high. Despite this, the politicians have not abandoned this plan. However, they now intend to establish lower carbon price floors. Even in Germany, where the matter is not currently on the political agenda, we are in favour of renouncing imposing additional burdens on utilities through national CO_2 levies.

We are also exposed to risks in the field of nuclear energy, albeit to a much lesser extent than in the past. Since we made contributions to the German nuclear energy fund in the middle of 2017, the state has assumed complete responsibility for interim and final storage. However, we are still exposed to cost risks associated with disposal tasks which remain within our remit. For example, it cannot be ruled out that the dismantling of nuclear power stations will be more expensive than estimated and we will therefore have to establish higher provisions. However, we also have the opportunity to leverage synergies and cut costs. Furthermore, we face the risk that our power plants which are still in operation become less profitable or indeed unprofitable if safety standards become stricter. However, since the safety standards of nuclear power stations in Germany are already very high, we feel that this is unlikely.

In November 2018 the General Court of the Court of Justice of the European Union repealed the approval granted for the UK capacity market by the European Commission, because it had not been preceded by a comprehensive investigation. Until this requirement has been complied with, there is a ban on capacity payments – even under existing agreements. This curtailed our EBITDA by €50 million in 2018, and we have not included any capacity payments in our plans for 2019 for the time being. Theoretically, it is possible that the payments will be resumed with a substantial delay or not at all. There is also a chance that the European Commission will conclude its investigation this year and approve the capacity market retroactively. In the best case scenario, the capacity payments would be resumed immediately and the suspended payments would be refunded retrospectively.

Even in the present political environment, we are exposed to risks associated, for instance, with approvals when building and operating production facilities. This particularly affects our opencast mines and power stations. The danger here is that approvals are granted late or not at all and that granted approvals are withdrawn temporarily or for good. One example is the preliminary halt to the clearance of Hambach Forest ordered by the Münster Higher Administrative Court. As set out on page 36, this will curtail our earnings from electricity generation from lignite for several years. We are doing everything we can to see to it that the pending lawsuits are concluded as quickly as possible and the delays in the operation of our opencast mine are minimised. However, it has since become likely that the German government will become active and aim for a political solution. In doing so, it would lean on the final report by the Growth, Structural Change and Employment Commission, which deems the preservation of Hambach Forest desirable.

We continue to classify our regulatory and political risks as 'high'. We ascribe the greatest importance to the potential burdens resulting from an accelerated coal phase-out, the introduction of CO_2 taxes and an extended or permanent halt to the clearance of Hambach Forest.

- **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 classify our operating risks as 'medium'.

- **Financial risks.** The development of market interest rates, foreign exchange rates, share prices and collateral pledged for forward transactions can have a significant effect on our financial position. As set out earlier, our greatest financial risk until the beginning of 2018 was the potential decline in the market value of our stake in innogy. This risk has become much less important because we agreed the sale of the shareholding to E.ON at a fixed price. However, the remaining shares in our financial portfolio are still exposed to the risk of decreases in value. The average VaR for the share price risk of these stocks (without innogy) in 2018 was €5 million (previous year: €2 million).

  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 €3 million on average at RWE AG (previous year: €5 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 in 2018 and the previous year was €3 million.

  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, all other things being equal, provisions rise when market interest rates fall and vice versa.

  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 2018, the average VaR for RWE AG's foreign currency position was less than €1 million. The same applies to the prior year.

Collateral pledged for forward transactions can have a significant effect on our liquidity. Its level is determined by the extent to which the contractually agreed prices deviate from current market quotations. These differences can be substantial, especially on volatile markets. In recent times, the prices of commodities of importance to us have fluctuated considerably, in particular those of CO_2 emission allowances. This development exposes us to risks. However, this also increases the probability of receiving substantial collateral from contracting parties, resulting in a temporary increase in our equity.

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 in part dependent on the credit ratings we receive from international rating agencies. As set out on page 53, 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, which can result in additional costs if we have to raise debt capital. This would probably also make it more expensive to pledge collateral for forward transactions.

We classify our financial risks as 'medium' as opposed to 'high' in the previous year. The improved classification results from the aforementioned decline in the share price risk of our stake in innogy.

- **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. It also encompasses the possibility of planned acquisitions or divestments not being implemented, for example owing to regulatory requirements. Our single-largest risk in this category is the potential failure of the planned asset swap with E.ON. We endeavour to ensure that the transaction is executed as planned by maintaining intense dialogue with the parties involved and preparing and supporting the approval processes carefully. Negative developments after the successful completion of the asset swap cannot be ruled out, either. For instance, the integration of the assets that we receive from E.ON and are returned to us from the innogy portfolio may prove more difficult than anticipated. Furthermore, the operational development of these activities may lag behind expectations. As far as legally possible, we are already seeing to it that the new assets are integrated into RWE successfully and have taken the first staffing and organisational measures necessary to continue managing these activities successfully in the future.

  Despite legal and economic imponderables, we deem it improbable that the asset swap with E.ON will fail. Should this occur nevertheless, it would have extremely negative ramifications. In consequence, we classify this risk as high, and therefore the entire 'other risks' class as well (previous year: 'low').

- **Risks related to innogy – continuing operations.** As set out earlier, our subsidiary innogy manages its risks independently. The parent company RWE AG is informed of the subsidiary's risk exposure once every six months. If the asset swap with E.ON is executed as planned, the risks and opportunities relating to the innogy assets that will be transferred to E.ON will no longer affect RWE as they will be transferred with retrospective economic effect to 1 January 2018. The developments at innogy relating to the renewable energy business, gas storage and the minority interest in Austria-based Kelag are still of importance to us.

  Earnings in the renewable energy business strongly depend on state subsidy schemes. Here, there is a risk that the realisable compensation declines and new projects cease to be attractive. This can lead to investment undertakings 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 determined by wholesale electricity prices. This applies for example to wind farms when subsidies have expired. If such risks materialise, impairments may have to be recognised for these plants or they may be sold below their carrying amount. However, these plants can earn unexpectedly high returns if wholesale electricity prices increase.

  The margins realisable in the gas storage business partially depend on seasonal differences in the price of gas. Significant differences enable substantial income to be achieved. Conversely, shrinking price gaps can lead to earnings shortfalls and impairments.

  innogy monitors these and its other risks continuously and takes countermeasures where necessary. The company provides more detailed information on its risk management system and the material risks and opportunities in its current annual report.

RWE's risk and opportunity situation: general assessment by management. As demonstrated by the contents of this chapter, RWE's risk exposure is largely influenced by economic and regulatory framework conditions and the implementation of the asset swap with E.ON. Regulatory risks arise inter alia from the recommendations of the Growth, Structural Change and Employment Commission. We anticipate that the German government will follow the proposals and that we will therefore have to shut down further lignite units prematurely. However, we firmly believe that we will receive adequate compensation for the economic damage. In addition, it is possible that the framework conditions for the lignite business become more reliable. We are also exposed to regulatory risks outside Germany. Of notable mention in this context is the uncertainty surrounding the continuation of the UK capacity market. The plans of the Dutch government to phase out coal in the coming decade and introduce a carbon floor price also expose us to risks. We are raising awareness of the consequences of such intervention and are lobbying for a reliable regulatory framework. We have not identified any material risks for RWE arising from the impending exit of the United Kingdom from the EU, even in the event of a hard Brexit.

Market conditions in electricity generation have a significant influence on our earnings. German wholesale prices are currently far above the record low at the beginning of 2016, in part because prices of fuel such as hard coal and gas have increased. Should these trends reverse and electricity prices drop sharply once again, significant earnings shortfalls are possible, which may lead to a downgrade of our credit rating and additional collateralisation of hedging trading transactions. However, prices may continue to trend upwards and generation margins may improve. Such a development may also be driven by the German nuclear phase-out, because additional power plant closures cause reliably available generation capacity to become tighter.

The envisaged asset swap with E.ON will enable us to broaden our operational setup and thus better cushion the risks of conventional electricity generation. The transaction will also make us stronger financially. Therefore, its failure would have a negative impact. We are confident of being able to complete the asset swap this year.

With ambitious efficiency-enhancement 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 the Debt Issuance Programme, the Commercial Paper Programme and the syndicated credit line. 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 and misrepresentations 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 our groupwide guidelines. Building on this, minimum requirements for the accounting-related IT systems are designed to ensure the reliability of data collection and processing.

RWE AG is responsible for the design and monitoring of the ICS. These tasks are performed by the Accounting Department, adhering to a groupwide set of rules. On top of this, we created the ICS Committee. Its objective is to ensure that the ICS is applied throughout the Group following uniform principles and meeting high ambitions in terms of correctness and transparency. The Committee consists of representatives from the Accounting, Controlling & Risk Management and Internal Auditing & Compliance departments, along with officers from the areas of human resources, procurement, trading, finance, taxes and IT, all of whom play an important role in accounting.

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 pertain to accounting-related processes, e. g. the receipt and processing of invoices in our service centre in Cracow, the preparation of financial statements or consolidation, they are conducted by employees from the Accounting Department. The representatives of the finance, human resources, procurement, trading and IT functions document 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 2018 once again demonstrated that the ICS is effective.

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 take a half-year and full-year balance-sheet oath, confirming that the prescribed accounting standards have been adhered to and that the financial statements 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.

1.14 OUTLOOK

Our generation margins will probably improve somewhat in fiscal 2019. Furthermore, electricity generation from wind is expected to increase substantially, resulting in a significant rise in earnings from the renewable energy business of our subsidiary innogy. However, we also anticipate curtailments, for example due to the temporary halt to the clearance of Hambach Forest and the suspension of payments from the UK capacity market. Based on current planning, our adjusted EBITDA will total between €1.4 billion and €1.7 billion this year. This forecast relates to RWE's continuing operations. We are confident of being able to complete the asset swap with E.ON this year. However, this forecast does not consider the impact on earnings stemming from the completion of the transaction.

Experts predict weaker growth. Based on initial forecasts, the global economy will expand by approximately 2.5 % in 2019, which would be less than last year. Economic prospects also clouded in the Eurozone, with estimated growth of some 1.5 %. Experts anticipate a similar gain in Germany, whereas growth in the Netherlands may well once again exceed the average of the Eurozone countries. The development of gross domestic product in the United Kingdom largely depends on an orderly Brexit, in which case the country could post an increase of 1.5 %.

Power consumption likely to be stable in Germany and the UK. Our forecast for this year's electricity usage is based on the economy's assumed development. If it grows as expected, demand for electricity should be roughly flat in Germany and the United Kingdom. Positive economic stimulus will probably be contrasted once again by the dampening effects of energy savings. In view of the slightly stronger economic expansion in the Netherlands, we expect the country's electricity consumption to post a marginal rise.

Electricity production for 2019 nearly completely sold forward. The development of commodity prices will depend on a number of factors that are nearly impossible to predict. At any rate, this would only have a minor impact on our earnings this year, as we have sold forward nearly all of our electricity generation for 2019 and secured the prices of the required fuel and CO_2 emission allowances. These transactions have been concluded up to three years in advance. Therefore, the realised electricity prices do not reflect current market prices, which are much higher than in 2016. The price realised for 2019 for the electricity generated by our German lignite-fired and nuclear power stations, which we sold forward with especially long lead times, was slightly higher year on year.

Adjusted EBITDA forecast € million	2018 actual	Outlook for 2019
RWE Group	1,538	1,400–1,700
of which:		
Lignite & Nuclear	356	300–400
European Power	334	250–350
Supply & Trading	183	100–300
innogy - continuing operations	699	800–900

Adjusted EBITDA in 2019: range of €1.4 billion to €1.7 billion expected. The upward trend of realised electricity prices will have a positive effect on earnings in 2019. Additional income is anticipated in the renewable energy business due to the commissioning of new generation capacity. Earnings contributed by existing stations would rise, assuming normalised wind conditions. Burdens will be imposed by the court rulings on Hambach Forest and the UK capacity market (see page 36 et seq.).

Based on our current planning for 2019, the RWE Group's adjusted EBITDA will range from €1.4 billion to €1.7 billion (2018: €1.5 billion). In light of the expected depreciation and amortisation of about €1 billion, adjusted EBIT is anticipated to be in the order of €0.4 billion to €0.7 billion. As mentioned elsewhere in this report, adjusted EBITDA and adjusted EBIT exclude material non-operating and aperiodic effects. The latter are assigned to the non-operating result, the components of which are presented in the reporting on actuals on page 47.

The aforementioned forecast ranges only relate to continuing operations. They do not consider the potential impact on earnings of a completion of the transaction with E.ON, which is scheduled for this year. However, we would recognise book gains from this transaction in the non-operating result. Likewise, the outlook does not take account of a potential coal phase-out ordered by the government as it is currently impossible to make a reliable assessment of its effects. In addition, we assume that payments on the UK capacity market will not resume this year.

We anticipate that earnings will develop as follows at the segment level:

- Lignite & Nuclear: Here, adjusted EBITDA should range between €300 million and €400 million. As mentioned earlier, we have already placed most of this year's electricity production on the market. In sum, the margins we achieved were slightly higher than those for 2018. By contrast, the temporary halt to the clearance of Hambach Forest will reduce earnings. We estimate that the curtailment will amount to between €100 million and €200 million per year for 2019 to 2021. Thanks to optimised processes, we are confident that the earnings shortfalls will be at the lower end of this range in 2019.

- European Power: Adjusted EBITDA recorded by this segment is expected to total between €250 million and €350 million. This assumes that we will not receive any capacity payments in the United Kingdom this year. About €180 million had been secured for 2019 in earlier auctions, which we have disregarded in our planning due to the suspension of the capacity market.

- Supply & Trading: We anticipate that we will be able to achieve average adjusted EBITDA in the order of €200 million per year in this segment in the long run. It is highly probable that it will range from €100 million to €300 million, which is what we expect for 2019 as well.

- innogy – continuing operations: In this segment, adjusted EBITDA is likely to close the year between €800 million and €900 million. Compared to last year (€699 million) this would represent a significant increase, which would primarily be attributable to the renewable energy business. Assuming that wind conditions in 2019 are in line with the long-term average, the usage of the UK and Central European wind farms will be much higher than in 2018. Commissioning new generation capacity will also have a positive impact on earnings. Furthermore, renewable generation assets, which are not subsidised through fixed feed-in payments, should benefit from the rise in wholesale electricity quotations.

Capital expenditure in 2019 markedly up year on year. According to current planning, capital expenditure this year is likely to be much higher than in 2018 (€1.3 billion). We expect a considerable increase to be posted by innogy's continuing operations (last year: €0.7 billion): the construction of the Triton Knoll offshore wind farm in the UK and the Limondale solar farm in Australia will increase expenditure. In conventional power generation, we anticipate spending capital in the order of €0.5 billion on property, plant and equipment, primarily on the maintenance and modernisation of power plants and opencast mines. A small portion of these funds is earmarked for growth projects, e. g. the conversion of our Dutch hard coal-fired power stations to biomass co-firing.

Significant rise in net debt expected. The net debt of the RWE Group's continuing operations, which totalled €4.4 billion at the end of 2018, is likely to rise substantially in the fiscal year underway. As set out on page 53, last year was characterised by high cash inflows from variation margins relating to forward transactions involving CO_2 certificates and other commodities. Once the contracts are realised, some of which mature in 2019, the effects will be reversed. The rise in investing activity will also be reflected in net debt.

Outlook for the RWE Group with innogy as a purely financial investment. For management purposes, we also use Group figures in which innogy is considered as a purely financial investment. On the income statement, our subsidiary is only reflected based on the dividend to which RWE is entitled. Further details on how these figures are calculated can be found on page 58. Applying this method, our adjusted EBITDA is expected to total between €1.2 billion and €1.5 billion in fiscal 2019 (last year: €1.5 billion). Net income adjusted for aperiodic and non-operating effects is anticipated to range from €0.3 billion to €0.6 billion (last year: €0.6 billion).

2 RESPONSIBILITY STATEMENT

To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group review of operations includes a fair review of the development and performance of the business and the position of the Group, together with a description of the principal opportunities and risks associated with the expected development of the Group.

Essen, 27 February 2019

The Executive Board

Schmitz Krebber

03

Consolidated financial statements

3.1 INCOME STATEMENT

€ million	Note	2018	2017[1]
Revenue (including natural gas tax/electricity tax)	(1)	**13,529**	**13,953**
Natural gas tax/electricity tax	(1)	141	131
Revenue	(1)	**13,388**	**13,822**
Other operating income	(2)	931	3,256
Cost of materials	(3)	10,237	10,029
Staff costs	(4)	1,895	1,848
Depreciation, amortisation and impairment losses	(5), (10)	948	1,330
Other operating expenses	(6)	950	1,909
Income from investments accounted for using the equity method	(7), (12)	211	137
Other income from investments	(7)	–42	20
Financial income	(8)	472	1,545
Finance costs	(8)	881	1,608
Income from continuing operations before tax		**49**	**2,056**
Taxes on income	(9)	103	333
Income from continuing operations		**–54**	**1,723**
Income from discontinued operations		1,127	592
Income		**1,073**	**2,315**
of which: non-controlling interests		679	373
of which: RWE AG hybrid capital investors' interest		59	42
of which: net income/income attributable to RWE AG shareholders		**335**	**1,900**
Basic and diluted earnings per common and preferred share in €	(25)	**0.54**	**3.09**
of which: from continuing operations in €		–0.32	2.77
of which: from discontinued operations in €		0.86	0.32

1 Prior-year figures adjusted.

3.2 STATEMENT OF COMPREHENSIVE INCOME

Figures stated after taxes – € million	Note	2018	2017
Income		**1,073**	**2,315**
Actuarial gains and losses of defined benefit pension plans and similar obligations		–1,183	1,346
Income and expenses of investments accounted for using the equity method (pro rata)	(12)	13	–85
Fair valuation of equity instruments		–105	
Income and expenses recognised in equity, not to be reclassified through profit or loss		**–1,275**	**1,261**
Currency translation adjustment	(20)	–8	174
Fair valuation of financial instruments available for sale	(26)		44
Fair valuation of debt instruments		–18	
Fair valuation of financial instruments used for hedging purposes	(26)	3,170	818
Income and expenses of investments accounted for using the equity method (pro rata)	(12), (20)	–1	–15
Income and expenses recognised in equity, to be reclassified through profit or loss in the future		**3,143**	**1,021**
Other comprehensive income		**1,868**	**2,282**
Total comprehensive income		**2,941**	**4,597**
of which: attributable to RWE AG shareholders		2,350	3,996
of which: attributable to RWE AG hybrid capital investors		59	42
of which: attributable to non-controlling interests		532	559

3.3 BALANCE SHEET

Assets € million	Note	31 Dec 2018	31 Dec 2017
Non-current assets			
Intangible assets	(10)	2,193	12,383
Property, plant and equipment	(11)	12,409	24,947[1]
Investments accounted for using the equity method	(12)	1,467	2,846
Other non-current financial assets	(13)	400	1,109
Financial receivables	(14)	110	359
Other receivables and other assets	(15)	946	1,187
Income tax assets		246	236
Deferred taxes	(16)	824	2,627
		18,595	**45,694**
Current assets			
Inventories	(17)	1,631	1,924
Financial receivables	(14)	2,782	1,745
Trade accounts receivable		1,963	5,405
Other receivables and other assets	(15)	7,408	4,892
Income tax assets		101	445
Marketable securities	(18)	3,609	4,893
Cash and cash equivalents	(19)	3,523	3,933
Assets held for sale		40,496	128
		61,513	**23,365**
		80,108	**69,059**

Equity and liabilities € million	Note	31 Dec 2018	31 Dec 2017
Equity	(20)		
RWE AG shareholders' interest		8,736	6,759
RWE AG hybrid capital investors' interest		940	940
Non-controlling interests		4,581	4,292
		14,257	**11,991**
Non-current liabilities			
Provisions	(22)	15,863	19,249
Financial liabilities	(23)	1,998	14,414
Other liabilities	(24)	508	2,393
Deferred taxes	(16)	1,638	718
		20,007	**36,774**
Current liabilities			
Provisions	(22)	2,615	5,137
Financial liabilities	(23)	766	2,787
Trade accounts payable		2,429	5,077
Income tax liabilities		38	100
Other liabilities	(24)	7,200	7,082
Liabilities held for sale		32,796	111
		45,844	**20,294**
		80,108	**69,059**

1 Figure adjusted because investment property (carrying amount as of 31 December 2017: €43 million) has been subsumed under property, plant and equipment.

3.4 CASH FLOW STATEMENT

€ million	Note (29)	2018	2017[1]
Income		– 54	1,723
Depreciation, amortisation, impairment losses/write-backs		958	968
Changes in provisions		–418	–6,878
Changes in deferred taxes		–97	81
Income from disposal of non-current assets and marketable securities		–6	–90
Other non-cash income/expenses		–245	225
Changes in working capital		4,473	200
Cash flows from operating activities of continuing operations		**4,611**	**–3,771**
Cash flows from operating activities of discontinued operations		2,037	2,017
Cash flows from operating activities		**6,648**	**–1,754**
Intangible assets/property, plant and equipment			
Capital expenditure		–1,050	–685
Proceeds from disposal of assets		35	168
Acquisitions, investments			
Capital expenditure		–196	–217
Proceeds from disposal of assets/divestitures		39	66
Changes in marketable securities and cash investments		–1,704	4,442
Cash flows from investing activities of continuing operations (before initial/subsequent transfer to plan assets)		**–2,876**	**3,774**
Initial/subsequent transfer to plan assets		–123	–24
Cash flows from investing activities of continuing operations (after initial/subsequent transfer to plan assets)		**–2,999**	**3,750**
Cash flows from investing activities of discontinued operations		–1,405	–1,059
Cash flows from investing activities (after initial/subsequent transfer to plan assets)		**–4,404**	**2,691**
Net change in equity (incl. non-controlling interests)		721	–5
Dividends paid to RWE AG shareholders and non-controlling interests		–1,025	–159
Issuance of financial debt		1,580	130
Repayment of financial debt		–2,835	–963
Cash flows from financing activities of continuing operations		**–1,559**	**–997**
Cash flows from financing activities of discontinued operations		569	–539
Cash flows from financing activities		**–990**	**–1,536**
Net cash change in cash and cash equivalents		1,254	–599
Effects of changes in foreign exchange rates and other changes in value on cash and cash equivalents		13	–19
Net change in cash and cash equivalents		**1,267**	**–618**
Cash and cash equivalents at beginning of the reporting period		3,958	4,576
of which: reported as 'Assets held for sale'		25	
Cash and cash equivalents at beginning of the reporting period as per the consolidated balance sheet		3,933	4,576
Cash and cash equivalents at the end of the reporting period		5,225	3,958
of which: reported as 'Assets held for sale'		1,702	25
Cash and cash equivalents at end of the reporting period as per the consolidated balance sheet		**3,523**	**3,933**

1 Prior-year figures adjusted.

3.5 STATEMENT OF CHANGES IN EQUITY

Statement of changes in equity € million	Subscribed capital of RWE AG	Additional paid-in capital of RWE AG	Retained earnings and distributable profit	Accumulated other Comprehensive Income			**RWE AG shareholders' interest**	RWE AG hybrid capital investors' interest	Non-controlling interests	**Total**
				Currency translation adjustments	Fair value measurement of financial instruments					
Note (20)					Available for sale[1]/debt instruments measured at fair value through other comprehensive income	Used for hedging purposes				
Balance at 1 Jan 2017	**1,574**	**2,385**	**−652**	**165**	**59**	**−777**	**2,754**	**942**	**4,294**	**7,990**
Capital paid out									−45	−45
Dividends paid[2]			−5				−5	−60	−480	−545
Income			1,900				1,900	42	373	2,315
Other comprehensive income			1,110	139	34	813	2,096		186	2,282
Total comprehensive income			3,010	139	34	813	3,996	42	559	4,597
Other changes			14				14	16	−36	−6
Balance at 31 Dec 2017	**1,574**	**2,385**	**2,367**	**304**	**93**	**36**	**6,759**	**940**	**4,292**	**11,991**
Initial adoption of IFRS 9			47		−62		−15		−4	−19
Initial adoption of IFRS 15			−21				−21		−5	−26
Balance at 1 Jan 2018	**1,574**	**2,385**	**2,393**	**304**	**31**	**36**	**6,723**	**940**	**4,283**	**11,946**
Capital paid out									−29	−29
Dividends paid[2]			−922				−922	−60	−506	−1,488
Income			335				335	59	679	1,073
Other comprehensive income			−1,126	−19	−14	3,174	2,015		−147	1,868
Total comprehensive income			−791	−19	−14	3,174	2,350	59	532	2,941
Other changes			459			126	585	1	301	887
Balance at 31 Dec 2018	**1,574**	**2,385**	**1,139**	**285**	**17**	**3,336**	**8,736**	**940**	**4,581**	**14,257**

1 Changes in the 'Financial assets available for sale' category stated for the last time in fiscal 2017 in accordance with IAS 39. Starting in fiscal 2018, changes in the 'Debt instruments measured at fair value through other comprehensive income' category are stated instead due to the application of IFRS 9.
2 Following reclassification of non-controlling interests to other liabilities as per IAS 32 and to liabilities held for sale.

3.6 NOTES

Basis of presentation

RWE AG, headquartered at Altenessener Straße 35 in 45141 Essen, Germany, is the parent company of the RWE Group ('RWE' or 'Group'). RWE is a supplier of electricity and natural gas in Europe.

The consolidated financial statements for the period ended 31 December 2018 were approved for publication on 27 February 2019 by the Executive Board of RWE AG. The statements were prepared in accordance with the International Financial Reporting Standards (IFRSs) applicable in the EU, as well as in accordance with the supplementary accounting regulations applicable pursuant to Sec. 315e, Para. 1 of the German Commercial Code (HGB). The previous year's figures were calculated according to the same principles.

A statement of changes in equity has been disclosed in addition to the income statement, the statement of comprehensive income, the balance sheet and the cash flow statement. The Notes also include segment reporting.

Several balance sheet and income statement items have been combined in the interests of clarity. These items are stated and explained separately in the Notes to the financial statements. The income statement is structured according to the nature of expense method.

The consolidated financial statements have been prepared in euros. Unless specified otherwise, all amounts are stated in millions of euros (€ million). Due to calculation procedures, rounding differences may occur.

These consolidated financial statements were prepared for the fiscal year from 1 January to 31 December 2018.

The Executive Board of RWE AG is responsible for the preparation, completeness and accuracy of the consolidated financial statements and the Group review of operations, which is combined with the review of operations of RWE AG.

We employ internal control systems, uniform groupwide directives, and programmes for basic and advanced staff training to ensure that the consolidated financial statements and combined review of operations are adequately prepared. Compliance with legal regulations and the internal guidelines as well as the reliability and viability of the control systems are continuously monitored throughout the Group.

In line with the requirements of the German Corporate Control and Transparency Act (KonTraG), the Group's risk management system enables the Executive Board to identify risks at an early stage and take countermeasures, if necessary.

The consolidated financial statements, the combined review of operations, and the independent auditors' report are discussed in detail by the Audit Committee and at the Supervisory Board's meeting on financial statements with the independent auditors present. The results of the Supervisory Board's examination are presented in the report of the Supervisory Board on page 8 et seqq.

Scope of consolidation

In addition to RWE AG, the consolidated financial statements contain all material German and foreign companies which RWE AG controls directly or indirectly. In determining whether there is control, in addition to voting rights, other rights in the company contracts or articles of incorporation and potential voting rights are also taken into consideration.

Material associates are accounted for using the equity method, and principal joint arrangements are accounted for using the equity method or as joint operations.

Associates are companies on which RWE AG exercises a significant influence on the basis of voting rights between 20 % and 50 % or on the basis of contractual agreements. In classifying joint arrangements which are structured as independent vehicles, as joint operations, or as joint ventures, other facts and circumstances – in particular delivery relationships between the joint arrangement and the parties participating in such – are taken into consideration, in addition to the legal form and contractual agreements.

Investments in subsidiaries, joint ventures, joint operations or associates which are of secondary importance from a Group perspective are accounted for in accordance with IFRS 9.

The list of Group shareholdings pursuant to Sec. 313, Para. 2 of the German Commercial Code (HGB) is presented on page 160 et seqq.

The following summaries show the changes in the number of fully consolidated companies, investments accounted for using the equity method, and joint ventures:

Number of fully consolidated companies	Germany	Abroad	Total
1 Jan 2018	**142**	**199**	**341**
First-time consolidation	6	63	69
Deconsolidation	−3	−10	−13
Mergers	−4	−37	−41
31 Dec 2018	**141**	**215**	**356**

Number of companies accounted for using the equity method	Germany	Abroad	Total
1 Jan 2018	**72**	**18**	**90**
Acquisitions		2	2
Other changes	−63	−8	−71
31 Dec 2018	**9**	**12**	**21**

The number of companies accounted for using the equity method decreased primarily due to the asset swap agreed upon with E.ON and the associated assignment to 'discontinuing operations'.

Furthermore, six companies are presented as joint operations (previous year: six). Of these, Greater Gabbard Offshore Winds Limited, UK, is a material joint operation of the RWE Group. Greater Gabbard holds a 500 MW offshore wind farm, which innogy operates together with Scottish and Southern Energy (SSE) Renewables Holdings. Innogy Renewables UK owns 50 % of the shares and receives 50 % of the power generated (including green power certificates). The wind farm is a key element in the offshore portfolio of the segment innogy – continuing operations.

First-time consolidation and deconsolidation generally take place when control is transferred.

In total, sales of shares which led to a change of control resulted in sales proceeds from disposals amounting to –€46 million, which were reported in other operating income (previous year: €19 million). Of this, €14 million pertained to the remeasurement of remaining shares.

Within the framework of purchases and sales of subsidiaries and other business units which resulted in a change of control, purchase prices amounted to €27 million (previous year: €159 million) and sales prices amounted to €13 million (previous year: €5 million). As in the previous year, all sales prices were paid in cash. In the year under review, all purchase prices were paid in cash. In the previous year, purchase prices in the amount of €134 million were paid in cash and €25 million in liabilities were assumed. In relation to this, in the previous year, cash and cash equivalents (excluding 'Assets held for sale') were acquired in the amount of €25 million and were disposed of in the amount of €5 million.

Disposals

Mátra
RWE Power sold Hungary-based Mátrai Erőmű ZRt. (Mátra) to a consortium in the middle of December 2017. The transaction was completed in March 2018. Mátra had been assigned to the 'Lignite & Nuclear' segment. As of 31 December 2017, the assets and liabilities of this company were stated as 'held for sale' on the balance sheet. The deconsolidation loss amounts to €46 million and was recognised in other operating expenses.

Triton Knoll
On 13 September 2018, innogy sold a 41 % stake in the UK offshore wind project Triton Knoll, in which innogy was the sole shareholder until that date. The sale increased RWE AG shareholders' equity by €472 million. Since the sale of the stake, innogy has held a 59 % interest and thus retained control of the project. Triton Knoll is assigned to the innogy – continuing operations segment.

Discontinued operations

Asset swap with E.ON

On 12 March 2018, RWE AG and E.ON SE reached a contractual agreement to transfer the 76.8 % majority stake in innogy held by RWE to E.ON as part of an extensive exchange of operations and shareholdings. The innogy assets that are to be transferred to E.ON over the long term have been stated as 'discontinued operations' since 30 June 2018. This mainly relates to the grid and retail business, which has been assigned to the 'innogy' segment thus far. By contrast, due to contractual arrangements RWE will retain control over the main activities of the innogy operations remaining with RWE over the long term (the renewables business, the gas storage business and the interest in Austria-based power utility Kelag). Furthermore, as RWE is entitled to the results of the development of the value of these operations, they will remain fully consolidated at RWE and stated as continuing innogy operations in segment reporting. The transaction values the 76.8 % stake in innogy held by RWE including the dividends of innogy SE for fiscal 2017 and 2018 totalling €3.24 per share, to which RWE remains entitled, at €40.00 per share. The transaction volume thus amounts to about €17.1 billion. The Supervisory Board of RWE AG has approved the sale. The transaction is subject to authority approvals and is envisaged to close by the end of 2019.

The elimination bookings within the scope of the consolidation of expenses and income for the intragroup deliveries and services existing so far, which will be continuing either with innogy or with third parties after the deconsolidation of the innogy assets that are to be transferred, were fully assigned to the discontinued operations.

Major key figures of the activities of the discontinued innogy operations are presented in the following tables:

Key figures of discontinued operations € million	31 Dec 2018
Non-current assets	
Intangible assets	10,716
Property, plant and equipment	14,000
Other non-current assets	5,363
	30,079
Current assets	**10,417**
Non-current liabilities	
Provisions	4,557
Financial liabilities	14,147
Other non-current liabilities	3,065
	21,769
Current liabilities	**11,027**

Key figures of discontinued operations € million	2018	2017
Revenue[1]	34,077	39,060
Other income[2]	1,503	1,088
Expenses[3]	33,877	39,148
Income of discontinued operations before tax	1,703	1,000
Taxes on income	576	409
Income of discontinued operations	1,127	591

1 Including income with continuing operations in the amount of €2,570 million (previous year: €2,283 million).
2 Including income with continuing operations in the amount of €266 million (previous year: €409 million).
3 Including expenses with continuing operations in the amount of €13,835 million (previous year: €11,282 million).

The first-time application of IFRS 15 involved identifying issues, in which companies belonging to the innogy – discontinued operations segment qualify as agents pursuant to IFRS 15 instead of as principals pursuant to IAS 18. This is primarily because under IFRS 15, the credit risk no longer constitutes an indicator for principal presentation. Pursuant to IFRS 15, payments received from the transmission system operator under the direct marketing and feed-in model of the German Renewable Energy Act are thus no longer recognised as revenue. In fiscal 2018, this caused revenue and the cost of materials within income from discontinued operations to decline by €5.1 billion. This did not have an impact on earnings.

Accumulated other comprehensive income from discontinued operations amounted to – €773 million (previous year: – €730 million).

Of the share of total comprehensive income attributable to RWE AG shareholders, €2,267 million (previous year: €4,159 million) were allocable to continuing operations and €83 million (previous year: – €163 million) were allocable to discontinued operations.

The impairment test performed for the discontinued operations as a whole in accordance with IFRS 5 as of 31 December 2018 did not reveal a need for impairment.

Consolidation principles

The financial statements of German and foreign companies included in the scope of the Group's financial statements are prepared using uniform accounting policies. On principle, subsidiaries whose fiscal years do not end on the Group's balance-sheet date (31 December) prepare interim financial statements as of this date. Three subsidiaries have a different balance-sheet date of 31 March (previous year: three). Different fiscal years compared to the calendar year stem from tax-related reasons or country-specific regulations.

Business combinations are reported according to the acquisition method. This means that capital consolidation takes place by offsetting the purchase price, including the amount of the non-controlling interests, against the acquired subsidiary's revalued net assets at the time of acquisition. In doing so, the non-controlling interests can either be measured at the prorated value of the subsidiary's identifiable net assets or at fair value. The subsidiary's identifiable assets, liabilities and contingent liabilities are measured at full fair value, regardless of the amount of the non-controlling interests. Intangible assets are reported separately from goodwill if they are separable from the company or if they stem from a contractual or other right. In accordance with IFRS 3, no new restructuring provisions are recognised within the scope of the purchase price allocation. If the pur-chase price exceeds the revalued prorated net assets of the acquired subsidiary, the difference is capitalised as goodwill. If the purchase price is lower, the difference is included in income.

In the event of deconsolidation, the related goodwill is derecognised with an effect on income. Changes in the ownership share which do not alter the ability to control the subsidiary are recognised without an effect on income. By contrast, if there is a change in control, the remaining shares are revalued with an effect on income.

Expenses and income as well as receivables and payables between consolidated companies are eliminated; intra-group profits and losses are eliminated.

For investments accounted for using the equity method, goodwill is not reported separately, but rather included in the value recognised for the investment. In other respects, the consolidation principles described above apply analogously. If impairment losses on the equity value become necessary, we report such under income from investments accounted for using the equity method. The financial statements of investments accounted for using the equity method are prepared using uniform accounting policies.

For joint operations, the assets and liabilities and the expenses and income of the companies which are attributable to RWE are reported. In the event that RWE's shareholding differs from the share of the output from the activity to which RWE is entitled (share of output), the assets, liabilities, expenses and revenue are recognised in accordance with the share of output.

Foreign currency translation

In their individual financial statements, the companies measure non-monetary foreign currency items at the balance-sheet date using the exchange rate in effect on the date they were initially recognised. Monetary items are converted using the exchange rate valid on the balance-sheet date. Exchange rate gains and losses from the measurement of monetary balance-sheet items in foreign currency occurring up to the balance-sheet date are recognised on the income statement.

Functional foreign currency translation is applied when converting the financial statements of companies outside of the Eurozone. As the principal foreign enterprises included in the consolidated financial statements conduct their business activities independently in their national currencies, their balance-sheet items are translated into euros in the consolidated financial statements using the average exchange rate prevailing on the balance-sheet date. This also applies for goodwill, which is viewed as an asset of the economically autonomous foreign entity. We report differences to previous-year translations in other comprehensive income without an effect on income. Expense and income items are translated using annual aver- age exchange rates. When translating the adjusted equity of foreign companies accounted for using the equity method, we follow the same procedure.

The following exchange rates (among others) were used as a basis for foreign currency translations:

Exchange rates	Average		Year-end	
in €	2018	2017	31 Dec 2018	31 Dec 2017
1 US dollar	0.85	0.88	0.87	0.83
1 pound sterling	1.13	1.14	1.12	1.13
100 Czech korunas	3.89	3.80	3.89	3.92
1 Polish zloty	0.23	0.24	0.23	0.24

Accounting policies

Intangible assets are accounted for at amortised cost. With the exception of goodwill, all intangible assets have finite useful lives and are amortised using the straight-line method. Useful lives and meth-ods of amortisation are reviewed on an annual basis.

Software for commercial and technical applications is amortised over three to five years. 'Operating rights' refer to the entirety of the permits and approvals required for the operation of a power plant. Such rights are generally amortised over the economic life of the power plant, using the straight-line method. Easement agreements in the electricity and gas business, and other easement rights, usually have useful lives of 20 years. Concessions in the water business generally have terms of up to 25 years. Capitalised customer relations are amortised over a maximum period of up to ten years.

Goodwill is not amortised; instead it is subjected to an impairment test once every year, or more frequently if there are indications of impairment.

Development costs are capitalised if a newly developed product or process can be clearly defined, is technically feasible and it is the company's intention to either use the product or process itself or market it. Furthermore, asset recognition requires that there be a sufficient level of certainty that the development costs lead to future cash inflows. Capitalised development costs are amortised over the period during which the products are expected to be sold. Research expenditures are recognised as expenses in the period in which they are incurred.

An impairment loss is recognised for an intangible asset if the recoverable amount of the asset is less than its carrying amount. A special regulation applies for cases when the asset is part of a cash-generating unit. Such units are defined as the smallest identifiable group of assets which generates cash inflows; these inflows must be largely independent of cash inflows from other assets or groups of assets. If the intangible asset is a part of a cash-generating unit, the impairment loss is calculated based on the recoverable amount of this unit. If goodwill was allocated to a cash-generating unit and the carrying amount of the unit exceeds the recoverable amount, the allocated goodwill is initially written down by the difference. Impairment losses which must be recognised in addition to this are taken into account by reducing the carrying amount of the other assets of the cash-generating unit on a prorated basis. If the reason for an impairment loss recognised in prior periods has ceased to exist, a write-back to intangible assets is performed. The increased carrying amount resulting from the write-back may not, however, exceed the amortised cost. Impairment losses on goodwill are not reversed.

Property, plant and equipment is stated at depreciated cost. Borrowing costs are capitalised as part of the asset's cost, if they are incurred directly in connection with the acquisition or production of a 'qualified asset'. What characterises a qualified asset is that a considerable period of time is required to prepare it for use or sale. If necessary, the cost of property, plant and equipment may contain the estimated expenses for the decommissioning of plants or site restoration. Maintenance and repair costs are recognised as expenses.

With the exception of land and leasehold rights, as a rule, property, plant and equipment is depreciated using the straight-line method, unless in exceptional cases another depreciation method is better suited to the usage pattern. The depreciation methods are reviewed annually. We calculate the depreciation of RWE's typical property, plant and equipment according to the following useful lives, which apply throughout the Group and are also reviewed annually:

Useful life in years	
Buildings	9 – 54
Technical plants	
Thermal power plants	10 – 40
Wind turbines	Up to 23
Power grids	20 – 45
Water mains	20 – 80
Gas and water storage facilities	10 – 60
Gas distribution facilities	10 – 40
Mining facilities	3 – 25
Mining developments	44 – 52
Other renewable generation facilities	4 – 50

Property, plant and equipment held under a finance lease is capitalised at the fair value of the leased asset or the present value of the minimum lease payments, depending on which is lower. They are depreciated using the straight-line method over the expected useful life or the lease term, whichever is shorter.

For operating leasing transactions, in which RWE is the lessee, the leasing payments are recognised as an expense over the term of the lease. If RWE is the lessor, the leasing payments are recognised as income over the term of the lease.

Impairment losses and write-backs on property, plant and equipment are recognised according to the principles described for intangible assets.

Investments accounted for using the equity method are initially accounted for at cost and thereafter based on the carrying amount of their prorated net assets. The carrying amounts are increased or reduced annually by prorated profits or losses, dividends and all other changes in equity. Goodwill is not reported separately, but rather included in the recognised value of the investment. Goodwill is not amortised. An impairment loss is recognised for investments accounted for using the equity method, if the recoverable amount is less than the carrying amount.

The initial measurement of **other financial assets** occurs at the settlement date. Shares in non-consolidated subsidiaries and in associates or joint ventures are recognised at fair value through profit or loss as long as such can be determined reliably. Other investments are also recognised at fair value. The option to state changes in fair value in other comprehensive income is exercised for some of these equity instruments. Non-current securities are accounted for at fair value and changes in value are recognised through profit or loss or other comprehensive income depending on their classification. Gains and losses on sales of equity instruments, for which the option to state changes in fair value in other comprehensive income is exercised, remain in equity and are not reclassified to the income statement. An impairment in the amount of the expected credit losses is recognised through profit or loss for debt instruments that are recognised at fair value through other comprehensive income.

Receivables are comprised of **financial receivables, trade accounts receivable** and **other receivables.** Aside from financial derivatives, **receivables and other assets** are stated at amortised cost minus a risk provision in the amount of the expected losses. Prepayments received from customers for consumption which is yet to be metered and billed are netted out against trade accounts receivable of the utilities.

Loans reported under financial receivables are stated at amortised cost minus a risk provision in the amount of the expected losses. Loans with interest rates common in the market are shown on the balance sheet at nominal value; as a rule, however, non-interest or low-interest loans are disclosed at their present value discounted using an interest rate commensurate with the risks involved.

CO_2 emission allowances and certificates for renewable energies are accounted for as intangible assets and reported under other assets. Allowances which are purchased and allowances allocated free of charge are both stated at cost and are not amortised.

Deferred taxes result from temporary differences in the carrying amount in the separate IFRS financial statements and tax bases, and from consolidation procedures. Deferred tax assets also include tax reduction claims resulting from the expected utilisation of existing loss carryforwards in subsequent years. Deferred taxes are capitalised if it is sufficiently certain that the related economic advantages can be used. Their amount is assessed with regard to the tax rates applicable or expected to be applicable in the specific country at the time of realisation. The tax regulations valid or adopted as of the balance-sheet date are key considerations in this regard. Deferred tax assets and deferred tax liabilities are netted out for each company and/or tax group.

Inventories are assets which are held for sale in the ordinary course of business (finished goods and goods for resale), which are in the process of production (work in progress – goods and services) or which are consumed in the production process or in the rendering of services (raw materials including nuclear fuel assemblies and excavated earth for lignite mining).

Insofar as inventories are not acquired primarily for the purpose of realising a profit on a short-term resale transaction, they are carried at the lower of cost or net realisable value. Production costs reflect the full costs directly related to production; they are determined based on normal capacity utilisation and, in addition to directly allocable costs, they also include adequate portions of required materials and production overheads. They also include production-related depreciation. Borrowing costs, however, are not capitalised as part of the cost. The determination of cost is generally based on average values. The usage of excavated earth for lignite mining is calculated using the 'first in – first out' method (FIFO).

If the net realisable value of inventories written down in earlier periods has increased, the reversal of the write-down is recognised as a reduction of the cost of materials.

Nuclear fuel assemblies are stated at depreciated cost. Depreciation is determined by operation and capacity, based on consumption and the reactor's useful life.

Inventories which are acquired primarily for the purpose of realising a profit on a short-term resale transaction are recognised at fair value less costs to sell. Changes in value are recognised with an effect on income.

Securities classified as current marketable securities essentially consist of marketable securities held in special funds as well as fixed-interest securities which have a maturity of more than three months and less than one year from the date of acquisition. Securities held in special funds are measured at fair value through profit or loss or at fair value through other comprehensive income. The transaction costs directly associated with the acquisition of these securities are included in the initial measurement, which occurs on their settlement date. Unrealised gains and losses are recognised through profit or loss or other comprehensive income, with due consideration of any deferred taxes depending on the underlying valuation category. An impairment in the amount of the expected credit losses is recognised through profit or loss for debt instruments that are stated at fair value through other comprehensive income. Changes included in other comprehensive income are recognised through profit or loss on disposal of such instruments.

Cash and cash equivalents consist of cash on hand, demand deposits and current fixed-interest securities with a maturity of three months or less from the date of acquisition.

Assets are stated under **Assets held for sale** if they can be sold in their present condition and their sale is highly probable within the next twelve months. Such assets may be certain non-current assets, asset groups ('disposal groups') or operations ('discontinued operations'). Liabilities intended to be sold in a transaction together with assets are a part of a disposal group or discontinued operations, and are reported separately under **Liabilities held for sale**.

Non-current assets held for sale are no longer depreciated or amortised. They are recognised at fair value less costs to sell, as long as this amount is lower than the carrying amount.

Gains or losses on the valuation of specific assets held for sale and of disposal groups are stated under income from continuing operations until final completion of the sale. Gains or losses on the valuation of discontinued operations and on certain assets of a discontinued operation, which are not subject to the valuation rules pursuant to IFRS 5, are stated under income from discontinued operations.

The stock option plans are accounted for as cash-settled **share-based payment**. At the balance-sheet date, a provision is recognised in the amount of the prorated fair value of the payment obligation. Changes in the fair value are recognised with an effect on income. The fair value of options is determined using generally accepted valuation methodologies.

Provisions are recognised for all legal or constructive obligations to third parties which exist on the balance-sheet date and stem from past events which will probably lead to an outflow of resources, and the amount of which can be reliably estimated. Provisions are carried at their prospective settlement amount and are not offset against reimbursement claims. If a provision involves a large number of items, the obligation is estimated by weighting all possible outcomes by their probability of occurrence (expected value method).

All non-current provisions are recognised at their prospective settlement amount, which is discounted as of the balance-sheet date. In the determination of the settlement amount, any cost increases likely to occur up until the time of settlement are taken into account.

If necessary, the cost of property, plant and equipment may contain the estimated expenses for the decommissioning of plants or site restoration. Decommissioning, restoration and similar provisions are recognised for these expenses. If changes in the discount rate or changes in the estimated timing or amount of the payments result in changes in the provisions, the carrying amount of the respective asset is increased or decreased by the corresponding amount. If the decrease in the provision exceeds the carrying amount, the excess is recognised immediately through profit or loss.

As a rule, releases of provisions are credited to the expense account on which the provision was originally recognised.

Provisions for pensions and similar obligations are recognised for defined benefit plans. These are obligations of the company to pay future and ongoing post-employment benefits to entitled current and former employees and their surviving dependents. In particular, the obligations refer to retirement pensions. Individual commitments are generally oriented to the employees' length of service and compensation.

Provisions for defined benefit plans are based on the actuarial present value of the respective obligation. This is measured using the projected unit credit method. This method not only takes into account the pension benefits and benefit entitlements known as of the balance-sheet date, but also anticipated future increases in salaries and pension benefits. The calculation is based on actuarial reports, taking into account appropriate biometric parameters (for Germany, in particular the 'Richttafeln 2018 G' by Klaus Heubeck, in the previous year the 'Richttafeln 2005 G' by Klaus Heubeck, and the Standard SAPS Table S2PA of the current year for the United Kingdom, taking into consideration future changes in mortality rates). The provision derives from the balance of the actuarial present value of the obligations and the fair value of the plan assets. The service cost is disclosed in staff costs. Net interest is included in the financial result.

Gains and losses on the revaluation of net debt or net assets are fully recognised in the fiscal year in which they occur. They are reported outside of profit or loss, as a component of other comprehensive income in the statement of comprehensive income, and are immediately assigned to retained earnings. They remain outside profit or loss in subsequent periods as well.

In the case of defined contribution plans, the enterprise's obligation is limited to the amount it contributes to the plan. Contributions to the plan are reported under staff costs.

Waste management provisions in the nuclear energy sector are based on obligations under public law, in particular the German Atomic Energy Act, and on restrictions from operating licenses. These provisions are measured using estimates, which are based on and defined in contracts as well as on information from internal and external specialists (e.g. experts).

Obligations existing as of the balance-sheet date and identifiable when the balance sheet is being prepared are recognised as provisions for mining damage to cover land recultivation and remediation of mining damage that has already occurred or been caused. The provisions must be recognised due to obligations under public law, such as the German Federal Mining Act, and formulated, above all, in operating schedules and water law permits. Provisions are generally fully related to the degree of mining in question. Such provisions are measured at full expected cost or according to estimated compensation payments. Cost estimates are based on external expert opinions to a significant extent.

A provision is recognised to cover the obligation to submit CO_2 emission allowances and certificates for renewable energies to the respective authorities; this provision is measured at the carrying amount of the CO_2 allowances or certificates for renewable energies capitalised for this purpose. If a portion of the obligation is not covered with the available allowances, the provision for this portion is measured using the market price of the emission allowances or certificates for renewable energies on the reporting date.

Liabilities consist of **financial liabilities, trade accounts payable, income tax liabilities** and **other liabilities**. Upon initial recognition, these are stated at fair value including transaction costs and are carried at amortised cost in the periods thereafter (except for derivative financial instruments). Liabilities from finance lease agreements are either measured at the fair value of the leased asset or the present value of minimum lease payments, depending on which amount is lower. For subsequent measurements, the minimum lease payments are divided into the financing costs and repayment portion of the outstanding debt. Financing costs are distributed over the term of lease in such a manner that a steady interest rate is created for the outstanding debt.

In the previous year, other liabilities included advances and contributions in aid of construction and building connection that are carried as liabilities by the utilities and are generally amortised and included in income over the useful life of the corresponding asset.

Furthermore, in the previous year, certain non-controlling interests were also included in other liabilities. Specifically, this pertained to purchase price obligations from rights to tender non-controlling interests (put options).

Moreover, other liabilities also include contract liabilities. A contract liability is the obligation of the Group to transfer goods or services to a customer, for which we have already received consideration or for which the consideration is already due.

Derivative financial instruments are recognised as assets or liabilities and measured at fair value, regardless of their purpose. Changes in this value are recognised with an effect on income, unless the instruments are used for hedge accounting purposes. In such cases, recognition of changes in the fair value depends on the type of hedging transaction.

Fair value hedges are used to hedge assets or liabilities carried on the balance sheet against the risk of a change in their fair value. The following applies: changes in the fair value of the hedging instrument and the fair value of the respective underlying transactions are recognised in the same line item on the income statement. Hedges of unrecognised firm commitments are also recognised as fair value hedges. Changes in the fair value of the firm commitments with regard to the hedged risk result in the recognition of an asset or liability with an effect on income.

Cash flow hedges are used to hedge the risk of variability in future cash flows related to an asset or liability carried on the balance sheet or related to a highly probable forecast transaction. If a cash flow hedge exists, unrealised gains and losses from the hedging instrument are initially stated as other comprehensive income. Such gains or losses are only included on the income statement when the hedged underlying transaction has an effect on income. If forecast transactions are hedged and such transactions lead to the recognition of a financial asset or financial liability in subsequent periods, the amounts that were recognised in equity until this point in time are recognised on the income statement in the period during which the asset or liability affects the income statement. If the transactions result in the recognition of non-financial assets or liabilities, for example the acquisition of property, plant and equipment, the amounts recognised in equity without an effect on income are included in the initial cost of the asset or liability.

The purpose of hedges of a net investment in foreign operations (net investment hedges) is to hedge the currency risk from investments with foreign functional currencies. Unrealised gains and losses from such hedges are recognised in other comprehensive income until disposal of the foreign operation.

Hedging relationships must be documented in detail and meet the following effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument,
- the value change of hedging relationship is not dominated by the credit risk, and
- the hedge ratio is the same as that resulting from the quantities used within the scope of risk management.

Only the effective portion of a hedge is recognised in accordance with the preceding rules. The ineffective portion is recognised immediately on the income statement with an effect on income.

Contracts on the receipt or delivery of non-financial items in accordance with the company’s expected purchase, sale or usage requirements (own-use contracts) are not accounted for as derivative financial instruments, but rather as executory contracts. If the contracts contain embedded derivatives, the derivatives are accounted separately from the host contract, insofar as the economic characteristics and risks of the embedded derivatives are not closely related to the economic characteristics and risks of the host contract. Written options to buy or sell a non-financial item which can be settled in cash are not own-use contracts.

Contingent liabilities are possible obligations to third parties or existing obligations which will probably not lead to an outflow of economic benefits or the amount of which cannot be measured reliably. Contingent liabilities are only recognised on the balance sheet if they were assumed within the framework of a business combination. The amounts disclosed in the Notes correspond to the exposure at the balance-sheet date.

Management judgements in the application of accounting policies. Management judgements are required in the application of accounting policies. In particular, this pertains to the following aspects:

- With regard to certain contracts, a decision must be made as to whether they are to be treated as derivatives or as so-called own-use contracts, and be accounted for as executory contracts.
- Financial assets are classified by contractual cash flows and applied business model. Whereas the contractual cash flows are determined by the characteristics of the financial instruments, the business model is based on the Group’s internal requirements relating to the portfolios of financial instruments.
- With regard to assets held for sale, it must be determined if they can be sold in their current condition and if the sale of such is highly probable in the next twelve months. If both conditions apply, the assets and any related liabilities must be reported and measured as ‘Assets held for sale’ or ‘Liabilities held for sale’, respectively.

Management estimates and judgements. Preparation of consolidated financial statements pursuant to IFRS requires assumptions and estimates to be made, which have an impact on the recognised value of the assets and liabilities carried on the balance sheet, on income and expenses and on the disclosure of contingent liabilities.

Amongst other things, these assumptions and estimates relate to the accounting and measurement of provisions. With regard to non-current provisions, the discount factor to be applied is an important estimate, in addition to the amount and timing of future cash flows. The discount factor for pension obligations is determined on the basis of yields on high-quality, fixed-rate corporate bonds on the financial markets as of the balance-sheet date.

The rules governing valuation allowances for financial assets under IFRS 9 stipulate that the expected credit losses must be determined. The valuation allowance is based on information from within and outside the Group.

The impairment test for goodwill and non-current assets is based on certain assumptions pertaining to the future, which are regularly adjusted. Property, plant and equipment is tested for indications of impairment on each cut-off date.

Power plants are grouped together as a cash-generating unit if their production capacity and fuel needs are centrally managed as part of a portfolio, and it is not possible to ascribe individual contracts and cash flows to the specific power plants.

Upon first-time consolidation of an acquired company, the identifiable assets, liabilities and contingent liabilities are recognised at fair value. Determination of the fair value is based on valuation methods which require a projection of anticipated future cash flows.

Deferred tax assets are recognised if realisation of future tax benefits is probable. Actual future development of income for tax purposes and hence the realisability of deferred tax assets, however, may deviate from the estimation made when the deferred taxes are capitalised.

Further information on the assumptions and estimates upon which these consolidated financial statements are based can be found in the explanations of the individual items.

All assumptions and estimates are based on the circumstances and forecasts prevailing on the balance-sheet date. Furthermore, as of the balance-sheet date, realistic assessments of overall economic conditions in the sectors and regions in which RWE conducts operations are taken into consideration with regard to the prospective development of business. Actual amounts may deviate from the estimated amounts if the overall conditions develop differently than expected. In such cases, the assumptions, and, if necessary, the carrying amounts of the affected assets and liabilities are adjusted.

As of the date of preparation of the consolidated financial statements, it is not presumed that there will be any material changes compared to the assumptions and estimates. However, the government's potential implementation of major aspects of the concept of the Growth, Structural Change and Employment Commission may have an impact. If opencast mines are closed prematurely, new recultivation concepts will have to be developed and the mining provisions will have to be increased due to their earlier usage.

Capital management. The focus of RWE's financing policy is on ensuring uninterrupted access to the capital market. The goal is to be in a position to refinance maturing debts and finance the operating activities at all times. Maintaining a solid rating and a positive operating cash flow serve this purpose.

The management of RWE's capital structure is oriented towards net debt. It is calculated by adding material non-current provisions to and deducting the net assets of funded pension obligations from net financial debt. RWE's liabilities of relevance to net debt primarily consist of hybrid bonds and provisions for pensions, nuclear waste management and mining.

During the reporting period, RWE's capital structure changed significantly. This was in part due to the separate statement of the net debt of the discontinued innogy operations. In addition, the net debt of the continuing operations was very positively affected by variation margins obtained from forward transactions with electricity, commodities and CO_2 certificates. Variation margins are payments with which transaction partners mutually offset profit and loss positions resulting from the daily revaluation of active contracts. However, their influence on cash flows is temporary and ends once the transactions are realised. Both of these effects resulted in a significant increase in financial assets and contributed to the statement of net financial assets of continuing operations in the amount of €7.4 billion as of 31 December 2018. The previous year's figures contained the net financial debt of the discontinued innogy operations; the associated net financial debt amounted to €6.3 billion. Furthermore, net debt provisions declined by €2.1 billion to €11.9 billion (previous year: €14.0 billion). On average, provisions have a very long duration; their level is primarily determined by external factors such as the general level of interest rates. A precise calculation of net debt and net financial debt is presented on page 54 of the review of operations.

RWE's credit rating is influenced by a number of qualitative and quantitative factors. These include aspects such as the amount of cash flows and debt as well as market conditions, competition, and the political framework. Our hybrid bonds also have a positive effect on our rating. The leading rating agencies, Moody's and Fitch, classify part of hybrid capital as equity.

RWE's creditworthiness is currently rated 'Baa3' by Moody's and 'BBB' by Fitch. Our rating thus remains in the investment-grade range. The short-term credit ratings for RWE are 'P-3' and 'F2', respectively.

Changes in accounting regulations

The International Accounting Standards Board (IASB) and the IFRS Interpretations Committee (IFRS IC) have implemented new IFRSs and approved amendments of existing IFRSs and a new interpretation, which became effective for the RWE Group as of fiscal 2018:

IFRS 9 Financial Instruments (2014) replaces the previous regulations of IAS 39 on financial instruments. The standard contains amended regulations on measurement categories for financial assets and includes some smaller changes in relation to the measurement of financial liabilities. It also contains regulations on impairments, which are based on expected losses for the first time. The new hedge accounting regulations are to improve the presentation of risk management activities in consolidated financial statements. In line with the transitional rules of IFRS 9, prior-year figures are not adjusted. The application of the new classification and valuation regulations and the recognition of the associated effects of the changeover occur through the adjustment of the carrying amounts of the financial assets and liabilities as well as retained earnings as of 1 January 2018.

IFRS 9 includes new rules for classifying financial instruments. They envisage four measurement categories:

- Debt instruments measured at amortised cost,
- Debt instruments measured at fair value through other comprehensive income, the changes in value of which are to be reclassified through profit or loss in the future,
- Financial instruments measured at fair value through profit or loss,
- Equity instruments measured at fair value through other comprehensive income, the changes in value of which are not to be reclassified through profit or loss in the future.

The following tables summarise the effects of the new classification and impairment regulations for financial assets on the individual balance-sheet line items and the respective measurement categories at the changeover date:

Reclassification by balance sheet item in accordance with IFRS 9 € million	Measurement category in accordance with IAS 39	Measurement category in accordance with IFRS 9	Carrying amount in accordance with IAS 39	Additional impairment in accordance with IFRS 9	Carrying amount in accordance with IFRS 9
Other non-current financial assets	Financial assets available for sale	Debt instruments measured at fair value through other comprehensive income	73		73
		Equity instruments measured at fair value through other comprehensive income	77		77
		Financial instruments measured at fair value through profit or loss	959		959
Financial receivables	Loans and receivables	Debt instruments measured at amortised cost	2,069	18	2,051
		Financial instruments measured at fair value through profit or loss	35		35
Trade accounts receivable	Loans and receivables	Debt instruments measured at amortised cost	5,405	8	5,397
Other receivables and other assets	Loans and receivables	Debt instruments measured at amortised cost	244	1	243
	Financial assets recognised at fair value through profit or loss	Financial instruments measured at fair value through profit or loss	2,807		2,807
Marketable securities	Financial assets available for sale	Debt instruments measured at amortised cost	11		11
		Debt instruments measured at fair value through other comprehensive income	1,306	18	1,306[1]
		Equity instruments measured at fair value through other comprehensive income	796		796
		Financial instruments measured at fair value through profit or loss	2,780		2,780
Cash and cash equivalents	Loans and receivables	Debt instruments measured at amortised cost	3,933		3,933
			20,495	**45**	**20,468[1]**

1 Additional impairments pursuant to IFRS 9 of debt instruments measured at fair value through other comprehensive income do not lead to a reduction in the carrying amounts as the impairments have already been considered in equity through the previous fair value measurement.

Some of the securities that were assigned to the category 'Financial assets available for sale' under IAS 39 are now assigned to the category 'Financial instruments measured at fair value through profit or loss' due to the adoption of IFRS 9 because the cash flows from these financial instruments do not solely consist of interest and principal on the outstanding capital.

Some of the other financial assets and securities have been reclassified from the 'financial assets available for sale' to the 'debt instruments recognised at fair value through other comprehensive income' category because the cash flows from these financial instruments solely represent the interest and principal on the outstanding capital and the corresponding business model envisages the appropriation of cash flows as well as the sale of financial instruments. Furthermore, these positions include equity instruments which are not intended to be traded anywhere within the Group. The discretion to recognise changes in fair value through other comprehensive income is exercised depending on the equity instrument in question. On this basis, they are assigned to the 'equity instruments recognised at fair value through other comprehensive income' or the 'financial instruments recognised at fair value through profit or loss' category.

In certain cases, financial receivables assigned to the 'loans and receivables' category under IAS 39 are assigned to the 'financial instruments recognised at fair value through profit or loss' category due to the first-time application of IFRS 9, because the cash flows from these financial instruments do not solely represent interest and principal on the outstanding capital.

Certain securities were reclassified from the mesurement category 'Financial assets available for sale' to the category 'Debt instruments measured at amortised cost' due to the adoption of IFRS 9. Had these financial instruments not been reclassified, there would not have been any gains or losses from the fair valuation of these financial instruments in 2018. The carrying amount as of 31 December 2018 corresponds to the fair value of the financial instruments of €3 million.

In addition to the aforementioned effects, deferred tax assets in the amount of €7 million were recognised.

Reclassification in accordance with IFRS 9 – sum by measurement category

Measurement category in accordance with IAS 39 € million	Measurement category in accordance with IFRS 9	Carrying amount in accordance with IAS 39	Additional impairment in accordance with IFRS 9	Carrying amount in accordance with IFRS 9
Loans and receivables	Debt instruments measured at amortised cost	11,651	27	11,624
	Financial instruments measured at fair value through profit or loss	35		35
Financial assets available for sale	Debt instruments measured at amortised cost	11		11
	Debt instruments measured at fair value through other comprehensive income	1,379	18	1,379
	Equity instruments measured at fair value through other comprehensive income	873		873
	Financial instruments measured at fair value through profit or loss	3,739		3,739
Financial assets recognised at fair value through profit or loss	Financial instruments measured at fair value through profit or loss	2,807		2,807
		20,495	**45**	**20,468**

The reconciliation from the closing balance of the impairments according to IAS 39 to the opening balance of the impairments according to IFRS 9 is presented in the following table:

Reconciliation of the risk provision in accordance with IFRS 9

€ million	Risk provision in accordance with IAS 39	Additional risk provision in accordance with IFRS 9	Risk provision in accordance with IFRS 9
Other financial assets	179		179
Financial receivables	241	18	259
Trade accounts receivable	397	8	405
Other receivables and other assets	2	1	3
Marketable securities		18	18
	819	**45**	**864**

In addition to the new regulations regarding the statement of financial assets, IFRS 9 encompasses minor amendments to the statement of financial liabilities. These amendments do not have an impact on the RWE Group.

Furthermore, IFRS 9 introduces new regulations for hedge accounting, which aim to improve the presentation of risk management activities in consolidated financial statements. For this purpose, IFRS 9 extends the scope of underlying transactions qualifying for hedge accounting and introduces a new approach for assessing effectiveness, among other things.

RWE is continuing its existing hedge accounting relationships in accordance with IFRS 9. Hedge accounting for foreign-currency risks will lead to changes in the treatment of foreign-currency basis spreads. If this component is designated as a part of the hedging relationship, this will tend to lead to a higher ineffectiveness of existing hedging relationships. If the forward component of a forward transaction or foreign-currency basis spread is excluded from hedge accounting, changes in value attributable to this component are recognised through profit or loss in the RWE Group. This change does not have any material effects on the RWE Group. New hedging relationships were not designated at the date of initial application.

The fair value option for own-use contracts and the possibility to exclude the fair value component of options for hedging relationships are not made use of in the RWE Group. Overall, the new regulations regarding hedge accounting do not have any material effects on the consolidated financial statements of RWE.

IFRS 15 Revenue from Contracts with Customers (2014) including **Amendments to IFRS 15, Effective Date of IFRS 15 (2015)** and **Clarifications to IFRS 15 Revenue from Contracts with Customers (2016)** replaced the contents of **IAS 18 Revenue** and **IAS 11 Construction Contracts** and the associated interpretations as of 1 January 2018.

The new standard does not distinguish between different types of orders and performance. It defines uniform criteria as to when revenue is realised for a performance obligation at a point in time or over time. Revenue is recognised when the customer obtains control of the agreed goods and services and can benefit from such.

RWE applied the modified retrospective method as the transition method for the first-time application as of 1 January 2018. Prior-year figures were not restated. The effects of the first-time application of IFRS 15 are recognised in equity, causing retained earnings to drop by €21 million.

The first-time application of IFRS 15 has the following effects on equity at the beginning of fiscal 2018 and on the income statement for fiscal 2018:

- As of 1 January 2018, RWE recognised contractual liabilities for basic fees received from customers in advance in the amount of €12 million. In addition, expenses incurred for free giveaways and goods in the amount of €26 million, previously recognised in accordance with IAS 18, were reversed. Furthermore, €8 million in costs associated with obtaining a contract were capitalised. Moreover, €2 million in deferred tax assets and €7 million in deferred tax liabilities were recognised.
- The first-time application of IFRS 15 caused RWE to change the presentation of unrealised changes in the fair value of commodity derivatives. Since 1 January 2018, they have no longer been presented as revenue or costs of material, but in other operating income. The change does not affect our income and leads to a stabilisation of revenue given that the other parameters did not change. €55 million was recognised in other operating expenses and €352 million was recognised in other operating income for unrealised changes in the fair value of commodity derivatives for fiscal 2018.

In fiscal 2018, the application of IFRS 15 had the following effects on the balance sheet and the income statement:

Effects of applying IFRS 15 € million	Figure in accordance with IFRS 15	Figure in accordance with IAS 18 / 11	Application effect
Balance-sheet items			
Contract liabilities	76		76
Income statement items			
Revenue	13,388	13,740	−352
Cost of materials	10,237	10,292	−55
Other operating income	931	579	352
Other operating expenses	950	895	55

The following amendments to standards and new interpretations mandatory for the RWE Group from fiscal 2018 onwards do not have a material effect on the consolidated financial statements of RWE:

- Amendments to IFRS 4 Applying IFRS 9 Financial Instruments with IFRS 4 Insurance Contracts (2016)
- Annual Improvements to IFRS Standards 2014–2016 Cycle (2016)
- Amendments to IAS 40 Transfers of Investment Property (2016)
- Amendments to IFRS 2 Classification and Measurement of Share-based Payment Transactions (2016)
- IFRIC 22 Foreign Currency Transactions and Advance Consideration (2016)

New accounting policies

The IASB issued further standards, which were not yet mandatory in the European Union (EU) in fiscal 2018. The major new regulations and the anticipated effects based on the current state of implementation are presented below:

IFRS 16 Leases (2016) will replace IAS 17 Leases and the related interpretations IFRIC 4, SIC-15 and SIC-27. According to the new standard on leases, aside from short-term leases (less than 12 months) and leases of low-value assets, all leases are to be reported on the balance sheet. Consequently, the lessee must recognise a right-of-use asset and a corresponding lease liability in the amount of the present value of the lease payments for all leased assets. For lessors, the new Standard does not result in any significant changes to the current accounting treatment pursuant to IAS 17 and still requires the classification of leases as finance or operating leases.

The new standard becomes effective for fiscal years starting on or after 1 January 2019. RWE will apply the modified retrospective method in transitioning to the new regulations concerning lease accounting. The comparable information for fiscal 2018 will not be adjusted in the consolidated financial statements for 2019.

The following options and exemptions are being made use of at the date of initial application:

- Renouncement of an assessment as to whether contracts existing before the date of first adoption contain a lease in accordance with IFRS 16,
- Recognition of the right-of-use asset and measurement in the amount of the lease liability, adjusted for lease payments that had already been recognised as an asset or a liability,
- Adjustment of the right-of-use asset by the amount recognised as a provision for onerous leases on the balance sheet for the period ending on 31 December 2018,
- Measurement of the right-of-use asset at the date of first-time adoption without considering initial direct costs,
- Leases with a term expiring within the first twelve months from the date of first-time adoption are treated as short-term leases.

RWE is making use of exemptions allowing for leases relating to short-term or low-value assets not to be recognised on the balance sheet as a right-of-use asset.

With respect to continuing operations, RWE expects the implementation of IFRS 16 to result in an increase in depreciation and amortisation of between €25 million and €50 million and a curtailment of the financial result of between €10 million and €20 million. By contrast, other operating expenses will receive relief in the amount of the two aforementioned ranges, as a result of which no material impact on net income is anticipated. Furthermore, RWE expects net financial debt for continuing operations to increase by between €400 million and €500 million. Taking account of discontinued operations, we anticipate that the initial adoption of IFRS 16 will increase the balance-sheet total by about €2.3 billion.

In the cash flow statement, the change in lease accounting provides relief to cash flows from operating activities, whereas a heavier burden is placed on cash flows from financing activities because a significant portion of the lease instalments paid will be presented as principal of the lease liabilities. The interest accretion continues to be recognised in cash flows from operating activities.

The following standards, amendments to standards, and interpretations are not expected to have any material effects on RWE's consolidated financial statements:

- Amendments to IFRS 9: Prepayment Features with Negative Compensation (2017),
- Amendments to IAS 28 Long-term Interests in Associates and Joint Ventures (2017),
- Annual Improvements to IFRS Standards 2015–2017 Cycle (2017). The collective standard contains amendments and clarifications to IFRS 3 and IFRS 11 as well as to IAS 12 and IAS 23,
- IFRS 17 Insurance Contracts (2017),
- Amendments to IAS 19 Plan Amendment, Curtailment or Settlement (2018),
- Amendments to References to the Conceptual Framework in IFRS Standards (2018),
- Amendments to IFRS 3 Business Combinations (2018),
- Amendments to IAS 1 and IAS 8 Definition of Material (2018),
- IFRIC 23 Uncertainty over Income Tax Treatments (2017).

Notes to the Income Statement

(1) Revenue

Revenue is recorded when the customer has obtained control over goods or services.

To improve the presentation of business development, we report revenue generated by energy trading operations as net figures, reflecting realised gross margins. Energy trading revenue is generated in the Supply & Trading segment. By contrast, we report consumer revenue on a gross basis. In fiscal 2018, gross revenue (including energy trading) totalled €76,345 million (previous year: €60,788 million).

In the year under review, RWE generated €13,752 million in gross revenue from discontinued innogy operations (previous year: €10,937 million).

A breakdown of revenue by division, geographical region and product is contained in the segment reporting on page 151 et seqq.

The item 'Natural gas tax/electricity tax' comprises the taxes paid directly by Group companies.

Certain performance obligations of the RWE Group were not yet or not yet fully met by the end of the fiscal year. The €4,650 million in revenue due from these performance obligations is expected to be received over the following three years. The receipt of this revenue will depend on when these performance obligations to the customer are met. It does not include future revenue from contracts with an original contractual term of twelve months or less.

(2) Other operating income

Other operating income € million	2018	2017
Income from own work capitalised	45	51
Release of provisions	57	111
Cost allocations/refunds	63	258
Disposal and write-back of current assets (excluding marketable securities)	4	2
Disposal and write-back of non-current assets including income from deconsolidation	103	531
Income from derivative financial instruments	408	159
Compensation and insurance benefits	26	25
Rent and lease	20	85
Exchange rate gains		11
Miscellaneous	205	2,023
	931	**3,256**

In the year under review, write-backs of €38 million were made for onshore wind farms in Poland in the innogy – continuing operations segment (recoverable amount: €0.2 billion). This was primarily due to the rise in the prices of electricity and of green electricity certificates. Of the write-backs, €36 million was allocable to property, plant and equipment and €2 milion was allocable to operating rights recognised as intangible assets. The fair value less costs to sell was calculated using a company valuation model based on cash flow planning and a discount rate of 5.5 % after taxes. The central planning assumptions relate to the development of wholesale and retail electricity prices and regulatory framework conditions amongst other things. The calculated fair value is assigned to Level 3 of the fair value hierarchy due to the use of internal planning assumptions.

In the previous year, the refund of the €1,797 million in nuclear fuel taxes paid in earlier periods contained in the 'Miscellaneous' item was based on a decision by the German Constitutional Court dated 7 June 2017. The nuclear fuel tax levied until 31 December 2016 could not be reconciled with constitutional rules, becoming null and void retroactively. The refund included the €100 million share economically attributable to E.ON.

Income from the disposal of non-current financial assets and loans is disclosed under income from investments if it relates to investments; otherwise it is recorded as part of the financial result as is the income from the disposal of current marketable securities.

To improve the presentation of the development of business, we state unrealised changes in the fair value of commodity derivatives in net amounts under other operating expenses or income. Gross income totaled €493 million in fiscal 2018.

(3) Cost of materials

Cost of materials € million	2018	2017
Cost of raw materials and of goods for resale	8,716	8,118
Cost of purchased services	1,521	1,911
	10,237	**10,029**

The cost of raw materials also includes expenses for the use and disposal of spent nuclear fuel assemblies. This item also includes expenses for CO_2 emission allowances.

A total of €62,817 million in energy trading revenue (previous year: €46,835 million) was netted out against the cost of materials.

(4) Staff costs

Staff costs € million	2018	2017
Wages and salaries	1,487	1,433
Cost of social security, pensions and other benefits	408	415
	1,895	**1,848**

Number of employees	2018	2017
Employees covered by collective agreements and other employees	45,333	46,757
Employees not covered by collective agreements	13,108	12,576
	58,441	**59,333**

The stated number of employees includes the 32,232 wage earners and other personnel assigned to the innogy – discontinued operations segment (previous year: 31,897) and 8,614 salaried staff (previous year: 8,294). The number of employees is arrived at by conversion to full-time positions, meaning that part-time and fixed-term employment relationships are included in accordance with the ratio of the part-time work or the duration of the employment to the annual employment time. On average, 2,031 trainees were employed (previous year: 1,998), of which 1,452 (previous year: 1,448) were assigned to the innogy – discontinued operations segment. Trainees are not included in the personnel headcount.

(5) Depreciation, amortisation and impairment losses

Depreciation, amortisation and impairment losses € million	2018	2017
Intangible assets	26	36
Property, plant and equipment	922	1,294
	948	**1,330**

Impairments € million	2018	2017
Intangible assets		9
Property, plant and equipment	47	373
	47	**382**

In the year being reviewed, a €29 million impairment was recognised for the UK power station Staythorpe in the European Power segment. Its earnings are expected to be slightly lower than anticipated thus far (recoverable amount: €0.3 billion).

In the previous year, the division of the former Conventional Power Generation segment into the two new Lignite & Nuclear and European Power segments had resulted in the division of the former cash-generating unit for the German power plant portfolio due to the resulting new management. The impairment test occasioned by this in the previous year resulted in a write-up of €401 million for the Lignite & Nuclear cash-generating unit, which was recognised in other operating income in the previous year (recoverable amount: €1.4 billion). In contrast, in the previous year, an impairment of €321 million was recognised for the new cash-generating unit for the German power plant portfolio in the European Power segment and provisions for impending losses were formed (recoverable amount: €0.0 billion). These effects stemmed from the non-recurrence of the compensatory effects of the division of the cash-generating unit.

In the previous year, in the Lignite & Nuclear segment, an impairment loss of €301 million was recognised for property, plant and equipment stated as being held for sale of the Hungarian company Mátrai Erőmű ZRt. (Mátra) which has since been sold (recoverable amount: €0.0 billion).

In the previous year, an impairment loss of €16 million was recognised for gas storage facilities in the innogy – continuing operations segment (€12 million of which for property, plant and equipment and €4 million of which for intangible assets) (recoverable amount: €0.0 billion), essentially due to changed price expectations.

Furthermore, in the previous year, an impairment loss of €20 million was recognised for property, plant and equipment for the construction of offshore wind farms in the innogy – continuing operations segment due to permanent decreases in value (recoverable amount: €0.1 billion).

Other impairments on intangible assets and property, plant and equipment were recognised primarily on the basis of cost increases and changes in price expectations.

Recoverable amounts are determined on the basis of fair values less costs to sell using valuation models based on planned cash flows. In the fiscal year, the valuation model for the UK power station Staythorpe used a discount rate of 4.75 %. In the previous year, the valuation models used discount rates ranging from 4.25 % to 5.50 %. Our key planning assumptions relate to the development of wholesale prices of electricity, crude oil, natural gas, coal and CO_2 emission allowances, retail prices of electricity and gas, market shares and regulatory framework conditions. Based on the use of internal planning assumptions, the determined fair values are assigned to Level 3 of the fair value hierarchy.

(6) Other operating expenses

Other operating expenses € million	2018	2017
Expenses associated with changes in product inventories	5	10
Maintenance and renewal obligations	465	500
Additions to provisions/reversals	– 196	402
Structural and adaptation measures	33	26
Legal and other consulting and data processing services	166	148
Disposal of current assets and decreases in values (excluding decreases in the value of inventories and marketable securities)	8	7
Disposal of non-current assets including expenses from deconsolidation	56	73
Insurance, commissions, freight and similar distribution costs	59	58
General administration	56	52
Expenses from derivative financial instruments	45	166
Lease payments for plant and grids as well as rents	48	49
Fees and membership dues	61	72
Exchange rate losses	3	
Other taxes (primarily on property)	27	175
Miscellaneous	114	171
	950	**1,909**

In the previous year, the 'Miscellaneous' item contained the €100 million share of the refund of the nuclear fuel tax paid in earlier periods economically allocable to E.ON.

To improve the presentation of the development of business, we recognise unrealised changes in the fair value of commodity derivatives in net amounts in other operating expenses or income. In fiscal 2018, the gross expenses totalled €196 million.

(7) Income from investments

Income from investments includes all income and expenses which have arisen in relation to operating investments. It is comprised of income from investments accounted for using the equity method and other income from investments.

Income from investments € million	2018	2017
Income from investments accounted for using the equity method	**211**	**137**
Income from non-consolidated subsidiaries	−45	−30
of which: amortisation/impairment losses on non-consolidated subsidiaries		−31
Income from other investments	−6	−2
of which: impairment of shares in other investments		−16
Income from the disposal of investments		50
Income from loans to investments	9	2
Other income from investments	**−42**	**20**
	169	**157**

(8) Financial result

Financial result € million	2018	2017
Interest and similar income	166	197
Other financial income	306	1,348
Financial income	**472**	**1,545**
Interest and similar expenses	180	298
Interest accretion to		
Provisions for pensions and similar obligations (including capitalised surplus of plan assets)	45	57
Provisions for nuclear waste management as well as to mining provisions	183	146
Other provisions	36	23
Other finance costs	437	1,084
Finance costs	**881**	**1,608**
	−409	**−63**

The financial result breaks down into net interest, interest accretion to provisions, other financial income and other finance costs.

Interest accretion to provisions contains the annual amounts of accrued interest. It is reduced by the imputed interest income on plan assets for the coverage of pension obligations.

Net interest essentially includes interest income from interest-bearing securities and loans, income and expenses relating to marketable securities, and interest expenses.

In the year under review, €9 million in borrowing costs were capitalised as costs in connection with the acquisition, construction or production of qualifying assets (previous year: €1 million). The underlying capitalisation rate ranged from 4.4 % to 4.8 % (previous year: from 3.8 % to 4.4 %).

Net interest € million	2018	2017
Interest and similar income	166	197
Interest and similar expenses	180	298
	– 14	**– 101**

Net interest stems from financial assets and liabilities, which were allocated to the measurement categories pursuant to IFRS 9 in the year under review and pursuant to IAS 39 in the previous year:

Interest result by category € million	2018	2017
Loans and receivables		169
Financial assets available for sale		28
Debt instruments measured at amortised cost	108	
Financial instruments measured at fair value through profit or loss	30	
Debt instruments measured at fair value through other comprehensive income	14	
Equity instruments measured at fair value through other comprehensive income	14	
Financial liabilities measured at (amortised) cost	– 180	– 298
	– 14	**– 101**

Other financial income includes €6 million in gains realised from the disposal of marketable securities (previous year: €50 million). It also includes €257 million in interest income on portions of the nuclear fuel tax paid by RWE and refunded in 2017. €243 million thereof is allocable to RWE shareholders. Of the other finance costs, €13 million (previous year: €71 million) stem from realised losses on the disposal of marketable securities.

(9) Taxes on income

Taxes on income € million	2018	2017
Current taxes on income	122	203
Deferred taxes	– 19	130
	103	**333**

Of the deferred taxes, – €2 million is related to temporary differences (previous year: €72 million). In the year under review, changes in valuation allowances for deferred tax assets amounted to – €73 million (previous year: €110 million).

Current taxes on income contain €30 million in net tax income (previous year: income of €111 million) relating to prior periods.

Due to the utilisation of tax loss carryforwards unrecognised in prior years, current taxes on income were reduced by €28 million (previous year: €189 million).

Income taxes recognised in other comprehensive income € million	2018	2017
Fair valuation of financial instruments available for sale		– 3
Fair valuation of debt instruments	7	
Fair valuation of financial instruments used for hedging purposes	– 1,442	8
Actuarial gains and losses of defined benefit pension plans and similar obligations[1]	410	– 171
	– 1,025	**– 166**

1 Including valuation allowances.

Taxes in the amount of – €61 million (previous year: €16 million) were offset directly against equity.

Tax reconciliation € million	2018	2017
Income before tax	**49**	**2,056**
Theoretical tax expense	**16**	**668**
Differences to foreign tax rates	– 28	– 15
Tax effects on		
Tax-free domestic dividends	– 31	– 31
Tax-free foreign dividends	– 7	– 2
Other tax-free income	– 21	– 16
Expenses not deductible for tax purposes	42	45
Accounting for associates using the equity method (including impairment losses on associates' goodwill)	– 24	– 3
Unutilisable loss carryforwards, utilisation of unrecognised loss carryforwards, write-downs on loss carryforwards, recognition of loss carryforwards	– 14	– 105
Income on the disposal of investments	12	– 2
Changes in foreign tax rates	– 3	30
Other allowances for deferred taxes in the RWE AG tax group	172	
Other	– 11	– 236
Effective tax expense	**103**	**333**
Effective tax rate in %	210.2	16.2

The theoretical tax expense is calculated using the tax rate for the RWE Group of 32.6 % (previous year: 32.5 %). This is derived from the prevailing 15 % corporate tax rate, the solidarity surcharge of 5.5 %, and the Group's average local trade tax rate.

Notes to the Balance Sheet

(10) Intangible assets

Intangible assets € million	Development costs	Concessions, patent rights, licences and similar rights	Customer relationships and similar assets	Goodwill	Prepayments	Total
Cost						
Balance at 1 Jan 2018	837	3,054	2,810	11,671	31	18,403
Additions/disposals due to changes in the scope of consolidation	−821	−890	−2,812	−9,929	−3	−14,455
of which: stated as 'Held for sale'	−821	−999	−2,812	−9,929	−3	−14,564
Additions	42	37			6	85
Transfers	2	29			−25	6
Currency translation adjustments	1	−15	3	−24		−35
Disposals	25	1				26
Balance at 31 Dec 2018	36	2,214	1	1,718	9	3,978
Accumulated amortisation/impairment losses						
Balance at 1 Jan 2018	489	2,493	2,564	474		6,020
Additions/disposals due to changes in the scope of consolidation	−460	−792	−2,579	−475		−4,306
of which: stated as 'Held for sale'	−460	−792	−2,579	−475		−4,306
Amortisation/impairment losses in the reporting period	29	63	13			105
Currency translation adjustments		−10	3	1		−6
Disposals	25	1				26
Write-ups		2				2
Balance at 31 Dec 2018	33	1,751	1			1,785
Carrying amounts						
Balance at 31 Dec 2018	3	463		1,718	9	2,193

Cost						
Balance at 1 Jan 2017	1,047	2,816	2,915	11,664	6	18,448
Additions/disposals due to changes in the scope of consolidation	3	143	4	17		167
Additions	74	92	8		29	203
Transfers	−29	39	3		−4	9
Currency translation adjustments	−30	−3	−83	−10		−126
Disposals	228	33	37			298
Balance at 31 Dec 2017	837	3,054	2,810	11,671	31	18,403
Accumulated amortisation/impairment losses						
Balance at 1 Jan 2017	630	2,410	2,658	1		5,699
Additions/disposals due to changes in the scope of consolidation	3	−2				1
Amortisation/impairment losses in the reporting period	104	107	27	479		717
Transfers	−5	5				
Currency translation adjustments	−18	4	−84	−6		−104
Disposals	225	31	37			293
Balance at 31 Dec 2017	489	2,493	2,564	474		6,020
Carrying amounts						
Balance at 31 Dec 2017	348	561	246	11,197	31	12,383

In the reporting period, the RWE Group's total expenditures on research and development amounted to €116 million (previous year: €182 million).

Goodwill breaks down as follows:

Goodwill € million	31 Dec 2018	31 Dec 2017
Grid & Infrastructure Germany		2,736
Grid & Infrastructure Eastern Europe		1,159
Retail Netherlands/Belgium		2,704
Retail Germany		923
Retail United Kingdom		1,525
Retail Eastern Europe		429
Renewables	712	715
Supply & Trading	1,006	1,006
	1,718	**11,197**

The goodwill reported in the Grid & Infrastructure and Retail cash-generating units in the previous year is stated under assets held for sale of innogy – discontinued operations.

In the third quarter of every fiscal year, an impairment test is performed to determine if there is any need to write down goodwill. In the course of this, goodwill is allocated to the cash-generating units.

In the previous year, goodwill increased by €53 million as a result of first-time consolidations.

The recoverable amount of the cash-generating unit is determined, which is defined as the higher of fair value less costs to sell or value in use. Fair value is the best estimate of the price that an independent third party would pay to purchase the cash-generating unit as of the balance-sheet date. Value in use reflects the present value of the future cash flows which are expected to be generated with the cash-generating unit.

Fair value less costs to sell is assessed from an external perspective and value in use from a company-internal perspective. Values are determined using a business valuation model, based on planned future cash flows. These cash flows, in turn, are based on the business plan, as approved by the Executive Board and valid at the time of the impairment test. They pertain to a detailed planning period of three years. In certain justifiable cases, a longer detailed planning period is taken as a basis, insofar as it is necessary due to economic or regulatory conditions. The cash flow plans are based on experience as well as on expected market trends in the future. If available, market transactions in the same sector or third-party valuations are taken as a basis for determining fair value. Based on the use of internal planning assumptions, the determined fair values are assigned to Level 3 of the fair value hierarchy.

Mid-term business plans are based on country-specific assumptions regarding the development of key economic indicators such as gross domestic product, consumer prices, interest rate levels and nominal wages. These estimates are, amongst others, derived from macroeconomic and financial studies.

Our key planning assumptions for the business segments active in Europe's electricity and gas markets relate to the development of wholesale prices of electricity, crude oil, natural gas, coal and CO_2 emission allowances, retail prices of electricity and gas, market shares and regulatory framework conditions.

The discount rates used for business valuations are determined on the basis of market data. During the period under review, they were 5.25 % for the Supply & Trading and 4.25 % for the Renewables cash-generating units (previous year: range of 3.25 % to 5.50 %) after tax.

We do not base the extrapolation of future cash flows going beyond the detailed planning period on growth rates. The growth rate for each division is generally derived from experience and expectations of the future and does not exceed the long-term average growth rates of the respective markets in which the Group companies are active. The annual cash flows assumed for the years after the detailed planning period include as a deduction capital expenditure in the amount necessary to maintain the scope of business.

As of the balance-sheet date, the recoverable amounts of the cash-generating units – determined as the fair value less costs to sell – were higher than their carrying amounts. The surpluses react especially sensitively to changes in the discount rate, the growth rate and cash flows in terminal value.

The Supply & Trading cash-generating unit exhibited the smallest surplus of recoverable amount over the carrying amounts. The recoverable amount was €1.2 billion higher than the carrying amount. Impairment would have been necessary if the calculations had used an after-tax discount rate increased by more than 3.1 percentage points to above 8.4 %, a growth rate decreased by more than 3.6 percentage points to below – 3.6 %, or cash flows reduced by more than €74 million in terminal value.

(11) Property, plant and equipment

Property, plant and equipment € million	Land, land rights and buildings incl. buildings on third-party land	Technical plant and machinery	Other equipment, factory and office equipment	Prepayments and plants under construction	Total
Cost					
Balance at 1 Jan 2018	7,325	74,280	2,123	2,317	86,045
Additions/disposals due to changes in the scope of consolidation	– 2,740	–30,747	–1,238	–845	–35,570
of which: stated as 'Held for sale'	– 2,738	–30,708	–1,238	–859	–35,543
Additions	65	665	74	1,014	1,818
Transfers	45	283	–2	–332	–6
Currency translation adjustments	–42	–294	–7	–10	–353
Disposals	109	478	35	69	691
Balance at 31 Dec 2018	4,544	43,709	915	2,075	51,243
Accumulated depreciation/impairment losses					
Balance at 1 Jan 2018	4,555	54,187	1,505	851	61,098
Additions/disposals due to changes in the scope of consolidation	–1,455	–20,646	–803	–1	–22,905
of which: stated as 'Held for sale'	–1,453	–20,580	–803	–1	–22,837
Amortisation/impairment losses in the reporting period	66	1,209	93	7	1,375
Transfers	1	–1			
Currency translation adjustments	–20	–149	–4		–173
Disposals	69	352	35	65	521
Additions	5	34		1	40
Balance at 31 Dec 2018	3,073	34,214	756	791	38,834
Carrying amounts					
Balance at 31 Dec 2018	1,471	9,495	159	1,284	12,409
Cost					
Balance at 1 Jan 2017	7,544	74,257	2,152	1,708	85,661
Additions/disposals due to changes in the scope of consolidation	–149	–950	–6	162	–943
Additions	92	1,477	138	825	2,532
Transfers	34	237	1	–273	–1
Currency translation adjustments	41	–121	8	–10	–82
Disposals	237	620	170	95	1,122
Balance at 31 Dec 2017	7,325	74,280	2,123	2,317	86,045
Accumulated depreciation/impairment losses					
Balance at 1 Jan 2017	4,581	54,126	1,521	915	61,143
Additions/disposals due to changes in the scope of consolidation	–149	–890	–11	–8	–1,058
Amortisation/impairment losses in the reporting period	225	1,829	142	27	2,223
Currency translation adjustments	20	–53	4		–29
Disposals	116	421	151	83	771
Additions	6	404			410
Balance at 31 Dec 2017	4,555	54,187	1,505	851	61,098
Carrying amounts					
Balance at 31 Dec 2017	2,770	20,093	618	1,466	24,947

Property, plant and equipment in the amount of €504 million (previous year: €82 million) were subject to restrictions from land charges, chattel mortgages or other restrictions. Of the total carrying amount of property, plant and equipment, €241 million (previous year: €248 million) was attributable to assets leased under finance leases. These assets essentially consist of technical plant and equipment. Disposals of property, plant and equipment resulted from sale or decommissioning.

(12) Investments accounted for using the equity method

Information on material and non-material investments in associates and joint ventures accounted for using the equity method is presented in the following summaries:

Material investments accounted for using the equity method	Amprion GmbH, Dortmund		KELAG-Kärntner Elektrizitäts-AG/ Kärntner Energieholding Beteiligungs GmbH, (KEH) Klagenfurt/Austria	
€ million	31 Dec 2018	31 Dec 2017	31 Dec 2018	31 Dec 2017
Balance sheet[1]				
Non-current assets	4,192	3,607	1,630	1,626
Current assets	2,906	2,609	373	370
Non-current liabilities	1,401	1,092	857	874
Current liabilities	3,555	3,238	276	277
Share of equity[2]	538	474	365	354
Goodwill			198	198
Carrying amounts	538	474	563	552
Statement of comprehensive income[1]				
Revenue	13,495	12,418	1,172	1,065[3]
Income	372	142	79	90
Other comprehensive income	−17	−25	−1	−4
Total comprehensive income	355	117	78	86
Dividends (prorated)	25	28	15	20
RWE shareholding	25 %	25 %	49 %	49 %

1 Figures based on a shareholding of 100 % in KEH.
2 Figures based on proportional share of equity in KEH and Kelag.
3 Figure adjusted due to the switch from gross to net presentation for energy trading activities.

Amprion GmbH, headquartered in Dortmund, Germany, is a transmission system operator (TSO) for the electricity sector, pursuant to the German Energy Act (EnwG). Amprion's main shareholder is a consortium of financial investors led by Commerz Real, a subsidiary of Commerzbank.

KELAG-Kärntner Elektrizitäts-AG, headquartered in Klagenfurt, Austria, is a leading Austrian energy supplier in the fields of electricity, district heating and natural gas. RWE has a share of 49 % in Kärntner Energieholding Beteiligungs GmbH (KEH), which is Kelag's largest shareholder and is assigned to innogy - continuing operations.

Non-material investments accounted for using the equity method	Associates		Joint ventures	
€ million	31 Dec 2018	31 Dec 2017	31 Dec 2018	31 Dec 2017
Income (pro-rata)	27	7	56	59
Other comprehensive income	8	–78		–22
Total comprehensive income	35	–71	56	37
Carrying amounts	142	1,317	224	503

The RWE Group holds shares with a book value of €3 million (previous year: €97 million) in associates and joint ventures, which are subject to temporary restrictions or conditions in relation to their distributions of profits, due to provisions of loan agreements.

(13) Other non-current financial assets

Other non-current financial assets € million	31 Dec 2018	31 Dec 2017
Non-consolidated subsidiaries	72	254
Other investments	74	617
Non-current securities	254	238
	400	**1,109**

Non-current securities primarily consist of fixed-interest marketable securities and shares of listed companies. Long-term securities amounting to €31 million and €4 million (previous year: €87 million and €12 million) were deposited in a trust account for RWE AG and its subsidiaries, in order to cover credit balances stemming from the block model for pre-retirement part-time work, pursuant to Sec. 8a of the Pre-Retirement Part-Time Work Act (AltTZG) and from the management of long-term working hours accounts pursuant to Sec. 7e of the German Code of Social Law (SGB IV), respectively. This coverage applies to the employees of RWE AG as well as to the employees of Group companies.

(14) Financial receivables

Financial receivables	31 Dec 2018		31 Dec 2017	
€ million	Non-current	Current	Non-current	Current
Loans to non-consolidated subsidiaries and investments	82	1	237	5
Collateral for trading activities		2,458		1,051
Other financial receivables				
Accrued interest		89		117
Miscellaneous other financial receivables	28	234	122	572
	110	**2,782**	**359**	**1,745**

Companies of the RWE Group deposited collateral for the trading activities stated above for exchange-based and over-the-counter transactions. These are to guarantee that the obligations from the transactions are discharged even if the development of prices is not favourable for RWE. Regular replacement of the deposited collateral depends on the contractually agreed thresholds, above which collateral must be provided for the market value of the trading activities.

For the miscellaneous other financial receivables, in the previous year, there was limited control in the amount of €260 million related to the financing of the pension commitments of three companies assigned to innogy – discontinued operations.

(15) Other receivables and other assets

Other receivables and other assets	31 Dec 2018		31 Dec 2017	
€ million	Non-current	Current	Non-current	Current
Derivatives	704	6,567	1,014	3,249
Capitalised surplus of plan assets over benefit obligations	213		103	
Prepayments for items other than inventories		137		217
CO_2 emission allowances		329		121
Miscellaneous other assets	29	375	70	1,305
	946	**7,408**	**1,187**	**4,892**
of which: financial assets	924	6,684	1,127	3,483
of which: non-financial assets	22	724	60	1,409

The financial instruments reported under miscellaneous other assets are measured at amortised cost. Derivative financial instruments are stated at fair value. The carrying values of exchange-traded derivatives with netting agreements are offset.

(16) Deferred taxes

Deferred tax assets and liabilities principally stem from the fact that measurements in the IFRS statements differ from those in the tax bases. As of 31 December 2018, no deferred tax liabilities were recognised for the difference between net assets and the carrying value of the subsidiaries and associates for tax purposes (known as 'outside basis differences') in the amount of €618 million (previous year: €441 million), as it is neither probable that there will be any distributions in the foreseeable future, nor will the temporary differences reduce in the foreseeable future. €5,335 million and €6,254 million of the gross deferred tax assets and liabilities, respectively, will be realised within twelve months (previous year: €4,135 million and €3,572 million).

The following is a breakdown of deferred tax assets and liabilities by item:

Deferred taxes	31 Dec 2018		31 Dec 2017	
€ million	Assets	Liabilities	Assets	Liabilities
Non-current assets	815	938	1,525	1,619
Current assets	2,101	3,009	1,401	2,312
Exceptional tax items		58		748
Non-current liabilities				
Provisions for pensions	139	41	932	11
Other non-current liabilities	289	194	1,252	325
Current liabilities	3,234	3,245	2,734	1,260
	6,578	**7,485**	**7,844**	**6,275**
Tax loss carryforwards				
Corporate income tax (or comparable foreign income tax)	77		328	
Trade tax	16		12	
Gross total	**6,671**	**7,485**	**8,184**	**6,275**
Netting	−5,847	−5,847	−5,557	−5,557
Net total	**824**	**1,638**	**2,627**	**718**

As of 31 December 2018, RWE reported deferred tax claims which exceeded the deferred tax liabilities by €56 million (previous year: €417 million), in relation to companies which suffered a loss in the current or previous period. The basis for the formation of deferred tax assets is the judgement of the management that it is likely that the companies in question will generate taxable earnings, against which unutilised tax losses and deductible temporary differences can be applied.

The capitalised tax reduction claims from loss carryforwards result from the expected utilisation of previously unused tax loss carryforwards in subsequent years.

It is sufficiently certain that these tax carryforwards will be realised. At the end of the reporting period, corporate income tax loss carryforwards and trade tax loss carryforwards for which no deferred tax claims have been recognised amounted to €1,463 million and €490 million, respectively (previous year: €2,513 million and €344 million).

€1,183 million in corporate income tax loss carryforwards for which no deferred tax claims have been recognised will apply to the following nine years. The other loss carryforwards do not have any time limits, but they are mostly not expected to be used.

As of 31 December 2018, temporary differences for which no deferred tax assets were recognised amounted to €11,180 million (previous year: €12,185 million).

In the year under review, a deferred tax expense of €5 million arising from the currency translation of foreign financial statements was offset against equity (previous year: €14 million).

(17) Inventories

Inventories € million	31 Dec 2018	31 Dec 2017
Raw materials, incl. nuclear fuel assemblies and earth excavated for lignite mining	723	998
Work in progress – goods/services	37	200
Finished goods and goods for resale	872	719
Prepayments	–1	7
	1,631	**1,924**

The carrying amount of inventories acquired for resale purposes was €33 million (previous year: €58 million). Of this, €29 million related to gas inventories (previous year: €44 million) and €4 million related to coal inventories (previous year: €10 million). In the previous year, €4 million related to biomass inventories.

The fair value of gas and coal inventories is determined every month on the basis of the current price curves of the relevant indices for gas (e.g. NCG) and coal (e.g. API#2). The valuations are based on prices which can be observed directly or indirectly (Level 2 of the fair value hierarchy). Differences between the fair value and the carrying value of inventories acquired for resale purposes are recognised on the income statement at the end of the month.

(18) Marketable securities

Of the current marketable securities, €3,226 million were fixed-interest marketable securities (previous year: €4,065 million) with a maturity of more than three months from the date of acquisition, and €383 million were stocks and profit-participation certificates (previous year: €828 million). Marketable securities are stated at fair value.

(19) Cash and cash equivalents

Cash and cash equivalents € million	31 Dec 2018	31 Dec 2017
Cash and demand deposits	3,521	3,924
Marketable securities and other cash investments (maturity less than three months from the date of acquisition)	2	9
	3,523	**3,933**

RWE keeps demand deposits exclusively for short-term cash positions. For cash investments, banks are selected on the basis of various credit-worthiness criteria. Such criteria include their rating from one of the three renowned rating agencies – Moody's, Standard & Poor's and Fitch – as well as their equity capital and the prices for credit default swaps. As in the previous year, interest rates on cash and cash equivalents were at market levels in 2018.

(20) Equity

A breakdown of fully paid-up equity is shown on page 92. The subscribed capital of RWE AG is structured as follows:

Subscribed capital	31 Dec 2018 Number of shares		31 Dec 2017 Number of shares		31 Dec 2018 Carrying amount	31 Dec 2017 Carrying amount
	in '000	in %	in '000	in %	€ million	€ million
Common shares	575,745	93.7	575,745	93.7	1,474	1,474
Preferred shares	39,000	6.3	39,000	6.3	100	100
	614,745	**100.0**	**614,745**	**100.0**	**1,574**	**1,574**

Common and preferred shares are no-par-value bearer share certificates. Preferred shares have no voting rights. Under certain conditions, preferred shares are entitled to payment of a preference dividend of €0.13 per share, upon allocation of the company's profits.

Pursuant to a resolution passed by the Annual General Meeting on 26 April 2018, the Executive Board was authorised to increase the company's capital stock with the Supervisory Board's approval by up to €314,749,693.44 until 25 April 2023 through the issue of up to 122,949,099 bearer common shares in return for contributions in cash and/or in kind (approved capital). In certain cases, with the approval of the Supervisory Board, the subscription rights of shareholders can be excluded.

Pursuant to a resolution passed by the Annual General Meeting on 26 April 2018, the Company was authorised until 25 April 2023 to acquire any kind of shares of the Company up to a volume of 10 % of the capital stock when the resolution on this authorisation was passed, or if the following is lower, when this authorisation is exercised. Based on the authorisation, the Executive Board is also authorised to cancel treasury shares without a further resolution by the Annual General Meeting. Moreover, the Executive Board is authorised to transfer or sell such shares to third parties under certain conditions and excluding shareholders' subscription rights. Furthermore, treasury shares may be issued to holders of option or convertible bonds. The Executive Board is also authorised to use the treasury shares to discharge obligations from future employee share schemes; in this regard, shareholders' subscription rights shall be excluded.

No treasury shares were held as of 31 December 2018.

In fiscal 2018, RWE AG purchased a total of 196,604 RWE common shares for a purchase price of €3,626,221.16 on the capital market. This is equivalent to €503,306.24 of the capital stock (0.03 % of subscribed capital). Employees of RWE AG and its subsidiaries received a total of 196,560 common shares for capital formation under the employee share plan and 44 common shares for service anniversaries. This generated total proceeds of €3,617,602.33. The differences to the purchase price were offset against freely available retained earnings.

Pursuant to IAS 32, the following hybrid bond issued by Group companies must be classified as equity:

Hybrid bonds Issuer	Nominal value	First call date	Coupon in % p.a.[1]
RWE AG	£750 m	2019	7.0

1 Until the first call date.

Proceeds from the bond issue were reduced by the capital procurement costs and added to equity, taking account of taxes. Interest payments to bondholders will be booked directly against equity, after deduction of taxes. Such payments can be deferred by the company; under certain circumstances, however, they must be made up again, for example if the Executive Board and Supervisory Board propose to the Annual General meeting that a dividend be paid.

As a result of equity capital transactions with subsidiary companies which did not lead to a change of control, the share of equity attributable to RWE AG's shareholders changed by a total of €491 million (previous year: –€4 million) and the share of equity attributable to other shareholders changed by a total of €258 million (previous year: –€15 million).

Accumulated other comprehensive income reflects changes in the fair values of debt instruments measured at fair value through other comprehensive income, cash flow hedges and hedges of the net investment in foreign operations, as well as changes stemming from foreign currency translation adjustments from foreign financial statements.

As of 31 December 2018, the share of accumulated other comprehensive income attributable to investments accounted for using the equity method amounted to –€7 million (previous year: €11 million).

During the reporting year, €48 million in differences from currency translation which had originally been recognised without an effect on income were realised as an expense (previous year: income of €13 million).

Dividend proposal

We propose to the Annual General Meeting that RWE AG's distributable profit for fiscal 2018 be appropriated as follows:

Distribution of a dividend of €0.70 per dividend-bearing common and preferred share.

Dividend	€430,321,849.30
Profit carryforward	€59,392.54
Distributable profit	€430,381,241.84

Based on a resolution of RWE AG's Annual General Meeting on 26 April 2018, the dividend for fiscal 2017 amounted to €0.50 per dividend-bearing common and preferred share. In addition, a special dividend of €1.00 from the nuclear fuel tax refund was paid per dividend-bearing common and preferred share. The dividend payment to shareholders of RWE AG amounted to €922 million.

Non-controlling interests
The share ownership of third parties in Group entities is presented in this item.

The income and expenses recognised directly in equity (other comprehensive income – OCI) include the following non-controlling interests:

Non-controlling interests in OCI € million	2018	2017
Actuarial gains and losses of defined benefit pension plans and similar obligations	– 134	165
Pro-rata income and expenses of investments accounted for using the equity method	– 2	– 14
Fair valuation of equity instruments	– 13	
Income and expenses recognised directly in equity, not to be reclassified through profit or loss	**– 149**	**151**
Currency translation adjustment	11	35
Fair valuation of financial instruments available for sale		5
Fair valuation of debt instruments	– 4	
Fair valuation of financial instruments used for hedging purposes	– 5	– 2
Pro-rata income and expenses of investments accounted for using the equity method		– 3
Income and expenses recognised directly in equity, to be reclassified through profit or loss in the future	**2**	**35**
	– 147	**186**

In the previous year, material non-controlling interests were attributable to the innogy Group, which is essentially accounted for as a discontinued operation in the year under review:

Subsidiaries with material non-controlling interests	innogy – continuing operations	innogy Group	
€ million	31 Dec 2018	31 Dec 2018	31 Dec 2017
Balance sheet			
Non-current assets	8,133	37,229	36,502
Current assets	4,313	12,645	10,312
Non-current liabilities	1,524	24,980	22,913
Current liabilities	8,092	14,980	12,649
Statement of comprehensive income			
Revenue	1,505	35,063	41,119
Other comprehensive income	88	– 576	722
Total comprehensive income	360	– 862	1,871
Cash flows from operating activities	538	2,565	2,654
Non-controlling interests	951	4,442	4,135
Dividends paid to non-controlling interests	237	501	469
Income of non-controlling interests	67	663	492
Shareholdings of non-controlling interests		23.2 %	23.2 %

In addition to the 23.2 % share accounted for by non-controlling interests disclosed, there are also non-controlling interests in subsidiaries of innogy SE.

(21) Share-based payment

For executives of RWE AG and innogy SE as well as of subordinate affiliates, Long Term Incentive Plans (LTIPs) are in place as share-based payment systems known as Strategic Performance Plans (SPPs) and the predecessor model Beat 2010, which is being phased out. The expenses associated with these are borne by the Group companies which employ the persons holding notional stocks.

The LTIP SPP was introduced in 2016. It uses an internal performance target (adjusted net income) derived from the mid-term planning and takes into account the development of RWE AG's and innogy SE's share price. Executives receive conditionally granted virtual shares (performance shares). The final number of virtual shares in a tranche is determined based on the achievement of the adjusted net income target. Each of the issued LTIP SPP tranches has a term of four years before payment is possible. The prerequisite for participating in the plan was the renouncement of the options of the predecessor model Beat 2010 which had not yet lapsed. The large majority of the participants made such renouncement declarations. The plan has expired with the exception of some immaterial remaining components.

RWE AG SPP	2016 tranche	2017 tranche	2018 tranche
Start of term	1 Jan 2016	1 Jan 2017	1 Jan 2018
Number of conditionally granted performance shares	486,436	1,338,027	883,974
Term	4 years	4 years	4 years
Performance target	Adjusted net income	Adjusted net income	Adjusted net income
Cap/number of performance shares	150 %	150 %	150 %
Cap/payment amount	200 %	200 %	200 %
Determination of payment	The payment amount is calculated on the basis of the determined number of performance shares multiplied by the sum of a) the mathematical average of the closing share price of the RWE common share (ISIN DE 000703129), with all available decimal places, in Xetra trading of Deutsche Börse AG (or a successor trading system which subsequently takes the place of the Xetra system) for the last 30 trading days prior to the end of the vesting period rounded according to standard commercial practice to two decimal places, and b) the dividend paid per share for the fiscal years between the determination of the final number of performance shares and the end of the vesting period. Dividends do not bear interest and are not reinvested. If a dividend payment occurs during the 30-day period for calculating the share price in accordance with item a), the share prices of the trading days leading up to the payment (CUM share prices) are adjusted by the dividend, as the dividend would otherwise be considered twice. Payment amount = (number of finally granted performance shares) x (mathematical average of the share price + dividends paid) The payment amount calculated in this manner is limited to no more than 200 % of the grant amount.		
Change in corporate control/ merger	A change in corporate control ('change of control') shall occur if a) a shareholder gains control in accordance with Sec. 29 of the German Securities Acquisition and Takeover Act (WpÜG) by holding at least 30 % of the voting rights including third-party voting rights attributable to it in accordance with Sec. 30 WpÜG, or b) a control agreement in accordance with Sec. 291 of the Stock Corporation Act (AktG) is concluded with RWE AG as the dependent company, or c) RWE AG is merged with another legal entity that does not belong to the Group in accordance with Sec. 2 of the German Company Transformation Act (UmwG), unless the value of the other legal entity is less than 50 % of the value of RWE AG based on the agreed conversion rate; in such a case, item a) shall not apply. In the event of a change of control, all of the performance shares which have been fully granted and have not been paid out shall be paid out early. The payment amount is determined according to the exercise conditions, with the deviation that the last 30 trading days prior to the announcement of the change in control is to be used; plus the dividends paid per share in the fiscal years between the determination of the final number of performance shares and the time of the change in control. The payment amount calculated in this manner shall be paid to the plan participant together with his or her next salary payment. All conditionally granted performance shares as of the effective date of the change of control shall lapse without consideration.		
Form of settlement	Cash settlement	Cash settlement	Cash settlement
Payment date	2020	2021	2022

innogy SE SPP	2016 tranche	2017 tranche	2018 tranche
Start of term	1 Jan 2016	1 Jan 2017	1 Jan 2018
Number of conditionally granted performance shares	352,834	1,178,133	1,108,599
Term	4 years	4 years	4 years
Performance target	Adjusted net income	Adjusted net income	Adjusted net income
Cap/number of performance shares	150 %	150 %	150 %
Cap/payment amount	200 %	200 %	200 %
Determination of payment	The payment amount is calculated on the basis of the determined number of finally granted performance shares multiplied by the sum of a) the mathematical average of the closing share price (including all available decimal places) of the innogy SE share (ISIN DE 000A2AADD2) in Deutsche Börse AG's Xetra trading (or a successor trading system which subsequently takes the place of the Xetra system) for the last 30 trading days prior to the end of the vesting period rounded to two decimal places according to standard commercial practice and b) the dividends paid per share for the fiscal years between the determination of the final number of performance shares and the end of the vesting period. Dividends do not bear interest and are not reinvested. If a dividend payment occurs during the 30-day period for calculating the share price in accordance with item a), the share prices of the trading days leading up to the payment (CUM share prices) are adjusted by the dividend, as the dividend would otherwise be considered twice. Payment amount = (number of finally granted performance shares) x (mathematical average of the share price + dividends paid) The payment amount calculated in this manner is limited to no more than 200 % of the grant amount.		
Change in corporate control/ merger	A change in corporate control ('change of control') shall occur if a) a shareholder obtains control in the sense of Sec. 29 of the German Securities Acquisition and Takeover Act (WpÜG) by acquiring at least 30 % of the voting rights, including the voting rights of third parties which can be attributed to the shareholder pursuant to Sec. 30 of WpÜG, whereby RWE AG or an RWE Group company may no longer have control in the sense of Sec. 29 of WpÜG (30 % of the voting rights), or b) a control agreement in accordance with Sec. 291 of the Stock Corporation Act (AktG) is concluded with a company which is not part of the RWE Group with innogy SE as the dependent company, or c) innogy SE is merged with another legal entity that does not belong to the Group in accordance with Sec. 2 of the German Company Transformation Act (UmwG), unless the value of the other legal entity is less than 50 % of the value of innogy SE based on the agreed conversion rate; in such a case, item a) shall not apply. In the event of a change of control, all of the performance shares which have been fully granted and have not been paid out shall be paid out early. The payment amount is determined according to the exercise conditions, with the deviation that the last 30 trading days prior to the announcement of the change in control is to be used; plus the dividends paid per share in the fiscal years between the determination of the final number of performance shares and the time of the change in control. The payment amount calculated in this manner shall be paid to the plan participant together with his or her next salary payment. All conditionally granted performance shares as of the effective date of the change of control shall lapse without consideration.		
Form of settlement	Cash settlement	Cash settlement	Cash settelement
Payment date	2020	2021	2022

The fair value of the performance shares conditionally granted under SPP included the following sums on the grant date:

Performance Shares from the RWE AG SPP €	2016 tranche	2017 tranche	2018 tranche
Fair value per share	13.78	11.62	18.80

Performance Shares from the innogy SE SPP €	2016 tranche	2017 tranche	2018 tranche
Fair value per share	37.13	32.07	36.78

The fair values of the tranches of the RWE AG SPP are based on RWE AG's and innogy SE's current share price plus the dividends per share which have already been paid to the shareholders during the term of the corresponding tranche. The limited payment per SPP was implemented via a sold call option. The option value calculated using the Black Scholes Model was deducted. The maximum payments per conditionally granted SPP (= option strike) established in the plan conditions, the discount rates relative to the remaining term as well as the volatilities and expected dividends of RWE AG and innogy SE were considered in determining the option price.

The fair values of the tranches of the innogy SE SPP are affected by the asset swap with E.ON announced in March 2018 because the the rules set out earlier will be reflected in the valuation in the event of a change of control. The expected payout amount will be calculated on the basis of the average innogy share price on the 30 stock market trading days leading up to 11 March 2018 plus dividends paid. In line with the payout conditions in the event of a change of control, the payout will be effected after the completion of the transaction.

The performance shares displayed the following development in the fiscal year that just came to a close:

Performance Shares from the RWE AG SPP	2016 tranche	2017 tranche	2018 tranche
Outstanding at the start of the fiscal year	446,035	1,338,027	
Granted			883,974
Change (granted/expired)	82,172	290,364	
Paid out			
Outstanding at the end of the fiscal year	528,207	1,628,391	883,974
Payable at the end of the fiscal year			

Performance Shares from the innogy SE SPP	2016 tranche	2017 tranche	2018 tranche
Outstanding at the start of the fiscal year	460,572	1,178,133	
Granted			1,108,599
Change (granted/expired)	−432,696	−1,122,921	−1,052,053
Of which: assigned to innogy – discontinued operations	−367,338	−975,733	−1,042,949
Paid out			
Outstanding at the end of the fiscal year	27,876	55,212	56,546
Payable at the end of the fiscal year			

During the period under review, expenses for the share-based payment system totalled €20 million (previous year: €19 million). As of the balance-sheet date, provisions for cash-settled share-based payment programmes amounted to €32 million (previous year: €25 million).

(22) Provisions

Provisions € million	31 Dec 2018 Non-current	 Current	 Total	31 Dec 2017 Non-current	 Current	 Total
Provisions for pensions and similar obligations	3,287		3,287	5,420		5,420
Provisions for nuclear waste management	5,659	285	5,944	5,725	280	6,005
Provisions for mining damage	2,460	56	2,516	2,263	60	2,323
	11,406	**341**	**11,747**	**13,408**	**340**	**13,748**
Other provisions						
Staff-related obligations (excluding restructuring)	378	446	824	723	844	1,567
Restructuring obligations	109	23	132	234	83	317
Provisions for taxes	1,497	43	1,540	1,620	349	1,969
Purchase and sales obligations	905	92	997	1,208	321	1,529
Provisions for dismantling wind farms	358	4	362	359	1	360
Other dismantling and retrofitting obligations	528	52	580	587	78	665
Environmental protection obligations	90	7	97	108	38	146
Interest payment obligations	261	1	262	398	11	409
Obligations to deliver CO_2 emission allowances/certificates for renewable energies		885	885		1,600	1,600
Miscellaneous other provisions	331	721	1,052	604	1,472	2,076
	4,457	**2,274**	**6,731**	**5,841**	**4,797**	**10,638**
	15,863	**2,615**	**18,478**	**19,249**	**5,137**	**24,386**

Provisions for pensions and similar obligations. The company pension plan consists of defined contribution and defined benefit plans. The defined benefit commitments mainly relate to pension benefits based on final salary.

In the reporting period, €23 million (previous year: €45 million) was paid into defined contribution plans. This includes payments made by RWE for a benefit plan in the Netherlands which covers the commitments of various employers. This fund does not provide the participating companies with information allowing for the pro-rata allocation of defined benefit obligations, plan assets and service cost. In the consolidated financial statements, the contributions are thus recognised analogously to a defined contribution plan, although this is a defined benefit plan. The pension plan for employees in the Netherlands is administered by Stichting Pensioenfonds ABP (see www.abp.nl). Contributions to the pension plan are calculated as a percentage rate of employees' salaries and are paid by the employees and employers. The rate of the contributions is determined by ABP. There are no minimum funding obligations. Approximately €8 million in employer contributions are expected to be paid to the ABP pension fund in fiscal 2019 (previous year: €20 million). The contributions are used for all of the beneficiaries. If ABP's funds are insufficient, it can either curtail pension benefits and future post-employment benefits, or increase the contributions of the employer and employees. In the event that RWE terminates the ABP pension plan, ABP will charge a termination fee. Amongst other things, its level depends on the number of participants in the plan, the amount of salary and the age structure of the participants. As of 31 December 2018, we had around 600 active participants in the plan (previous year: approximately 2,000). The information relating to the prior year includes information from businesses subsumed under the discontinued innogy operations.

RWE transferred assets to RWE Pensionstreuhand e.V. within the framework of a contractual trust arrangement (CTA) in order to finance the pension commitments of German Group companies. There is no obligation to provide further funds. From the assets held in trust, funds were transferred to RWE Pensionsfonds AG to cover pension commitments to most of the employees who have already retired. RWE Pensionsfonds AG falls under the scope of the Act on the Supervision of Insurance Undertakings and oversight by the Federal Financial Supervisory Agency (BaFin). Insofar as a regulatory deficit occurs in the pension fund, supplementary payment shall be requested from the employer. Independently of the aforementioned rules, the liability of the employer shall remain in place. The boards of RWE Pensionstreuhand e.V. and RWE Pensionsfonds AG are responsible for ensuring that the funds under management are used in compliance with the contract and thus fulfil the requirements for recognition as plan assets.

In the United Kingdom, it is legally mandated that defined benefit plans are provided with adequate and suitable assets to cover pension obligations. The corporate pension system is managed by the sector-wide Electricity Supply Pension Scheme (ESPS), in which RWE and innogy each have their own dedicated independent sections. The sections are managed by trustees which are elected by members of the pension plans or appointed by the sponsoring employers. The trustees are responsible for managing the pension plans. This includes investments, pension payments and financing plans. The pension plans comprise the benefit obligations and plan assets for the subsidiaries of the innogy Group and the RWE Group. It is required by law to assess the required financing of the pension plans once every three years. This involves measuring pension obligations on the basis of conservative assumptions, which deviate from the requirements imposed by IFRS. The underlying actuarial assumptions primarily include the projected life expectancies of the members of the pension plans as well as assumptions relating to inflation, imputed interest rates and the market returns on the plan assets.

The last funding valuations of the RWE and innogy ESPS sections were carried out on 31 March 2016. In sum, they showed a financing deficit of £574.6 million. RWE, innogy and the trustees subsequently prepared a plan for annual payments to rectify this deficit. These payments were calculated for the period from 2017 to 2025. The amounts determined were as follows: £106 million for 2017, £76 million annually for 2018 to 2021, and £39.6 million annually for 2022 to 2025. In October 2016, an early payment in a nominal amount of £45.4 million was made. Thereafter, the contribution plans of the RWE and innogy sections were extended until 2022 and 2029, respectively, while maintaining the annual contributions. The next valuation has to occur by 31 March 2019. From this point in time, the company and the trustees have 15 months to approve the funding valuation.

The payments to settle the deficit are charged to the participating companies on the basis of a contractual agreement. Above and beyond this, payments are regularly made to finance the newly arising benefit obligations of active employees which increase the pension claims.

Provisions for defined benefit plans are determined using actuarial methods. We apply the following assumptions:

Calculation assumptions	31 Dec 2018		31 Dec 2017	
in %	Germany	Foreign[1]	Germany	Foreign[1]
Discount rate	1.70	2.70	2.00	2.30
Wage and salary growth rate	2.35	3.30	2.35	3.20
Pension increase rate	1.00, 1.60 and 1.75	2.20 and 3.10	1.00, 1.60 and 1.75	2.10 and 3.00

1 Pertains to benefit commitments to employees of the RWE Group in the UK.

Provisions for pensions and similar obligations of innogy – discontinued operations included in liabilities held for sale as of 31 December 2018 are based on the following calculation assumptions:

Calculation assumptions	31 Dec 2018	
in %	Germany	Foreign[1]
Discount rate	1.80	2.80
Wage and salary growth rate	2.35	3.30
Pension increase rate	1.00, 1.60 and 1.75	2.20 and 3.10

1 Pertains to benefit commitments to employees of the RWE Group in the UK.

Composition of plan assets (fair value)	31 Dec 2018				31 Dec 2017			
€ million	Domestic[1]	Of which: Level 1 pursuant to IFRS 13	Foreign[2]	Of which: Level 1 pursuant to IFRS 13	Domestic[1]	Of which: Level 1 pursuant to IFRS 13	Foreign[2]	Of which: Level 1 pursuant to IFRS 13
Equity instruments, exchange-traded funds	1,396	1,375	469	208	3,559	1,699	662	254
Interest-bearing instruments	3,245	4	3,720	1,641	6,874		4,793	2,109
Real estate	4				17			
Mixed funds[3]	613	229	613	324	1,326	364		
Alternative investments	689	406	784	2	1,412	544	922	
Other[4]	72	68	308	7	241	102	193	8
	6,019	**2,082**	**5,894**	**2,182**	**13,429**	**2,709**	**6,570**	**2,371**

1 Plan assets in Germany primarily pertain to assets of RWE AG and other Group companies which are managed by RWE Pensionstreuhand e.V. as a trust, as well as to assets of RWE Pensionsfonds AG.
2 Foreign plan assets pertain to the assets of two UK pension funds for covering benefit commitments to employees of the RWE Group in the UK.
3 Includes equity and interest-bearing instruments.
4 Includes reinsurance claims against insurance companies and other fund assets of provident funds.

Our investment policy in Germany is based on a detailed analysis of the plan assets and the pension commitments and the relation of these two items to each other, in order to determine the best possible investment strategy (Asset Liability Management Study). Using an optimisation process, portfolios are identified which can earn the best targeted results at a defined level of risk. One of these efficient portfolios is selected and the strategic asset allocation is determined; furthermore, the related risks are analysed in detail.

The focus of RWE's strategic investment policy is on domestic and foreign government bonds. In order to increase the average yield, corporate bonds with a higher yield are also included in the portfolio. The ratio of equities in the portfolio is lower than that of bonds. Investment occurs in various regions. The investment position in equities is intended to earn a risk premium over bond investments over the long term. Furthermore, in order to achieve consistently high returns, there is also investment in products which offer relatively regular positive returns over time. This involves products with returns which fluctuate like those of bond investments, but which achieve an additional return over the medium term, such as so-called absolute return products (including funds of hedge funds).

In the United Kingdom, our capital investment takes account of the structure of the pension obligations as well as liquidity and risk matters. The goal of the investment strategy in this context is to maintain the level of pension plan funding and ensure the full financing of the pension plans over time. To reduce financing costs and earn surplus returns, we also include higher-risk investments in our portfolio. The capital investment focusses on government and corporate bonds.

Pension provisions for pension commitments changed as follows:

Changes in pension provisions € million	Present value of pension commitments	Fair value of plan assets	Capitalised surplus of plan assets	Total
Balance at 1 Jan 2018	**25,316**	**19,999**	**103**	**5,420**
Current service cost	210			210
Interest cost/income	413	340		73
Return on fund assets less interest components		– 788		788
Gain/loss on change in demographic assumptions	44			44
Gain/loss on change in financial assumptions	380			380
Experience-based gains/losses	– 71			– 71
Currency translation adjustments	– 45	– 46	– 1	
Employee contributions to funded plans	8	8		
Employer contributions to funded plans [1]		259		– 259
Benefits paid by funded plans [2]	– 907	– 852		– 55
Changes in the scope of consolidation/transfers	– 10,376	– 7,001	– 106	– 3,481
of which: stated as 'Held for sale'	– 10,461	– 7,005	– 106	– 3,562
Past service cost	15			15
General administration expenses		– 6		6
Change in capitalised surplus of plan assets			217	217
Balance at 31 Dec 2018	**14,987**	**11,913**	**213**	**3,287**
of which: domestic	9,208	6,019		3,189
of which: foreign	5,779	5,894	213	98

1 Of which: €138 million from initial and subsequent transfers to plan assets and €121 million in cash flows from operating activities.
2 Contained in cash flows from operating activities.

Changes in pension provisions € million	Present value of pension commitments	Fair value of plan assets	Capitalised surplus of plan assets	Total
Balance at 1 Jan 2017	**26,334**	**19,602**	**29**	**6,761**
Current service cost	325			325
Interest cost/income	501	381		120
Return on fund assets less interest components		744		– 744
Gain/loss on change in demographic assumptions	– 145			– 145
Gain/loss on change in financial assumptions	– 528			– 528
Experience-based gains/losses	– 89			– 89
Currency translation adjustments	– 246	– 233		– 13
Employee contributions to funded plans	12	12		
Employer contributions to funded plans[1]		476		– 476
Benefits paid by funded plans[2]	– 1,069	– 980		– 89
Changes in the scope of consolidation	278	3		275
Past service cost	– 57			– 57
General administration expenses		– 6		6
Change in capitalised surplus of plan assets			74	74
Balance at 31 Dec 2017	**25,316**	**19,999**	**103**	**5,420**
of which: domestic	18,613	13,429	103	5,287
of which: foreign	6,703	6,570		133

1 Of which: €190 million from initial and subsequent transfers to plan assets and €286 million in cash flows from operating activities.
2 Contained in cash flows from operating activities.

Changes in the actuarial assumptions would lead to the following changes in the present value of the defined benefit obligations:

Sensitivity analysis of pension provisions	Changes in the present value of defined benefit obligations			
€ million	31 Dec 2018		31 Dec 2017	
Change in the discount rate by + 50/– 50 basis points				
– Domestic	– 644	728	– 1,370	1,554
– Foreign	– 373	420	– 485	554
Change in the wage and salary growth rate by – 50/+ 50 basis points				
– Domestic	– 49	51	– 151	158
– Foreign	– 29	32	– 61	71
Change in the pension increase rate by – 50/+ 50 basis points				
– Domestic	– 442	484	– 937	1,027
– Foreign	– 267	298	– 350	394
Increase of one year in life expectancy				
– Domestic		425		772
– Foreign		202		245

The sensitivity analyses are based on the change of one assumption each, with all other assumptions remaining unchanged. Actual developments will probably be different than this. The methods of calculating the aforementioned sensitivities and for calculating the pension provisions are in agreement. The dependence of pension provisions on market interest rates is limited by an opposite effect. The background of this is that the commitments stemming from company pension plans are primarily covered by funds, and mostly plan assets exhibit negative correlation with the market yields of fixed-interest securities. Consequently, declines in market interest rates are typically reflected in an increase in plan assets, whereas rising market interest rates are typically reflected in a reduction in plan assets.

The present value of pension obligations, less the fair value of the plan assets, equals the net amount of funded and unfunded pension obligations.

As of the balance-sheet date, the recognised amount of pension provisions totalled €2,826 million for funded pension plans (previous year: €3,694 million) and €461 million for unfunded pension plans (previous year: €1,726 million).

In fiscal 2018, the past service cost predominantly consisted of pension commitments in the United Kingdom due to a ruling on the equalisation of minimum pension entitlements through the consideration of gender-specific factors and severance payments. Furthermore, employee rights to compensation for disadvantages were remeasured in some cases in German pre-retirement regulations. In the previous year, the past service cost was primarily based on effects in relation to restructuring measures and the remeasurement of a pension policy – both in Germany.

Domestic company pensions are subject to an obligation to review for adjustment every three years pursuant to the Act on the Improvement of Company Pensions (Sec 16 of the German Company Pension Act (BetrAVG)). Additionally, some commitments grant annual adjustments of pensions, which may exceed the adjustments in compliance with the legally mandated adjustment obligation.

Some domestic pension plans guarantee a certain pension level, taking into account the statutory pension (total retirement earnings schemes). As a result, future reductions in the statutory pension can result in higher pension payments by RWE.

The weighted average duration of the pension obligations was 15 years in Germany (previous year: 16 years) and 14 years outside of Germany (previous year: 16 years).

In fiscal 2019, RWE expects to make €220 million in payments for defined benefit plans of continuing operations (previous-year target: €400 million), as direct benefits and contributions to plan assets.

Provisions for nuclear energy and mining € million	Balance at 1 Jan 2018	Additions	Unused amounts released	Interest accretion	Changes in the scope of consolidation, currency adjustments, transfers	Amounts used	Balance at 31 Dec 2018
Provisions for nuclear waste management	6,005	48		135		–244	5,944
Provisions for mining damage	2,323	127	–56	96	77	–51	2,516
	8,328	**175**	**–56**	**231**	**77**	**–295**	**8,460**

Provisions for nuclear waste management are recognised in the full amount for the nuclear power plants Biblis A and B, Mülheim-Kärlich, Emsland and Lingen, and at a rate of 75 % for the nuclear power plant Gundremmingen A, B and C, in accordance with RWE's share in the nuclear obligations. Provisions for waste disposal for the Dutch nuclear power plant Borssele are included at a rate of 30 %, in line with RWE's stake.

Provisions for nuclear waste disposal are almost exclusively reported as non-current provisions, and their settlement amount is discounted to the balance-sheet date. Based on the current state of planning, we will use most of these provisions by 2045. The discount rate calculated on the basis of the current level of market interest rates for no-risk cash investments was 0.4 % as of the balance-sheet date (previous year: 0.6 %). The escalation rate based on expectations with regard to general increases in wages and prices and productivity growth was 1.5 % (previous year: 1.5 %). As a result, the real discount rate used for nuclear waste management purposes, which is the difference between the discount rate and the escalation rate, amounted to –1.1 % (previous year: –0.9 %). An increase (decrease) in this rate by 0.1 percentage point would reduce (increase) the present value of the provision by roughly €50 million.

Excluding the interest accretion, additions to provisions for nuclear waste management amount to €48 million. Besides quantity-related increases in the provisions, additions to provisions are due to the fact that the current estimates resulted in a net increase in the anticipated nuclear waste management costs. The interest accretion in the additions to provisions for nuclear waste management amounted to €135 million. Of the changes in provisions, €74 million was capitalised under the corresponding costs of nuclear power plants and fuel elements still in operation. Prepayments for services in the amount of €8 million were deducted from these provisions. In the reporting period, we also used provisions of €171 million for the decommissioning of nuclear power plants. Decommissioning and dismantling costs had originally been capitalised in a corresponding amount and reported under the cost of the power plants.

The provisions of the law on the reassignment of responsibility for nuclear waste disposal stipulates that accountability for the shutdown and dismantling of the assets as well as for packaging radioactive waste remains with the companies. The shutdown and dismantling process encompasses all activities following the final termination of production by the nuclear power plant until the plant site is removed from the regulatory scope of the Nuclear Energy Act. Actual dismantling begins after the fuel assemblies, operating equipment and radioactive operational waste are removed from the facility and the approval process is completed. Dismantling operations essentially consist of the dismantling of the facilities, removal of the radioactive contamination from the structures, radiation protection, and regulatory monitoring of the dismantling measures and residual operations.

We thus subdivide our provisions for nuclear waste management into the residual operation of nuclear power plants, the dismantling of nuclear power station facilities as well as the cost of residual material processing and radioactive waste treatment facilities.

Provisions for nuclear waste management € million	31 Dec 2018	31 Dec 2017
Residual operation	2,515	2,577
Dismantling	1,810	1,766
Processing of residual material and waste management	1,619	1,662
	5,944	**6,005**

Provisions for the residual operation of nuclear power station facilities cover all steps that must be taken largely independent of dismantling and disposal but are necessary to ensure that the assets are safe and in compliance with permits or are required by the authorities. In addition to works monitoring and facility protection, these mainly include service, recurrent audits, maintenance, radiation and fire protection as well as infrastructural adjustments.

Provisions for the dismantling of nuclear power plant facilities include all work done to dismantle plants, parts of plants, systems and components as well as on buildings that must be dismantled to comply with the Nuclear Energy Act. They also consider the conventional dismantling of nuclear power plant facilities to fulfil legal or other obligations.

Provisions for residual material processing and waste management include the costs of processing radioactive residual material for non-hazardous recycling and the costs of treating radioactive waste produced during the plant's service life and dismantling operations. This includes the various processes for conditioning, proper packaging of the low-level and intermediate-level radioactive waste in suitable containers and the transportation of such waste to BGZ Gesellschaft für Zwischenlagerung mbH (BGZ), which has been commissioned by the Federal government for intermediate storage. This item also contains the cost of transporting the waste produced by recycling and the cost of the proper packaging of spent nuclear fuel elements, i.e. the cost of loading and procuring freight and interim storage containers.

Commissioned by the plant operator, the internationally renowned company NIS Ingenieurgesellschaft mbH (NIS), Alzenau, assesses the prospective residual operation and dismantling costs for the nuclear power plants on an annual basis. The costs are determined specifically for each facility and take into consideration the current state of the art, regulatory requirements and previous practical experience from ongoing and completed dismantling projects. Additionally, current developments are also incorporated into the cost calculations. They also include the cost of conditioning and packaging radioactive waste generated during dismantling operations and the transportation of such waste to BGZ, which has been commissioned by the Federal government for intermediate storage. Further cost estimates for the disposal of radioactive waste are based on contracts with foreign reprocessing companies and other disposal companies. Furthermore, they are based on plans by internal and external experts, in particular GNS Gesellschaft für Nuklear-Service mbH, (GNS) Essen.

In terms of their contractual definition, provisions for nuclear waste management break down as follows:

Provisions for nuclear waste management € million	31 Dec 2018	31 Dec 2017
Provisions for nuclear obligations, not yet contractually defined	4,462	4,453
Provisions for nuclear obligations, contractually defined	1,482	1,552
	5,944	**6,005**

The provision for obligations which are not yet contractually defined covers the costs of the remaining operational phase of the operating plants, the costs of dismantling as well as the residual material processing and waste treatment costs incurred in connection with waste produced as a result of shut-downs.

Provisions for contractually defined nuclear obligations relate to all obligations the value of which is specified in contracts under civil law. The obligations include the anticipated residual costs of reprocessing and returning the resulting radioactive waste. These costs stem from existing contracts with foreign reprocessing companies and with GNS. Moreover, these provisions also include the costs for transport and intermediate storage containers for and the loading of spent fuel assemblies within the framework of final direct storage. Furthermore, this item also includes the amounts for the professional packaging of radioactive operational waste as well as the in-house personnel costs incurred for the residual operation of plants which are permanently decommissioned.

Provisions for mining damage also consist almost entirely of non-current provisions and fully covered the volume of obligations as of the balance-sheet date. They are reported at their settlement amount discounted to the balance-sheet date. In addition to continuous recultivation of opencast mine sites a large part of the claims for site restoration of lignite opencast mining areas is expected for the period from 2030 to 2100. The cost estimates are to a great extent based on external expert opinions.

Due to the long-term nature of the obligations, both the escalation rate and the discount rate are determined as the average values for a longer period in the past. Since the development of inflation has an impact both on the fulfilment amounts and the level of interest rates, this approach results in a consistent real discount rate specific to the provisions, as the difference between the discount rate and the escalation rate. Due to developments in long-term interest rates on the capital markets, the discount rate was lowered from 4.2 % to 4.1 % in the 2018 reporting year. The escalation rate, which takes into consideration anticipated future increases in costs and prices, as well as a risk premium, declined to the same degree, from 2.9 % to 2.8 %. The real discount rate applied for mining purposes, which is the difference between the discount rate and the escalation rate, thus remained unchanged at 1.3 %. An increase (decline) in the real discount rate by 0.1 percentage point would reduce (increase) the present value of the provision by around €70 million.

In the reporting year, €127 million was added to provisions for mining damage amounted due to the quantity-induced increases in the obligatory volume, of which €109 million was capitalised under ‘Property, plant and equipment’. Releases of provisions in the amount of €56 million resulted in part from the fact that current estimates led to a reduction in the anticipated costs of restoration. The interest accretion increased provisions for mining damage by €96 million.

Other provisions € million	Balance at 1 Jan 2018	Additions	Unused amounts released	Interest accretion	Changes in the scope of consolidation, currency adjustments, transfers	Of which: ‘Held for sale’	Amounts used	Balance at 31 Dec 2018
Staff-related obligations (excluding restructuring)	1,567	640	−21	3	−689	−745	−676	824
Restructuring obligations	317	47	−45	3	−172	−127	−18	132
Provisions for taxes	1,969	125	−10		−379	−369	−165	1,540
Purchase and sales obligations	1,529	171	−309	8	−225	−224	−177	997
Provisions for dismantling wind farms	360	4	−1	1	−1		−1	362
Other dismantling and retrofitting obligations	665	11	−6	12	−88	−87	−14	580
Environmental protection obligations	146	8	−1	−5	−47	−47	−4	97
Interest payment obligations	409	7			−154	−26		262
Obligations to deliver CO_2 emission allowances/certificates for renewable energies	1,600	1,339	−9		−1,069	−1,066	−976	885
Miscellaneous other provisions	2,076	490	−113	13	−1,034	−1,096	−380	1,052
	10,638	**2,842**	**−515**	**35**	**−3,858**	**−3,787**	**−2,411**	**6,731**

Provisions for taxes primarily consist of income taxes.

Provisions for staff-related obligations mainly consist of provisions for pre-retirement part-time work arrangements, severance, outstanding vacation and service jubilees and performance-based pay components. Based on current estimates, we expect most of these to be used from 2019 to 2025.

Provisions for restructuring obligations pertain mainly to measures for socially acceptable payroll downsizing. We currently expect most of these to be used from 2019 to 2025. In so doing, sums ear-marked for personnel measures are reclassified from provisions for restructuring obligations to provisions for staff-related obligations as soon as the underlying restructuring measure has been specified. This is the case if individual contracts governing socially acceptable payroll downsizing are signed by affected employees.

Provisions for purchase and sales obligations primarily relate to contingent losses from pending transactions.

From the current perspective, we expect that the majority of the **provisions for the dismantling of wind farms** will be used from 2020 to 2038, and the **other dismantling and retrofitting obligations** will be used from 2019 to 2060.

(23) Financial liabilities

Financial liabilities	31 Dec 2018		31 Dec 2017	
€ million	Non-current	Current	Non-current	Current
Bonds payable[1]	1,103		12,059	990
Commercial paper				456
Bank debt	473	81	1,333	261
Other financial liabilities				
Collateral for trading activities		533		389
Miscellaneous other financial liabilities	422	152	1,022	691
	1,998	**766**	**14,414**	**2,787**

1 Including hybrid bonds classified as debt as per IFRS.

€523 million of the non-current financial liabilities were interest-bearing liabilities (previous year: €12,633 million).

The following overview shows the key data on the major bonds of the RWE Group as of 31 December 2018:

Bonds payable Issuer	Outstanding amount	Carrying amount € million	Coupon in %	Maturity
RWE AG/innogy SE	€ 480 million[1]	12	3.5	October 2037
RWE AG	€ 539 million[2]	537	2.75	April 2075
RWE AG	€ 282 million[2]	281	3.5	April 2075
RWE AG	US$ 317 million[2]	273	6.625	July 2075
Bonds payable		**1,103**		

1 Of which €12 million is attributable to RWE AG and €468 million is attributable to innogy SE.
2 Hybrid bonds classified as debt as per IFRS.

Other financial liabilities contain finance lease liabilities. Lease agreements principally relate to capital goods in the electricity business.

Liabilities arising from finance lease agreements have the following maturities:

Liabilities from finance lease agreements	Maturities of minimum lease payments					
	31 Dec 2018			31 Dec 2017		
€ million	Nominal value	Discount	Present value	Nominal value	Discount	Present value
Due in the following year	10		10	11		11
Due after 1 to 5 years	39		39	41	1	40
Due after 5 years	192		192	197		197
	241		**241**	**249**	**1**	**248**

€72 million (previous year: €85 million) of the financial liabilities are secured by mortgages.

(24) Other liabilities

Other liabilities	31 Dec 2018		31 Dec 2017	
€ million	Non-current	Current	Non-current	Current
Tax liabilities		105		725
Social security liabilities	2	14	6	66
Derivatives	362	6,698	975	3,282
Advances and contributions in aid of construction and building connection			1,168	168
Miscellaneous other liabilities	144	383	244	2,841
	508	**7,200**	**2,393**	**7,082**
of which: financial debt	379	6,877	1,033	5,337
of which: non-financial debt	129	323	1,360	1,745

The principal component of social security liabilities are the amounts payable to social security institutions.

Miscellaneous other liabilities contain €76 million in contract liabilities. The opening balance as of 1 January 2018 of €1,314 million was reduced essentially because €1,274 million was stated under 'Liabilities held for sale'.

Moreover, €56 million (previous year: €8 million) in miscellaneous other liabilities were allocable to state investment subsidies primarily granted in connection with the construction of wind farms and the modernisation of a power station.

In the previous year, of the miscellaneous other liabilities, €1,451 million related to financial debt in the form of current purchase price obligations from rights granted to tender non-controlling interests (put options).

Other information

(25) Earnings per share

Basic and diluted earnings per share are calculated by dividing the portion of net income attributable to RWE shareholders by the average number of shares outstanding; treasury shares are not taken into account in this calculation. The earnings per share are the same for both common and preferred shares.

Earnings per share		2018	2017
Net income for RWE AG shareholders	€ million	335	1,900
of which: from continuing operations		– 196	1,702
of which: from discontinued operations		531	198
Number of shares outstanding (weighted average)	in '000	614,745	614,745
Basic and diluted earnings per common and preferred share	€	0.54	3.09
of which: from continuing operations		– 0.32	2.77
of which: from discontinued operations		0.86	0.32
Dividend per common share	€	0.70[1]	1.50
Dividend per preferred share	€	0.70[1]	1.50

1 Proposal for fiscal 2018.

(26) Reporting on financial instruments

Financial instruments are divided into non-derivative and derivative. Non-derivative financial assets essentially include other non-current financial assets, accounts receivable, marketable securities and cash and cash equivalents. Financial instruments are recognised at amortised cost or fair value, depending on their classification. Financial instruments are recognised in the following categories:

- Debt instruments measured at amortised cost: the contractual cash flows solely consist of interest and principal on the outstanding capital and there is an intention to hold the financial instrument until maturity.
- Debt instruments measured at fair value through other comprehensive income: the contractual cash flows solely consist of interest and principal on the outstanding capital: there is an intention to hold and sell the financial instrument.
- Equity instruments measured at fair value through other comprehensive income: the option to recognise changes in fair value directly in equity is exercised.
- Financial assets measured at fair value through profit or loss: the contractual cash flows of a debt instrument do not solely consist of interest and principal on the outstanding capital or the option to recognise changes in the fair value of equity instruments in other comprehensive income is not exercised.

On the liabilities side, non-derivative financial instruments principally include liabilities measured at amortised cost.

The fair value of financial instruments is determined based on the published exchange price, insofar as the financial instruments are traded on an active market. The fair value of non-quoted debt and equity instruments is generally determined on the basis of discounted expected payment flows, taking into consideration macro-economic developments and corporate business plan data. Current market interest rates corresponding to the remaining maturity are used for discounting.

Derivative financial instruments are recognised at their fair values as of the balance-sheet date, insofar as they fall under the scope of IFRS 9. Exchange-traded products are measured using the published closing prices of the relevant exchange. Non-exchange traded products are measured on the basis of publicly available broker quotations or, if such quotations are not available, on generally accepted valuation methods. In doing so, we draw on prices on active markets as much as possible. If such prices are not available, company-specific planning estimates are used in the measurement process. These estimates encompass all of the market factors which other market participants would take into account in the course of price determination. Assumptions pertaining to the energy sector and economy are made within the scope of a comprehensive process with the involvement of both in-house and external experts.

Measurement of the fair value of a group of financial assets and financial liabilities is conducted on the basis of the net risk exposure per business partner.

The following overview presents the classifications of financial instruments measured at fair value in the fair value hierarchy prescribed by IFRS 13. The individual levels of the fair value hierarchy are defined as follows:

- Level 1: Measurement using (unadjusted) prices of identical financial instruments formed on active markets,
- Level 2: Measurement on the basis of input parameters which are not the prices from Level 1, but which can be observed for the financial instrument either directly (i.e. as price) or indirectly (i.e. derived from prices),
- Level 3: Measurement using factors which cannot be observed on the basis of market data.

Fair value hierarchy € million	Total 2018	Level 1	Level 2	Level 3	Total 2017	Level 1	Level 2	Level 3
Other financial assets	400	93	159	148	1,109	80	208	821
Derivatives (assets)	7,271		7,115	156	4,263		4,230	33
of which: used for hedging purposes	1,644		1,644		1,456		1,456	
Securities	3,606	1,618	1,988		4,893	3,168	1,725	
Assets held for sale	4,031	1,755	1,472	804				
Derivatives (liabilities)	7,060		7,025	35	4,257		4,253	4
of which: used for hedging purposes	1,134		1,134		643		643	
Liabilities held for sale	1,343		1,343					

Due to the increase in the number of price quotations on active markets, marketable securities with a fair value of €14 million were reclassified from Level 2 to Level 1. Conversely, due to a drop in the number of price quotations, financial assets with a fair value of €12 million were reclassified from Level 1 to Level 2.

The development of the fair values of Level 3 financial instruments is presented in the following table:

Level 3 financial instruments: Development in 2018 € million	Balance at 1 Jan 2018	Changes in the scope of consolidation, currency adjustments and other	Changes			Balance at 31 Dec 2018
			Recognised in profit or loss	Recognised in OCI	With a cash effect	
Other financial assets	821	–741	–42	12	98	148
Financial receivables	35	–35				
Derivatives (assets)	33		140		–17	156
Assets held for sale		736	30	–1	39	804
Derivatives (liabilities)	4		36		–5	35

Level 3 financial instruments: Development in 2017 € million	Balance at 1 Jan 2017	Changes in the scope of consolidation, currency adjustments and other	Changes			Balance at 31 Dec 2017
			Recognised in profit or loss	Recognised in OCI	With a cash effect	
Other financial assets	789	–48	–6		86	821
Derivatives (assets)	37	1	15		–20	33
Derivatives (liabilities)	10		4		–10	4

Amounts recognised in profit or loss generated through Level 3 financial instruments relate to the following line items on the income statement:

Level 3 financial instruments: Amounts recognised in profit or loss € million	Total 2018	Of which: attributable to financial instruments held at the balance-sheet date	Total 2017	Of which: attributable to financial instruments held at the balance-sheet date
Revenue	25	25	16	16
Cost of materials	–24	–24	–4	–4
Other operating income/expenses	96	96		
Income from investments	–45	–45	–22	–22
Income from discontinued operations	40	48	15	21
	92	**100**	**5**	**11**

Level 3 derivative financial instruments essentially consist of energy purchase and commodity agreements, which relate to trading periods for which there are no active markets yet. The valuation of such depends on the development of electricity and gas prices in particular. All other things being equal, rising market prices cause the fair values to increase, whereas declining gas prices cause them to drop. A change in pricing by +/–10 % would cause the market value to rise by €41 million or decline by €41 million.

Acquisition costs are used as an approximate figure for shares in non-consolidated subsidiaries and associates/joint ventures not accounted for using the equity method included in other financial assets as well as for other investments, the fair value of which cannot be determined reliably.

In the previous year, pursuant to IAS 39 the following impairments were recognised on financial assets which fall under the scope of IFRS 7 and are reported under the balance-sheet items stated below:

Impairments on financial assets € million	Other non-current financial assets	Financial receivables	Trade accounts receivable	Other receivables and other assets	Total
Balance at 1 Jan 2017	**127**	**233**	**469**	**11**	**840**
Additions	54	24	157		235
Transfers	9	–2	8	–2	13
Currency translation adjustments			–4		–4
Disposals	11	14	233	7	265
Balance at 31 Dec 2017	**179**	**241**	**397**	**2**	**819**

In the previous year, according to IAS 39 there were unimpaired, past due receivables falling under the scope of IFRS 7 in the following amounts:

Receivables, past due € million	Gross amount as of 31 Dec 2017	Receivables, impaired, past due,	Receivables not impaired, past due by: less than 30 days	31 to 60 days	61 to 90 days	91 to 120 days	over 120 days
Financial receivables	2,345	18					
Trade accounts receivable	5,808	474	343	40	33	25	138
Other receivables and other assets	4,509	3					4
	12,662	**495**	**343**	**40**	**33**	**25**	**142**

The disclosures on the impairments in accordance with IFRS 9 for the current fiscal year are commented upon in the section on credit risks (see page 147 et seqq.).

Financial assets and liabilities can be broken down into the measurement categories with the following carrying amounts according to IFRS 9 in the year under review (previous year: IAS 39):

Carrying amounts by category € million	31 Dec 2018	31 Dec 2017
Financial assets measured at fair value through profit or loss	11,128	2,807
of which: held for trading		2,807
of which: obligatorily measured at fair value – continuing operations	8,483	
of which: obligatorily measured at fair value – held for sale	2,645	
Financial assets available for sale		6,002
Loans and receivables		11,692
Debt instruments measured at amortised cost	14,757	
of which: held for sale	6,244	
Debt instruments measured at fair value through other comprehensive income	1,715	
of which: held for sale	975	
Equity instruments measured at fair value through other comprehensive income	817	
of which: held for sale	408	
Financial liabilities measured at fair value through profit or loss	7,258	3,614
of which: held for trading		3,614
of which: obligatorily measured at fair value – continuing operations	5,926	
of which: obligatorily measured at fair value – held for sale	1,332	
Financial liabilities measured at (amortised) cost	20,621	19,754
of which: held for sale	15,545	

The carrying amounts of financial assets and liabilities within the scope of IFRS 7 basically correspond to their fair values. The only deviations are for financial liabilities. The carrying amount of these is €2,764 million (previous year: €17,201 million), while the fair value amounts to €2,842 million (previous year: €19,167 million). Of this, €1,080 million (previous year: €14,744 million) is related to Level 1 and €1,762 million (previous year: €4,393 million) to Level 2 of the fair value hierarchy.

The following net results from financial instruments as per IFRS 7 were recognised on the income statement, depending on the category (according to IFRS 9 in 2018; according to IAS 39 in 2017):

Net gain/loss by category € million	2018	2017
Financial assets and liabilities measured at fair value through profit or loss	362	– 178
of which: held for trading		– 178
of which: obligatorily measured at fair value	362	
Financial assets available for sale		8
Loans and receivables		1,926
Debt instruments measured at amortised cost	186	
Debt instruments measured at fair value through other comprehensive income	25	
Equity instruments measured at fair value through other comprehensive income	14	
Financial liabilities measured at (amortised) cost	– 236	– 5

The net result as per IFRS 7 essentially includes interest, dividends and results from the measurement of financial instruments at fair value.

In the previous year, changes of €74 million after taxes in the value of financial assets available for sale were recognised in accumulated other comprehensive income without an effect on income. Above and beyond this, €30 million in changes in the value of financial instruments available for sale which had originally been recognised without an effect on income was realised as income in the previous year.

The option to recognise changes in fair value in other comprehensive income is exercised for a portion of the investments in equity instruments. These are strategic investments and other long-term investments as well as securities in special funds.

Fair value of equity instruments measured at fair value through other comprehensive income € million	31 Dec 2018
Securities in special funds	378
Nordsee One GmbH	31

In the 2018 fiscal year, €13 million in income from dividends from these financial instruments was recognised, of which €4 million is attributable to equity instruments sold during the same year. Moreover, in the year under review, equity instruments measured through other comprehensive income were sold in line with the existing investment strategy. Their fair value at the derecognition date amounted to €312 million. The resulting loss amounted to €2 million.

The following is an overview of the financial assets and financial liabilities which are netted out in accordance with IAS 32 or are subject to enforceable master netting agreements or similar agreements. The netted financial assets and liabilities essentially consist of collateral for stock market transactions due on a daily basis.

Netting of financial assets and financial liabilities as of 31 Dec 2018	Gross amounts recognised	Netting	Net amounts recognised	Related amounts not set off		Net amount
€ million				Financial instruments	Cash collateral received/ pledged	
Derivatives (assets)	14,915	−14,232	683		−400	283
Derivatives (liabilities)	10,532	−10,101	431	−186	−245	

Netting of financial assets and financial liabilities as of 31 Dec 2017	Gross amounts recognised	Netting	Net amounts recognised	Related amounts not set off		Net amount
€ million				Financial instruments	Cash collateral received/ pledged	
Derivate (aktiv)	8,204	−7,419	785		−305	480
Derivate (passiv)	8,291	−7,264	1,027	−118	−318	591

The related amounts not set off include cash collateral received and pledged for over-the-counter transactions as well as collateral pledged in advance for stock market transactions.

As a utility enterprise with international operations, the RWE Group is exposed to market, credit and liquidity risks in its ordinary business activity. We limit these risks via systematic, groupwide risk management. The range of action, responsibilities and controls are defined in binding internal directives.

Market risks stem from changes in exchange rates and share prices as well as interest rates and commodity prices, which can have an influence on business results.

RWE AG manages its fully consolidated subsidiary innogy as a financial investment and exercises its control over innogy SE via the legal bodies of the Supervisory Board and its majority influence at the Annual General Meeting. One of the results of this is that RWE and innogy each have their own independent management of interest rate, currency, liquidity and credit risks. In accordance with this, the risk figures from these areas are reported for the respective parts of the Group.

Due to the RWE Group's international profile, currency management is a key issue. Sterling and US dollar are two important currencies for the RWE Group. In certain cases, fuels are traded in these two currencies. In addition, RWE does business in the UK currency area. The companies of the RWE Group are required to hedge their foreign currency risks via RWE AG or innogy SE, depending on which part of the Group they belong to. Only these two companies themselves may maintain open foreign currency positions, subject to predefined limits, or approve such limits for their Group companies.

Interest rate risks stem primarily from financial debt and the Group's interest-bearing investments. We hedge against negative changes in value caused by unexpected interest-rate movements using non-derivative and derivative financial instruments. The financial liabilities and interest-bearing bonds transferred to innogy SE are managed exclusively by innogy SE.

Opportunities and risks from changes in the values of non-current securities are centrally controlled by a professional fund management system operated by RWE AG. This also includes fund management for the assets of the innogy subgroup.

The Group's other financial transactions are recorded using centralised risk management software, with RWE AG and innogy SE each monitoring their own transactions.

For commodity operations, risk management directives have been established by RWE AG's Controlling & Risk Management Department. These regulations stipulate that derivatives may be used to hedge price risks, optimise power plant schedules and increase margins. Furthermore, commodity derivatives may be traded, subject to limits. Compliance with limits is monitored daily. innogy does not hold derivatives for trading purposes.

Risks stemming from fluctuations in commodity prices and financial market risks (foreign currency risks, interest rate risks, securities risks) are monitored and managed by RWE using indicators such as the Value at Risk (VaR), amongst other things. In addition, for the management of interest rate risk, a Cash Flow at Risk (CFaR) is determined. innogy exclusively manages financial risks using these key figures amongst others.

Using the VaR method, RWE and innogy determine and monitor the maximum expected loss arising from changes in market prices with a specific level of probability during specific periods. Historical price volatility is taken as a basis in the calculations. With the exception of the CFaR data, all VaR figures are based on a confidence interval of 95 % and a holding period of one day. For the CFaR, a confidence interval of 95 % and a holding period of one year is taken as a basis.

In respect of interest rate risks, RWE and innogy distinguish between two risk categories: on the one hand, increases in interest rates can result in declines in the prices of securities from the holdings of RWE and innogy. This pertains primarily to fixed-rate instruments. A VaR is determined to quantify securities price risk. As of the balance-sheet date, it amounted to €2.3 million for RWE (previous year: €2.7 million) and €3.4 million for innogy (previous year: €3.2 million). On the other hand, financing costs also increase along with the level of interest rates. The sensitivity of interest expenses to increases in market interest rates is measured with the CFaR. As of 31 December 2018 this amounted to €5.9 million for RWE (previous year: €3.7 million) and €11.0 million for innogy (previous year: €10.8 million). RWE calculates the CFaR based on the assumption of the refinancing of maturing debt, whereas innogy determines it based on the planned financing requirement.

As of 31 December 2018, the VaR for foreign currency positions was less than €1.1 million for RWE (previous year: less than €1 million) and also less than €1 million for innogy (previous year: less than €1 million). This corresponds to the figure used internally, which also includes the underlying transactions for cash flow hedges. Unlike in the previous year, the VaR also reflects the risk of timing differences.

As of 31 December 2018, the VaR for risks related to the RWE share portfolio amounted to €6.9 million for RWE (previous year: €2.7 million) and €4.7 million for innogy (previous year: €3.0 million).

The key internal control parameters for commodity positions at RWE Supply & Trading are the VaR for the trading business and the VaR for the pooled gas and liquefied natural gas (LNG) business. Here, the maximum VaR is €40 million and €12 million, respectively. As of 31 December 2018, the VaR was €12.4 million in the trading business (previous year: €7.9 million) and €5.1 million for the pooled gas and LNG business (previous year: €2.2 million).

Additionally, stress tests are carried out on a monthly basis in relation to the trading and pooled LNG and gas business of RWE Supply & Trading to model the impact of commodity price changes on the earnings conditions and take risk-mitigating measures if necessary. In these stress tests, market price curves are modified, and the commodity position is revalued on this basis. Historical scenarios of extreme prices and realistic, fictitious price scenarios are modelled. In the event that the stress tests exceed internal thresholds, these scenarios are then analysed in detail in relation to their impact and probability, and – if necessary – risk-mitigating measures are considered.

Commodity risks of the Group's power generation companies belonging to the Lignite & Nuclear and European Power segments are transferred on the basis of available market liquidity – in accordance with Group guidelines – at market prices to the Supply & Trading segment, where they are hedged. In accordance with the approach for long-term investments for example, it is not possible to manage commodity risks from long-term positions or positions which cannot be hedged due to their size and the prevailing market liquidity using the VaR concept. As a result, these positions are not included in the VaR figures. Above and beyond open production positions which have not yet been transferred, the Group companies belonging to the Lignite & Nuclear and European Power segments are not allowed to maintain significant risk positions, according to a Group guideline. Commodity price risks at innogy can exist in relation to the renewable generation positions, in the gas storage business and in the retail business separate from fixed price products. As of 31 December 2018, the aggregated commodity price risk for 2019 at innogy, which was calculated based on the as yet unhedged commodity risk positions at innogy, was €90 million (previous year: €20 million).

One of our most important instruments to limit market risk is the conclusion of hedging transactions. The instruments most commonly used are forwards and options with foreign currency, interest rate swaps, interest rate currency swaps, and forwards, options, futures and swaps with commodities.

Maturities of derivatives related to interest rates, currencies, equities, indices and commodities for the purpose of hedging are based on the maturities of the underlying transactions and are thus primarily short term and medium term in nature. Hedges of the foreign currency risks of foreign investments have maturities of up to 20 years.

All derivative financial instruments are recognised as assets or liabilities and are measured at fair value. When interpreting their positive and negative fair values, it should be taken into account that, with the exception of trading in commodities, these financial instruments are generally matched with underlying transactions that carry offsetting risks.

Hedge accounting pursuant to IFRS 9 is used primarily for mitigating currency risks from net investments in foreign functional currencies, commodity market price risks, interest risks from non-current liabilities and currency and price risks from sales and purchase transactions.

Fair value hedges are used to limit the market price risk exposure related to CO_2 emission allowances. In the case of fair value hedges, both the derivative as well as the underlying hedged transaction (in relation to the hedged risk) are recorded at fair value with an effect on income. As of the cut-off date for the financial statements of the preceding year, the fair value of hedging instruments used as fair value hedges totalled €10 million. In the prior year, the adjustment to the carrying amount of the underlying transactions in view of the hedged risk resulted in €17 million in gains, whereas changes in the value of the hedging instruments resulted in €17 million in losses, both of which were recognised in the financial result.

As of 31 December 2018, RWE held the following instruments to hedge the fair value of commodity price risks:

Fair value hedges	Maturity		
	1-6 months	7-12 months	>12 months
CO_2 derivatives			
Nominal volume (€ million)			39
Secured average price (€/metric ton)			5.57

Cash flow hedges are primarily used to hedge against interest risks from non-current liabilities as well as currency and price risks from sales and purchase transactions. Hedging instruments consist of forwards, swaps and options with foreign currency and interest rates, and forwards, futures and swaps with commodities. Changes in the fair value of the hedging instruments – insofar as they affect the effective portion – are recorded under other comprehensive income until the underlying transaction is realised. The ineffective portion of changes in value is recognised in profit or loss. When hedging commodities, underlying and hedging transactions are based on the same price index. This generally does not result in ineffectiveness. When hedging foreign currency risks, ineffectiveness can result from the difference in timing between the origination of the hedged item and the hedging instrument. Ineffectiveness can likewise stem from hedges containing material foreign currency basis spreads. Upon realisation of the underlying transaction, the hedge's contribution to income from accumulated other comprehensive income is recognised on the income statement or is offset against the initial value recognition of an asset or a liability. In the prior year, the recognised fair value of the hedging instruments used as cash flow hedges amounted to €478 million.

As of 31 December 2018, RWE held the following instruments to hedge future cash flows relating to foreign currency risks:

Cash flow hedges	Maturity		
	1-6 months	7-12 months	>12 months
Currency forwards – purchases			
Nominal volume (€ million)	1,534	135	738
Avg. EUR/USD exchange rate	1.20		1.19
Avg. EUR/GBP exchange rate	0.90	0.91	0.92
Avg. EUR/CAD exchange rate	1.57	1.58	1.55
Currency forwards – sales			
Nominal volume (€ million)	−1,743	−339	−217
Avg. EUR/USD exchange rate	1.23	1.28	1.17
Avg. EUR/GBP exchange rate	0.90	0.91	0.91
Avg. EUR/CAD exchange rate	1.53		

As of 31 December 2018, RWE held the following instruments to hedge future cash flows relating to interest risks:

Cash flow hedges	Maturity		
	1–6 months	7–12 months	>12 months
Interest swaps			
Nominal volume (£ million)			1,642
Secured average interest rate (%)			1.56

The commercial optimisation of the power plant portfolio is based on a dynamic hedging strategy. Hedged items and hedging instruments are constantly adjusted based on changes in market prices, market liquidity and the sales business with consumers. Commodity prices are hedged if this leads to a positive margin. Proprietary commodities trading is strictly separated from this when managing risks.

In the previous year, changes of €950 million after taxes in the fair values of hedging instruments used as cash flow hedges were recognised in accumulated other comprehensive income. Ineffectivenesses of cash flow hedges amounted to €0 million in the prior year. Furthermore, in the previous year, changes of €148 million after tax in the value of cash flow hedges, which had originally not been recognised through profit or loss, were recognised as income. Moreover, in the previous year, changes in the values of cash flow hedges recognised in other comprehensive income increased the cost of non-financial assets by €208 million.

Hedges of net investment in a foreign operation are used to hedge the foreign currency risks of net investment in foreign entities whose functional currency is not the euro. We use bonds with various terms in the appropriate currencies, interest rate currency swaps, and other currency derivatives as hedging instruments. If there are changes in the exchange rates of currencies in which the bonds used for hedging are denominated or changes in the fair value of interest rate currency swaps, this is recorded under foreign currency translation adjustments in other comprehensive income. As of 31 December 2018, RWE held the following instruments to hedge net investments in foreign operations:

Net investment hedges	Maturity		
	1-6 months	7-12 months	>12 months
Bonds and currency forwards – purchases			
Nominal volume (€ million)	56		
Avg. EUR/GBP exchange rate	0.89		
Bonds and currency forwards – sales			
Nominal volume (€ million)	−1,576		−4,370
Avg. EUR/AUD exchange rate	1.58		
Avg. EUR/GBP exchange rate	0.89		0.85
Avg. EUR/USD exchange rate	1.23		

As regards bonds used as hedging instruments for net investment hedges, the average price was calculated using the foreign exchange rate valid on the designation date of the hedging relationship.

The hedging instruments designated in hedging relationships as of 31 December 2018 had the following effects on the company's net asset, financial and earnings position:

Hedging instruments – effects on the net asset, financial and earnings position	Nominal amount	Carrying amount		Fair value changes in the current period	Recognised ineffectiveness
€ million		Assets	Liabilities		
Fair value hedges					
Commodity price risks	39		146	−126	
Cash flow hedges					
Interest risks	1,642		42	−26	
Foreign currency risks	108	39	63	−18	−11
Commodity price risks	4,516[1]	1,056	861	4,611	
Net investment hedges					
Foreign currency risks	−5,890	7	4,070	37	−3

1 The net nominal amount stated is made up of purchases in the amount of €7,904 million and sales in the amount of €3,388 million.

The carrying amounts of the hedging instruments are recognised in the 'Other receivables and other assets' and 'Other liabilities' balance-sheet items.

The hedged items designated in hedging relationships as of 31 December 2018 had the following effects on the company's net asset, financial and earnings position:

Fair value hedges	Carrying amount		Of which cumulative fair value adjustments		Changes in fair value in the reporting year
€ million	Assets	Liabilities	Assets	Liabilities	
Commodity price risks	185		146		126

Cash flow hedges and net investment hedges € million	Changes in fair value during the current period	Reserve for current hedges	Reserve for terminated hedges
Cash flow hedges			
Interest risks	26	–158	
Foreign currency risks	6	13	
Commodity price risks	4,611	5,004	
Net investment hedges			
Foreign currency risks	–19	1,380	171

The carrying amounts of the hedged items for fair value hedges are stated in the 'Other receivables and other assets' balance-sheet item. Amounts realised from OCI and any ineffectiveness are recognised in the items on the income statement in which the underlying transactions are also recognised with an effect on income. The amounts realised from OCI are recognised in revenue and the cost of materials, whereas any ineffectiveness is recognised in other operating income and expenses. Amounts recognised and any ineffectiveness of hedging interest risks are recognised in financial income and financial expenses on the income statement.

The reconciliation of the changes in the hedge reserve in relation to the various risk categories of hedge accounting for fiscal 2018 follows below:

Hedge reserve € million	
Balance at 1 Jan 2018	**43**
Cash flow hedges	
Effective portion of changes in market value	5,085
Interest risks	–26
Foreign currency risks	12
Commodity price risks	5,099
Gain or loss reclassified from OCI to the income statement – realisation of underlying transactions	–473
Commodity price risks	–473
Gain or loss recognised as a basis adjustment	187
Interest risks	31
Foreign currency risks	–15
Commodity price risks	171
Tax effect of the change in the hedge reserve	–1,502
Net investment hedges	
Effective portion of changes in market value	57
Foreign currency risks	57
Ofsetting against currency adjustments	–57
Balance at 31 Dec 2018	**3,340**

Credit risks. In the fields of finance and commodities, RWE and innogy primarily have credit relationships with banks that have good creditworthiness and other trading partners, most of which have good creditworthiness. Furthermore, innogy has credit relationships primarily with banks and other business partners with good creditworthiness within the scope of large-scale projects such as the construction of wind farms. RWE and innogy review counterparty default risks before contracts are concluded. Both companies mitigate such risks by establishing limits which are adjusted during the business relationships if the creditworthiness of the business partners changes. Counterparty risks are monitored constantly so that countermeasures can be initiated early on. Furthermore, RWE and innogy are exposed to credit risks due to the possibility of customers failing to meet their payment obligations. We identify these risks by conducting regular analyses of the creditworthiness of our customers and initate countermeasures if necessary.

Amongst other things, RWE and innogy demand guarantees, cash collateral and other forms of security in order to mitigate credit risks. Furthermore, we take out credit insurance policies to protect against defaults. Bank guarantees received as collateral are from financial institutions which normally have been issued a rating of at least ʻA-/A3ʼ by rating agencies. Collateral for credit insurance is pledged by insurers with an investment-grade rating.

The maximum balance-sheet default risk is derived from the carrying amounts of the financial assets stated on the balance sheet. The default risks for derivatives correspond to their positive fair values. Risks can also stem from financial guarantees and loan commitments which we have to fulfill vis-à-vis external creditors in the event of a default of a certain debtor. As of 31 December 2018, these obligations amounted to €223 million (previous year: €161 million). As of 31 December 2018, default risks were balanced against credit collateral, financial guarantees, bank guarantees and other collaterals amounting to €1.3 billion (previous year: €1.4 billion). Of this, €0.2 billion relates to trade receivables (previous year: €0.5 billion), €0.3 billion to derivatives used for hedging purposes (previous year: €0.4 billion), €0.8 billion to other derivatives (previous year: €0.5 billion), and €0 billion to ʻAssets held for saleʼ. There were no material defaults in fiscal 2018 or the previous year.

In the RWE Group, the risk provision for financial assets is determined on the basis of expected credit losses. These are determined on the basis of the probability of default, loss given default and the exposure at default. We determine the probability of default and loss given default using historical data and forward-looking information. The exposure at default date for financial assets is the gross carrying amount on the balance-sheet date. The expected credit loss for financial assets determined on this basis corresponds to the difference between the contractually agreed payments and the payments expected by RWE, discounted by the original effective interest rate. The contractually agreed payments for lease receivables are determined in accordance with IAS 17. The assignment to one of the levels described below influences the level of the expected losses and the effective interest income recognised.

- Stage 1 – Expected 12-month credit losses: At initial recognition, financial assets are generally assigned to this stage – with the exception of those that have been purchased or originated credit impaired, which are thus considered separately. The level of impairment results from the cash flows expected for the entire term of the financial instrument, multiplied by the probability of a default within 12 months from the reporting date. The effective interest rate used for measurement is determined on the basis of the carrying amount before impairment (gross).
- Stage 2 – Lifetime expected credit losses (gross): If the credit risk has risen significantly between initial recognition and the reporting date, the financial instrument is assigned to this stage. Unlike Stage 1, default events expected beyond the 12-month period from the reporting date are also considered in calculating the impairment. The effective interest rate used for measurement is still determined on the basis of the carrying amount before impairment (gross).
- Stage 3 – Lifetime expected credit losses (net): If in addition to the criteria for Stage 2 there is an objective indication of an impairment, the financial asset is assigned to Stage 3. The impairment is calculated analogously to Stage 2. In this case, however, the effective interest rate used for measurement is applied to the carrying amount after impairment (net).

In the RWE Group, risk provisions are formed for financial instruments in the following categories:

- debt instruments measured at amortised cost,
- debt instruments measured at fair value through other comprehensive income.

For debt instruments for which there has been no significant rise in credit risk since initial recognition, a risk provision is recognised in the amount of the expected 12-month credit losses (Stage 1). In addition, a financial instrument is assigned to Stage 1 of the impairment model if the absolute credit risk is low on the balance-sheet date. The credit risk is classified as low if the debtor's internal or external rating is investment-grade. For trade accounts receivable, the risk provision corresponds to the lifetime expected credit losses (Stage 2).

To determine whether a financial instrument is assigned to Stage 2 of the impairment model, it must be determined whether the credit risk has increased significantly since initial recognition. To make this assessment, we consider quantitative and qualitative information supported by our experience and assumptions regarding future developments. In so doing, special importance is accorded to the sector in which the RWE Group's debtors are active. Our experience is based on studies and data from financial analysts and government authorities, amongst others. Special attention is paid to the following developments:

- significant deterioration of the internal or external rating of the financial instrument,
- unfavourable changes in risk indicators, e.g. credit spreads or debtor-related credit default swaps,
- negative development of the debtor's regulatory, technological or economic environment,
- danger of an unfavourable development of business resulting in a significant reduction in operating income.

Independent thereof, a significant rise in credit risk and thus an assignment of the financial instrument to Stage 2 are assumed if the contractually agreed payments are more than 30 days overdue and there is no information that contradicts this assumption.

We draw conclusions about the potential default of a counterparty from information from internal credit risk management. If internal or external information indicates that the counterparty cannot fulfil its obligations, the associated receivables are classified as unrecoverable and assigned to Stage 3 of the impairment model. Examples of such information are:

- The debtor of the receivable has apparent financial difficulties.
- The debtor has already commited a breach of contract by missing or delaying payments.
- Concessions already had to be made to the debtor.
- An insolvency or another restructuring procedure is impending.
- The market for the financial asset is no longer active.
- A sale is only possible at a high discount, which reflects the debtor's reduced creditworthiness.

A payment default and an associated assignmet of the financial asset to Stage 3 is also assumed if the contractually agreed payments are more than 90 days overdue and there is no information disproving the assumption of a payment default. Based on our experience, we generally assume that this assumption does not apply to trade accounts receivable.

A financial asset is depreciated if there are indications that the counterparty is in serious financial difficulty and the situation is unlikely to improve. We may also take legal recourse and other measures in order to enforce the contractually agreed payments in the event of an impairment.

The following impairments were recognised for financial assets stated under the following balance-sheet items within the scope of IFRS 7:

Impairment of financial assets € million	Stage 1 – 12-month expected credit losses	Stage 2 – lifetime expected credit losses	Stage 3 – lifetime expected credit losses	Purchased or originated credit impaired	Total
Financial receivables					
Balance at 1 Jan 2018	**53**	**16**		**71**	**140**
Remeasurement due to new measurement parameters	1	1			2
Newly acquired/issued financial assets	1				1
Redeemed or derecognised financial assets	−1				−1
Change in the scope of consolidation	−10			−71	−81
Transfers	−21				−21
Balance at 31 Dec 2018	**23**	**17**			**40**

For trade accounts receivable, the expected credit loss is determined by applying the simplified approach taking account of the entire lifetime of the financial instruments.

In the RWE Group, there are no cases where a risk provision for trade accounts receivable was not recognised due to the collateral on the books.

The following table shows the development of the risk provisions for trade accounts receivable:

Risk provision for trade accounts receivable € million	
Balance at 1 Jan 2018 (pursuant to IFRS 9)	**405**
Addition	85
Withdrawal	−81
Currency translation	−2
Changes in the scope of consolidation	−390
Transfers	10
Balance at 31 Dec 2018	**27**

The following table presents the gross carrying amounts of the financial instruments under the scope of the impairment model:

Gross carrying amounts of financial assets as of 31 Dec 2018 € million	Equivalent to S&P scale	Stage 1 – 12-month expected credit losses	Stage 2 – lifetime expected credit losses	Stage 3 – lifetime expected credit losses	Trade accounts receivable	Total
Class 1 – 5: low risk	AAA to BBB–	7,228			1,611	8,839
Class 6 – 9: medium risk	BB+ to BB–	68	11		297	376
Class 10: high risk	B+ to B–	5	13		65	83
Class 11: doubtful	CCC to C				6	6
Class 12: loss	D			1	20	21
		7,301	**24**	**1**	**1,999**	**9,325**

Liquidity risks. As a rule, RWE Group companies refinance with RWE AG or innogy SE, depending on which part of the Group they belong to. In this regard, there is a risk that liquidity reserves will prove to be insufficient to meet financial obligations in a timely manner. In 2019, bonds with a volume of approximately €0.8 billion (previous year: €1.0 billion) and liabilities owed to banks of €0.1 billion (previous year: €0.3 billion) are due. In addition, short-term debt must be repaid.

As of 31 December 2018, holdings of cash and cash equivalents and current marketable securities amounted to €7,132 million (previous year: €8,826 million).

Since the beginning of October 2017, innogy SE has had its own €2 billion syndicated credit line, which expires in October 2022. It may be prolonged twice by a year at a time. Furthermore, the credit line can be topped up by €1 billion. RWE AG's credit line was reduced to €3 billion in October 2017. It expires in March 2021. As of the balance-sheet date, US$0 billion (previous year: US$0.5 billion) of RWE AG's US$5 billion commercial paper programme (previous year: US$5 billion) was used. As of 31 December 2018, innogy SE had a commercial paper programme with a volume of €3 billion, but this programme has not yet been used. Above and beyond this, RWE AG and innogy SE can finance themselves using €10 billion and €20 billion debt issuance programmes, respectively; as of the balance-sheet date, outstanding bonds from this programme amounted to €0 billion (previous year: €0 billion) at RWE AG and €13.3 billion (previous year: €12.1 billion) at innogy SE. Accordingly, the medium-term liquidity risk can be classified as low for both RWE AG and innogy.

Financial liabilities falling under the scope of IFRS 7 are expected to result in the following (undiscounted) payments in the coming years:

Redemption and interest payments on financial liabilities		Redemption payments			Interest payments		
€ million	Carrying amounts 31 Dec 2018	2019	2020 to 2024	From 2024	2019	2020 to 2023	From 2024
Bonds payable[1]	1,103		539	564	102	129	81
Bank debt	554	87	90	413	13	51	31
Liabilities arising from finance lease agreements	241	10	39	192			
Other financial liabilities	333	155	13	170	7	27	428
Derivative financial liabilities	7,060	6,681	100	282	26	58	143
Collateral for trading activities	533	533					
Miscellaneous other financial liabilities	2,553	2,549	8	4			

1 Including hybrid bonds classified as debt as per IFRS, taking into account the earliest possible call date.

Redemption and interest payments on financial liabilities		Redemption payments			Interest payments		
€ million	Carrying amounts 31 Dec 2017	2018	2019 to 2022	From 2023	2018	2019 to 2022	From 2023
Bonds payable[1]	13,049	990	4,495	7,677	666	1,912	3,189
Bank debt	1,594	262	810	522	35	84	3
Liabilities arising from finance lease agreements	248	11	41	197			
Other financial liabilities	1,464	712	92	684	12	28	434
Derivative financial liabilities	4,257	3,429	385	447	41	105	296
Collateral for trading activities	389	389					
Redemption liabilities from put options	1,451	1,451					
Miscellaneous other financial liabilities	5,601	5,525	30	74			

1 Including hybrid bonds classified as debt as per IFRS, taking into account the earliest possible call date.

Above and beyond this, as of 31 December 2018, there were financial guarantees for external creditors in the amount of €145 million (previous year: €90 million), which are to be allocated to the first year of repayment. Additionally, Group companies have provided loan commitments to third-party companies amounting to €78 million (previous year: €71 million), which are callable in 2019.

Detailed information on the risks of the RWE Group and on the objectives and procedures of the risk management is presented on page 73 et seqq. in the review of operations.

(27) Contingent liabilities and financial commitments

As of 31 December 2018, the amount of capital commitments totalled €2,396 million (previous year: €489 million). This mainly consisted of investment in property, plant and equipment. In the previous year, there were unrecognised obligations to provide loans or other financial means to joint ventures, which amounted to €10 million.

Commitments from operating leases refer largely to rental arrangements for power generation and supply plants as well as rent and lease contracts for storage and administration buildings. Minimum lease payments have the following maturity structure:

Operating leases	Nominal value	
€ million	31 Dec 2018	31 Dec 2017
Due within 1 year	59	265
Due after 1 to 5 years	159	685
Due after 5 years	354	1,261
	572	**2,211**

We have made long-term contractual purchase commitments for supplies of fuels, including natural gas in particular. Payment obligations stemming from the major long-term purchase contracts amounted to €27.9 billion as of 31 December 2018 (previous year: €25.8 billion), of which €0.8 billion is due within one year (previous year: €0.9 billion).

Gas purchases by the RWE Group are partially based on long-term take-or-pay contracts. The conditions in these contracts, which have terms up to 2036 in some cases, are renegotiated by the contractual partners at certain intervals, which may result in changes in the reported payment obligations. Calculation of the payment obligations resulting from the purchase contracts is based on parameters from the internal planning.

Furthermore, RWE has long-term financial commitments for purchases of electricity. As of 31 December 2018, the minimum payment obligations stemming from the major purchase contracts totalled €7.8 billion (previous year: €6.8 billion), of which €0.8 billion is due within one year (previous year: €0.4 billion). Above and beyond this, there are also long-term purchase and service contracts for uranium, conversion, enrichment and fabrication.

We bear legal and contractual liability from our membership in various associations which exist in connection with power plant projects, profit- and loss-pooling agreements and for the provision of liability cover for nuclear risks, amongst others.

On the basis of a mutual benefit agreement, RWE AG and other parent companies of German nuclear power plant operators undertook to provide approximately €2,244 million in funding to liable nuclear power plant operators to ensure that they are able to meet their payment obligations in the event of nuclear damages. From 1 January 2019, onwards, RWE AG has a 23.259 % contractual share in the liability (21.347 % until 31 December 2018) plus 5 % for damage settlement costs.

RWE AG and its subsidiaries are involved in official, regulatory and antitrust proceedings, litigation and arbitration proceedings related to their operations and are affected by the results of such. In some cases, out-of-court claims are also filed. However, RWE does not expect any material negative repercussions from these proceedings on the RWE Group's economic or financial position.

(28) Segment reporting

RWE is divided into four segments, which are separated from each other based on functional criteria.

We report on German electricity generation from lignite and nuclear fuel in the Lignite & Nuclear segment. This includes the Rhenish opencast lignite mining operations.

The European Power segment encompasses the German, British, Dutch/Belgian and Turkish power generation business via gas and hard coal-fired power stations, the Scottish biomass-fired power plant Markinch, and the project management and engineering specialist RWE Technology International. The segment is supplemented by hydroelectric power stations in Germany and Luxembourg.

The Supply & Trading segment contains energy and commodities trading, the marketing and hedging of the RWE Group's electricity position and the gas midstream business. This segment is the responsibility of RWE Supply & Trading, which also supplies certain major industrial and commercial customers with electricity and natural gas.

The innogy – continuing operations segment encompasses the parts of innogy which will remain within the RWE Group over the long term against the backdrop of the asset swap agreed with E.ON. These are the renewables business, innogy's gas storage facilities located in Germany and the Czech Republic, and the stake in the Austrian energy utility Kelag. Along with electricity generation, activities in the field of renewables include the development and implementation of projects to expand capacities. Wind and hydroelectric power are the two dominant production technologies. The main production sites are located in Germany, the United Kingdom, the Netherlands, Poland, Spain and Italy.

The grid and retail activities included in the innogy segment in the previous year as well as the holding company and the internal service providers are now stated as 'Discontinued operations' and are no longer included in segment reporting.

'Other, consolidation' covers consolidation effects, RWE AG and the activities of other business areas which are not presented separately. These activities primarily include our non-controlling interest in the German transmission system operator Amprion.

Segment reporting Divisions 2018 € million	Lignite & Nuclear	European Power	Supply & Trading	innogy – continuing operations	Other, consolidation	RWE Group
External revenue (incl. natural gas tax/electricity tax)	**1,144**	**926**	**10,317**	**1,124**	**18**	**13,529**
Intra-group revenue	2,340	3,768	3,434	386	– 9,928[1]	
Total revenue	3,484	4,694[2]	13,751	1,510	– 9,910	13,529
Adjusted EBIT	77	37	177	349	– 21	619
Operating income from investments	58	7	– 44	61	94	176
Operating income from investments accounted for using the equity method	58	6		53	94	211
Operating depreciation, amortisation and impairment losses	279	297	6	350	– 13	919
Impairment losses	14	29		4		47
Adjusted EBITDA	**356**	**334**	**183**	**699**	**– 34**	**1,538**
Carrying amount of investments accounted for using the equity method	60	125	3	740	539	1,467
Capital expenditure on intangible assets, property, plant and equipment	230	245	13	592	– 1	1,079

1 Of which: consolidation of intra-group revenue of – €9,929 million and intra-group revenue of other companies of €1 million.
2 Of which: total revenue from power generation in the United Kingdom of €2,213 million.

Regions 2018	EU			Rest of Europe	Other	RWE Group
€ million	Germany	UK	Other EU			
External revenue[1,2]	4,531	4,358	3,130	984	385	13,388
Intangible assets and property, plant and equipment	5,882	5,286	3,004		430	14,602

1 Excluding natural gas tax/electricity tax.
2 Broken down by the region in which the service was provided.

Segment reporting Divisions 2017 € million	Lignite & Nuclear	European Power	Supply & Trading	innogy – continuing operations	Other, consolidation	RWE Group
External revenue (incl. natural gas tax/electricity tax)	**1,271**	**926**	**10,632**	**1,087**	**37**	**13,953**
Intra-group revenue	2,898	3,967	3,419	377	– 10,661[1]	
Total revenue	4,169	4,893[2]	14,051	1,464	– 10,624	13,953
Adjusted EBIT	399	155	265	398	– 47	1,170
Operating income from investments	63	10	– 16	29	35	121
Operating income from investments accounted for using the equity method	63	– 2		32	44	137
Operating depreciation, amortisation and impairment losses	272	308	6	387	6	979
Impairment losses	311	26		39	6	382
Adjusted EBITDA	**671**	**463**	**271**	**785**	**– 41**	**2,149**
Carrying amount of investments accounted for using the equity method	64	105	3	2,214	460	2,846
Capital expenditure on intangible assets and property, plant and equipment	269	147	7	285	– 2	706

1 Of which: consolidation of intra-group revenue of – €10,679 million and intra-group revenue of other companies of €18 million.
2 Of which: total revenue from power generation in the United Kingdom of €2,166 million.

Regions 2017	EU			Rest of Europe	Other	RWE Group
€ million	Germany	UK	Other EU			
External revenue[1, 2, 3]	4,995	4,593	2,915	849	470	13,822
Intangible assets and property, plant and equipment	18,660	6,930	11,418		322	37,330

1 Excluding natural gas tax/electricity tax.
2 Broken down by the region in which the service was provided.
3 Prior-year figures adjusted.

External revenue by product in 2018 € million	Lignite & Nuclear	European Power	Supply & Trading	innogy – continuing operations	Other, consolidation	RWE Group
External revenue[1]	**1,132**	**925**	**10,190**	**1,124**	**17**	**13,388**
of which: electricity	303	542	8,447	799	– 1	10,090
of which: gas		17	1,502	47	– 1	1,565
of which: other revenue	829	366	241	278	19	1,733

1 Excluding natural gas tax/electricity tax.

External revenue by product in 2017 € million	Lignite & Nuclear	European Power	Supply & Trading	innogy – continuing operations	Other, consolidation	RWE Group
External revenue[1]	**1,259**	**923**	**10,517**	**1,087**	**36**	**13,822**
of which: electricity	451	594	8,628	755	2	10,430
of which: gas		11	1,738	48	– 2	1,795
of which: other revenue	808	318	151	284	36	1,597

1 Excluding natural gas tax/electricity tax.

Notes on segment data. We report revenue between the segments as RWE intra-group revenue. Internal supply of goods and services is settled at arm's length conditions. Adjusted EBITDA is used for internal management. The following table presents the reconciliation of adjusted EBITDA to adjusted EBIT and income from continuing operations before tax:

Reconciliation of income items € million	2018	2017
Adjusted EBITDA	**1,538**	**2,149**
– Operating depreciation, amortisation and impairment losses	– 919	– 979
Adjusted EBIT	**619**	**1,170**
+ Non-operating result	– 161	949
+ Financial result	– 409	– 63
income from continuing operations before tax	**49**	**2,056**

Income and expenses that are unusual from an economic perspective, or stem from exceptional events, prejudice the assessment of operating activities. They are reclassified to the non-operating result. Amongst other things, these can include book gains or losses from the disposal of investments or non-current assets not required for operations, impairment of the goodwill of fully consolidated companies, as well as effects of the fair valuation of certain derivatives.

Non-operating result € million	2018	2017
Disposal result	– 25	107
Impact of derivatives on earnings	– 146	– 480
Other	10	1,322
Non-operating result	**– 161**	**949**

Further commentary on the non-operating result can be found on page 47.

(29) Notes to the cash flow statement

The cash flow statement classifies cash flows according to operating, investing and financing activities. Cash and cash equivalents in the cash flow statement correspond to the amount stated on the balance sheet. Cash and cash equivalents consist of cash on hand, demand deposits and fixed-interest marketable securities with a maturity of three months or less from the date of acquisition.

Among other things, cash flows from operating activities include:

- cash flows from interest income of €166 million (previous year: €166 million) and cash flows used for interest expenses of €176 million (previous year: €341 million),
- €321 million (previous year: €409 million) in taxes on income paid (less refunds),
- income from investments, corrected for items without an effect on cash flows, in particular from accounting using the equity method, which amounted to €107 million (previous year: €137 million).

Flows of funds from the acquisition and sale of consolidated companies are included in cash flows from investing activities. Effects of foreign exchange rate changes and other changes in value are stated separately.

Cash flows from financing activities include €922 million (previous year: €5 million) which was distributed to RWE shareholders, €43 million (previous year: €88 million) which was distributed to non-controlling shareholders, and €60 million (previous year: €60 million) which was distributed to hybrid capital investors. Furthermore, cash flows from financing activities include purchases of €2 million (previous year: €19 million) and sales in the amount of €687 million (previous year: €0 million) of shares in subsidiaries and other business units which did not lead to a change of control.

Changes in liabilities from financing activities are presented in the following table:

Statement of changes in financial liabilities € million	1 Jan 2018	Increase/ repayment	Changes in the scope of consolidation	Of which stated as 'held for sale'	Currency effects	Changes in fair values	Other changes	31 Dec 2018
Current financial liabilities	2,787	– 196	– 2,845	– 2,779	32	– 58	1,046	766
Non-current financial liabilities	14,414	435	– 13,840	– 13,840	4	1	984	1,998
Other items		– 1,494						

Statement of changes in financial liabilities € million	1 Jan 2017	Increase/ repayment	Changes in the scope of consolidation	Currency effects	Changes in fair values	Other changes	31 Dec 2017
Current financial liabilities	2,142	– 209	– 39	175	– 144	862	2,787
Non-current financial liabilities	16,041	– 322	– 13	– 377		– 915	14,414
Other items		– 338					

The amount stated in the 'Other items' line item contains cash-effective changes resulting from derivative financial instruments and margin payments, which are recognised in cash flows from financing activities in the cash flow statement.

Restrictions on the disposal of cash and cash equivalents amounted to €0 million (previous year: €38 million).

(30) Information on concessions

In the fields of electricity, gas and water supply, there are a number of easement agreements and concession contracts between RWE Group companies and the governmental authorities in the areas we supply.

Easement agreements are used in the electricity and gas business to regulate the use of public rights of way for laying and operating lines for public energy supply. These agreements are generally limited to a term of 20 years. After expiry, there is a legal obligation to transfer ownership of the local distribution facilities to the new operator, for appropriate compensation.

Water concession agreements contain rules for the right and obligation to provide water and wastewater services, to operate the associated infrastructure, such as water utility plants, as well as to implement capital expenditure. Concessions in the water business generally have terms of up to 25 years.

(31) Related party disclosures

Within the framework of their ordinary business activities, RWE AG and its subsidiaries have business relationships with numerous companies. These include associated companies and joint ventures, which are classified as related parties. In particular, this category includes material investments of the RWE Group, which are accounted for using the equity method.

Business transactions were concluded with major associates and joint ventures, resulting in the following items in RWE's consolidated financial statements:

Key items from transactions with associates and joint ventures € million	Associated companies		Joint ventures	
	2018	2017	2018	2017
Income	1,855	3,553	79	90
Expenses	3,193	2,992	48	74
Receivables	140	247	64	145
Liabilities	191	168	8	8

The key items from transactions with associates and joint ventures mainly stem from supply and service transactions. In addition to supply and service transactions, there are also financial links with joint ventures. During the reporting period, income of €4 million (previous year: €7 million) was recorded from interest-bearing loans to joint ventures. As of the balance-sheet date, financial receivables accounted for €56 million of the receivables from joint ventures (previous year: €142 million). All transactions were completed at arm's length conditions, i.e. on principle the conditions of these transactions did not differ from those with other enterprises. €165 million of the receivables (previous year: €285 million) and €166 million of the liabilities (previous year: €139 million) fall due within one year. Other obligations from executory contracts amounted to €578 million (previous year: €1,426 million).

Above and beyond this, the RWE Group did not execute any material transactions with related companies or persons.

With regard to fiscal 2018, in addition to the members of the Executive Board and Supervisory Board of RWE AG, the Executive Board members and Supervisory Board members of innogy SE are deemed to be key management personnel for the RWE Group. The following information pertains to total compensation pursuant to IAS 24.

Key management personnel (Executive and Supervisory Board members) received €19,721,000 in short-term compensation components for fiscal 2018 (previous year: €22,121,000). Additionally, share-based payments within the framework of LTIP SPP amounted to €7,479,000 (previous year: 3,183,000) and the pension service cost amounted to €536,000 (previous year: €538,000). Provisions totalling €36,052,000 (previous year: €32,624,000) were formed for obligations vis-à-vis key management personnel.

The remuneration model and remuneration of the Executive and Supervisory Boards of RWE AG calculated pursuant to the German Commercial Code is presented in the remuneration report, which is included in the review of operations.

In total, the remuneration of the Executive Board amounted to €6,880,000 (previous year: €7,274,000). This contains share-based payments amounting to €2,350,000 (125,000 RWE performance shares) granted within the framework of the LTIP SPP. In the previous year, share-based payments amounting to €2,567,000 (192,556 RWE and 10,264 innogy performance shares) were granted.

Including remuneration from subsidiaries for the exercise of mandates, the Supervisory Board received total remuneration of €3,480,000 (previous year: €3,637,000) in fiscal 2018. The employee representatives on the Supervisory Board have labour contracts with the respective Group companies. Remuneration occurs in accordance with the relevant contractual conditions.

During the period under review, no loans or advances were granted to members of the Executive or Supervisory Boards.

Former members of the Executive Board and their surviving dependants received €10,802,000 (previous year: €10,699,000), of which €940,000 came from subsidiaries (previous year: €918,000). As of the balance-sheet date, €146,721,000 (previous year: €146,430,000) were accrued for defined benefit obligations to former members of the Executive Board and their surviving dependants. Of this, €8,516,000 was set aside at subsidiaries (previous year: €8,601,000).

Information on the members of the Executive and Supervisory Boards is presented on page 196 et seqq. of the Notes.

(32) Auditors' fees

The fees for audit services primarily contain the fees for the audit of the consolidated financial statements and for the audit of the financial statements of RWE AG and its subsidiaries, along with the review of the interim statements. Other assurance services include fees for review of the internal controlling system, as well as expenses related to statutory or court-ordered requirements. In particular, the fees for tax services include compensation for consultation in the preparation of tax returns and other national and international tax-related matters as well as review of resolutions of the tax authorities. Other services primarily include compensation for IT project consulting.

RWE recognised the following fees as expenses for the services rendered by the auditors of the consolidated financial statements, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft (PwC) and companies belonging to PwC's international network:

PwC network fees	2018		2017	
€ million	Total	Of which: Germany	Total	Of which: Germany
Audit services	17.7	11.0	17.5	10.9
Other assurance services	5.1	4.7	3.4	3.2
Tax services	0.7	0.6	0.3	0.3
Other services	3.8	1.8	3.2	0.8
	27.3	**18.1**	**24.4**	**15.2**

(33) Application of the exemption rule pursuant to Sec. 264, Para. 3 and Sec. 264b of the German Commercial Code

In fiscal 2018, the following German subsidiaries made partial use of the exemption clause pursuant to Sec. 264, Para. 3 and Sec. 264b of the German Commercial Code (HGB):

- BGE Beteiligungs-Gesellschaft für Energieunternehmen mbH, Essen,
- GBV Vierunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen,
- Kernkraftwerk Lingen Gesellschaft mit beschränkter Haftung, Lingen (Ems),
- KMG Kernbrennstoff-Management Gesellschaft mit beschränkter Haftung, Essen,
- Rheinbraun Brennstoff GmbH, Cologne,
- Rheinische Baustoffwerke GmbH, Bergheim,
- RV Rheinbraun Handel und Dienstleistungen GmbH, Cologne,
- RWE Technology International GmbH, Essen,
- RWE Trading Services GmbH, Essen.

(34) Events after the balance-sheet date

In the period from 1 January 2019 until the completion of the consolidated financial statements on 27 February 2019, the following significant events occurred:

Recommendation of the Structural Change Commission

In January 2019, the Growth, Structural Change and Employment Commission established by the German government submitted its final report. The body, which consists of representatives from industry, trade unions, science, civic initiatives and environmental organisations, recommends that Germany phase out coal by 2038. It envisages the total capacity of lignite and hard coal-fired power stations on the market being reduced to 15 GW each by the end of 2022 through shutdowns or conversions. The objective is to have lignite and hard coal-fired power stations with a total capacity of only 9 GW and 8 GW on the market by 2030. The government intends to submit a package of climate protection laws based on the recommendations and initiate talks with the affected companies. We report on the Commission's recommendations and their potential consequences for RWE in detail on page 33.

Sale of a CHP station

The sale of the Belgian CHP station Inesco to the UK chemicals group INEOS marked the completion of a further divestment at the end of February 2019. The plant is eleven years old and is located in a chemical park near Antwerp operated by INEOS.

Cancellation of a hybrid bond

On 6 February 2019, we announced the cancellation of a £750 million hybrid bond as of 20 March 2019 without replacing it with new hybrid capital. The hybrid bond was classified as as equity pursuant to IAS 32 as of the balance-sheet date.

Acquisition of a grid shareholding

At the end of February, RWE purchased innogy SE's majority interest in Czech distribution system operator innogy Grid Holding (IGH). We had made this commitment as part of the asset swap agreed upon with E.ON. We had also undertaken to sell the shareholding in IGH on to E.ON. innogy held a 50.04 % stake in IGH. The remaining shares are held by Australian financial service provider and infrastructure investor Macquarie. The acquisition of IGH is an intragroup transaction, which will result in a reduction in non-controlling interests in the RWE consolidated financial statements.

(35) Declaration according to Sec. 161 of the German Stock Corporation Act

The declarations on the German Corporate Governance Code prescribed by Sec. 161 of the German Stock Corporation Act (AktG) have been submitted for RWE AG and innogy SE and have been made permanently and publicly available to shareholders on the Internet pages of RWE AG[1] and innogy SE[2].

Essen, 27 February 2019

The Executive Board

Schmitz Krebber

1 www.rwe.com/statement-of-compliance-2018
2 www.innogy.com/statement-of-compliance-2018

3.7 LIST OF SHAREHOLDINGS (PART OF THE NOTES)

List of shareholdings as per Sec. 285 No. 11 and No. 11a and Sec. 313 Para. 2 (in relation to Sec. 315 e I) of HGB as of 31 December 2018

I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Aktivabedrijf Wind Nederland B.V., Zwolle/Netherlands		100	172,445	–9,306
Alte Haase Bergwerks-Verwaltungs-Gesellschaft mbH, Dortmund		100	–66,665	–1,462
An Suidhe Wind Farm Limited, Swindon/United Kingdom		100	21,926	837
Andromeda Wind s.r.l., Bolzano/Italy		51	8,903	3,387
Artelis S.A., Luxembourg/Luxembourg		90	38,900	2,898
A/V/E GmbH, Halle (Saale)		76	1,754	–1,604
Bayerische Bergbahnen-Beteiligungs-Gesellschaft mbH, Gundremmingen		100	27,208	763
Bayerische Elektrizitätswerke Gesellschaft mit beschränkter Haftung, Augsburg		100	24,728	[1]
Bayerische-Schwäbische Wasserkraftwerke Beteiligungsgesellschaft mbH, Gundremmingen		62	57,581	3,128
Belectric Australia Pty. Limited, Southbank/Australia		100	–503	–36
Belectric France S.à.r.l., Vendres/France		100	356	–182
Belectric Italia s.r.l., Latina/Italy		100	2,574	–160
Belectric Solar & Battery - Group - (pre-consolidated)			40,347	–25,820[2]
Belectric Chile Energia Fotovoltaica LTDA, Santiago de Chile/Chile		100		
Belectric Espana Fotovoltaica S.L., Madrid/Spain		100		
BELECTRIC GmbH, Kolitzheim		100		
Belectric Inversiones Latinoamericana S.L., Madrid/Spain		100		
Belectric Israel Ltd., Be´er Scheva/Israel		100		
Belectric Photovoltaic India Private Limited, Mumbai/India		100		
BELECTRIC PV Dach GmbH, Sömmerda		100		
Belectric Solar & Battery GmbH, Kolitzheim		100		
Belectric Solar Ltd., Slough/United Kingdom		100		
hoch.rein Beteiligungen GmbH, Kolitzheim		100		
Inversiones Belectric Chile LTDA, Santiago de Chile/Chile		100		
Jurchen Technology India Private Limited, Mumbai/India		100		
Solar Holding Poland GmbH, Kolitzheim		100		
BGE Beteiligungs-Gesellschaft für Energieunternehmen mbH, Essen	100	100	4,317,938	[1]
Bilbster Wind Farm Limited, Swindon/United Kingdom		100	3,313	335
Bristol Channel Zone Limited, Bristol/United Kingdom		100	–2,070	–100
Broadband TelCom Power, Inc., Santa Ana/USA		100		[3]
BTB-Blockheizkraftwerks, Träger- und Betreibergesellschaft mbH Berlin, Berlin		100	19,783	[1]
Budapesti Elektromos Muvek Nyrt., Budapest/Hungary		55	644,109	31,711
Carl Scholl GmbH, Cologne		100	536	–101
Carnedd Wen Wind Farm Limited, Swindon/United Kingdom		100	–3,816	–373
Cegecom S.A., Luxembourg/Luxembourg		100	10,705	805
Channel Energy Limited, Bristol/United Kingdom		100	–17,066	–780
Cloghaneleskirt Energy Supply Limited, Kilkenny City/Ireland		100	0	0
Dromadda Beg Wind Farm Limited, Kilkenny City/Ireland		100	1.421	–181
ELE Verteilnetz GmbH, Gelsenkirchen		100	883	[1]
Electra Insurance Limited, Hamilton/Bermuda		100	28,541	–288
Elektrizitätswerk Landsberg GmbH, Landsberg am Lech		100	1,562	115
ELMU DSO Holding Korlátolt Felelosségu Társaság, Budapest/Hungary		100	692,199	32,842

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	Direct	Total	€ '000	€ '000
ELMU Halozati Eloszto Kft., Budapest/Hungary		100	738,577	26,885
ELMU-ÉMÁSZ Energiakereskedo Kft., Budapest/Hungary		100	3,407	2,009
ELMU-ÉMÁSZ Energiaszolgáltató Zrt., Budapest/Hungary		100	6,593	708
ELMU-ÉMÁSZ Energiatároló Kft., Budapest/Hungary		100	69	60
ELMU-ÉMÁSZ Solutions Kft., Budapest/Hungary		100	–359	–370
ELMU-ÉMÁSZ Telco Kft., Budapest/Hungary		100	105	7
ELMU-ÉMÁSZ Ügyfélszolgálati Kft., Budapest/Hungary		100	1,113	1,107
ÉMÁSZ Halozati Kft., Miskolc/Hungary		100	274,107	10,491
Emscher Lippe Energie GmbH, Gelsenkirchen		50	56,917	36,492
Energiedirect B.V., Waalre/Netherlands		100	–52,480	500
Energienetze Berlin GmbH, Berlin		100	25	[1]
Energies France S.A.S. - Group - (pre-consolidated)			31,329	198[2]
Centrale Hydroelectrique d'Oussiat S.A.S., Paris/France		100		
Energies Charentus S.A.S., Paris/France		100		
Energies France S.A.S., Paris/France		100		
Energies Maintenance S.A.S., Paris/France		100		
Energies Saint Remy S.A.S., Paris/France		100		
Energies VAR 1 S.A.S., Paris/France		100		
Energies VAR 3 S.A.S., Paris/France		100		
SAS Île de France S.A.S., Paris/France		100		
Energiewacht Groep B.V. - Group - (pre-consolidated)			15,272	2,934[2]
Energiewacht Facilities B.V., Zwolle/Netherlands		100		
Energiewacht Groep B.V., Meppel/Netherlands		100		
GasWacht Friesland Facilities B.V., Leeuwarden/Netherlands		100		
Energiewacht N.V. - Group - (pre-consolidated)			28,546	2,290[2]
EGD-Energiewacht Facilities B.V., Assen/Netherlands		100		
Energiewacht installatie B.V., Assen/Netherlands		100		
Energiewacht N.V., Veendam/Netherlands		100		
Energiewacht West Nederland B.V., Assen/Netherlands		100		
energis GmbH, Saarbrücken		72	128,852	14,832
energis-Netzgesellschaft mbH, Saarbrücken		100	33,002	[1]
Energy Resources B.V., 's-Hertogenbosch/Netherlands		100	141,252	1,098
Energy Resources Holding B.V., 's-Hertogenbosch/Netherlands		100	38,055	–6,048
Energy Resources Ventures B.V., 's-Hertogenbosch/Netherlands		100	23,867	–114
envia Mitteldeutsche Energie AG, Chemnitz		59	1,750,245	202,522
envia SERVICE GmbH, Cottbus		100	2,167	37
envia TEL GmbH, Markkleeberg		100	22,116	3,118
envia THERM GmbH, Bitterfeld-Wolfen		100	67,266	[1]
enviaM Beteiligungsgesellschaft Chemnitz GmbH, Chemnitz		100	56,366	[1]
enviaM Beteiligungsgesellschaft mbH, Essen		100	175,691	31,675
eprimo GmbH, Neu-Isenburg		100	4,600	[1]

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Essent Belgium N.V., Antwerp/Belgium		100	99,503	4,323
Essent CNG Cleandrive B.V., 's-Hertogenbosch/Netherlands		100	–28	–17
Essent Energie Verkoop Nederland B.V., 's-Hertogenbosch/Netherlands		100	98,220	–4,600
Essent EnergieBewust Holding B.V., 's-Hertogenbosch/Netherlands		100	–4	–4
Essent Energy Group B.V., Arnhem/Netherlands		100	446	–20
Essent IT B.V., Arnhem/Netherlands		100	–275,174	–8,392
Essent Nederland B.V., Arnhem/Netherlands		100	723,500	8,300
Essent N.V., 's-Hertogenbosch/Netherlands		100	6,981,400	–755,900
Essent Retail Energie B.V., 's-Hertogenbosch/Netherlands		100	842,220	149,900
Essent Rights B.V., 's-Hertogenbosch/Netherlands		100		[3]
Essent Sales Portfolio Management B.V., 's-Hertogenbosch/Netherlands		100	328,482	55,654
Eszak-magyarorszagi Aramszolgáltató Nyrt., Miskolc/Hungary		54	286,599	10,794
EuroSkyPark GmbH, Saarbrücken		51	828	495
EVIP GmbH, Bitterfeld-Wolfen		100	11,347	[1]
EWV Energie- und Wasser-Versorgung GmbH, Stolberg		54	53,527	17,181
FAMIS Gesellschaft für Facility Management und Industrieservice mbH, Saarbrücken		100	7,468	1,961
Fri-El Anzi Holding s.r.l., Bolzano/Italy		51	7,368	1,161
Fri-El Anzi s.r.l., Bolzano/Italy		100	7,652	2,221
Fri-El Guardionara Holding s.r.l., Bolzano/Italy		51	10,184	2,463
Fri-El Guardionara s.r.l., Bolzano/Italy		100	9,690	2,385
GasNet, s.r.o., Ústí nad Labem/Czech Republic		100	908,842	177,895
GBV Vierunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen	100	100	13,855,458	–19,392
Geas Energiewacht B.V., Enschede/Netherlands		100	17,700	1,600
Gemeinschaftskraftwerk Bergkamen A beschränkt haftende OHG, Bergkamen		51	5,929	556
Generación Fotovoltaica De Alarcos, S.L.U., Barcelona/Spain		100	3	0
Georgia Biomass Holding LLC, Savannah/USA		100	59,014	1,018
Georgia Biomass LLC, Savannah/USA		100	40,061	16,548
GfV Gesellschaft für Vermögensverwaltung mbH, Dortmund	100	100	128,465	24,784
Green Gecco GmbH & Co. KG, Essen		51	89,423	1,098
GridServices, s.r.o., Brno/Czech Republic		100	38,266	32,536
GWG Grevenbroich GmbH, Grevenbroich		60	24,683	2,545
Hardin Wind LLC, Chicago/USA		100		[3]
Harryburn Wind Farm Limited, Swindon/United Kingdom		100	–1,820	–410
Hof Promotion B.V., Eindhoven/Netherlands		100	–66	–337
Improvers B.V. - Group - (pre-consolidated)			1,002	592[2]
Certified B.V., Amsterdam/Netherlands		100		
Improvers B.V., 's-Hertogenbosch/Netherlands		100		
Improvers Community B.V., Amsterdam/Netherlands		100		
Konnektor B.V., Amsterdam/Netherlands		100		
innogy Aqua GmbH, Mülheim an der Ruhr		100	233,106	[1]
innogy Benelux Holding B.V., 's-Hertogenbosch/Netherlands		100	1,576,700	–1,413,500
innogy Bergheim Windparkbetriebsgesellschaft mbH, Hanover		100	25	[1]

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	Direct	Total	€ '000	€ '000
innogy Beteiligungsholding GmbH, Essen		100	3,895,026	1
innogy Brise Windparkbetriebsgesellschaft mbH, Hanover		100	226	1
innogy Business Services Benelux B.V., Arnhem/Netherlands		100	–1,390	602
innogy Business Services Polska Sp. z o.o., Krakow/Poland		100	5,156	1,252
Innogy Business Services UK Limited, Swindon/United Kingdom		100	–797	–21,123
innogy Ceská republika a.s., Prague/Czech Republic		100	2,153,310	254,531
innogy e-mobility US LLC, Delaware/USA		100	1,719	–536
innogy Energie, s.r.o., Prague/Czech Republic		100	171,035	105,208
innogy Energo, s.r.o., Prague/Czech Republic		100	21,434	–2,114
innogy Evendorf Windparkbetriebsgesellschaft mbH, Hanover		100	25	1
innogy Finance B.V., 's-Hertogenbosch/Netherlands		100	13,809	1,726
innogy Gas Storage NWE GmbH, Dortmund		100	350,087	1
innogy Gas Storage, s.r.o., Prague/Czech Republic		100	528,702	5,884
innogy Gastronomie GmbH, Essen		100	275	1
innogy Grid Holding, a.s., Prague/Czech Republic		50	1,135,490	193,020
Innogy GyM 2 Limited, Swindon/United Kingdom		100	–12,204	–1,067
Innogy GyM 3 Limited, Swindon/United Kingdom		100	–12,204	–1,066
Innogy GyM 4 Limited, Swindon/United Kingdom		100	–36,635	–3,226
innogy Hörup Windparkbetriebsgesellschaft mbH, Hörup		100	26	1
innogy Hungária Tanácsadó Kft., Budapest/Hungary		100	1,689	–694
innogy indeland Windpark Eschweiler GmbH & Co. KG, Eschweiler		100	55,222	2,000
innogy Innovation Berlin GmbH, Berlin		100	3,868	1
INNOGY INNOVATION CENTER LTD, Tel Aviv/Israel		100	6,694	–831
innogy Innovation GmbH, Essen		100	180,038	1
innogy Innovation UK Ltd., London/United Kingdom		100		10
innogy International Participations N.V., 's-Hertogenbosch/Netherlands		100	9,316,100	–64,000
innogy IT Magyarország Kft. „v.a.", Budapest/Hungary		100	1,141	63
innogy Italia s.p.a., Milan/Italy		100	17,259	5,061
innogy Kaskasi GmbH, Hamburg		100	99	1
innogy Lengerich Windparkbetriebsgesellschaft mbH, Gersten		100	25	1
innogy Limondale Sun Farm Holding Pty. Ltd., Southbank/Australia		100		3
innogy Lüneburger Heide Windparkbetriebsgesellschaft mbH, Walsrode		100	25	1
innogy Metering GmbH, Mülheim an der Ruhr		100	25	1
innogy Mistral Windparkbetriebsgesellschaft mbH, Hanover		100	578	1
innogy Netze Deutschland GmbH, Essen		100	497,854	1
innogy New Ventures LLC, Palo Alto/USA		100	61,665	3,381
innogy Offshore Wind Netherlands B.V., 's-Hertogenbosch/Netherlands		100	–2,983	–456
innogy Polska IT Support Sp. z o.o., Warsaw/Poland		100		3
innogy Polska S.A., Warsaw/Poland		100	411,754	99,841
Innogy Renewables Australia Pty Ltd., Southbank/Australia		100		3
innogy Renewables Benelux B.V., 's-Hertogenbosch/Netherlands		100	–22,813	–4,877
innogy Renewables Beteiligungs GmbH, Dortmund		100	7,350	1
Innogy Renewables Ireland Limited, Kilkenny City/Ireland		100	0	–956

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	Direct	Total	€ '000	€ '000
innogy Renewables Polska Sp. z o.o., Warsaw/Poland		100	195,301	–7,235
Innogy Renewables UK Holdings Limited, Swindon/United Kingdom		100	2,023,560	100,676
Innogy Renewables UK Limited, Swindon/United Kingdom		100	1,791,052	174,766
Innogy Renewables US LLC, Dover/USA		100	72,477	–6,601
innogy Rheinhessen Beteiligungs GmbH, Essen		100	57,865	[1]
innogy SE, Essen		77	8,926,111	907,605
innogy Seabreeze II GmbH & Co. KG, Essen		100	11,140	–2,245
innogy Slovensko s.r.o., Bratislava/Slovakia		100	8,240	7,841
Innogy Solutions Ireland Limited, Dublin/Ireland		100	5,271	571
innogy solutions Kft., Budapest/Hungary		100	891	–1,004
innogy Solutions s.r.o., Banská Bystrica/Slovakia		100	1,177	147
innogy Sommerland Windparkbetriebsgesellschaft mbH, Sommerland		100	26	[1]
innogy South East Europe s.r.o., Bratislava/Slovakia		100	1,058	–54
innogy Spain, S.A.U. - Group - (pre-consolidated)			132,941	1,843[2]
Danta de Energías, S.A., Soria/Spain		99		
Explotaciones Eólicas de Aldehuelas, S.L., Soria/Spain		95		
General de Mantenimiento 21, S.L.U., Barcelona/Spain		100		
Hidroeléctrica del Trasvase, S.A., Barcelona/Spain		60		
innogy Spain, S.A.U., Barcelona/Spain		100		
Innogy Stallingborough Limited, Swindon/United Kingdom		100	0	8,346
innogy Stoen Operator Sp. z o.o., Warsaw/Poland		100	656,499	45,674
innogy Süderdeich Windparkbetriebsgesellschaft mbH, Süderdeich		100	106	[1]
innogy TelNet GmbH, Essen		100	25	[1]
innogy Titz Windparkbetriebsgesellschaft mbH, Essen		100	25	[1]
innogy Ventures GmbH, Essen		100	75,704	[1]
innogy Wind Onshore Deutschland GmbH, Hanover		100	77,373	[1]
innogy Windpark Bedburg GmbH & Co. KG, Bedburg		51	80,613	4,843
innogy Windpower Netherlands B.V., 's-Hertogenbosch/Netherlands		100	–34,615	1,631
innogy Zákaznické služby, s.r.o., Ostrava/Czech Republic		100	2,468	2,044
innogy Zweite Vermögensverwaltungs GmbH, Essen		100	1,720,555	[1]
Installatietechniek Totaal B.V., Leeuwarden/Netherlands		100	1,114	340
INVESTERG - Investimentos em Energias, SGPS, Lda. - Group - (pre-consolidated)			19,054	2,692[2]
INVESTERG - Investimentos em Energias, Sociedade Gestora de Participações Sociais, Lda., São João do Estoril/Portugal		100		
LUSITERG - Gestão e Produção Energética, Lda., São João do Estoril/Portugal		74		
IRUS Solar Development LLC, Dover/USA		100		[3]
IRUS Solar Holdings LLC, Dover/USA		100		[3]
IRUS Wind Development LLC, Dover/USA		100		[3]
IRUS Wind Holdings LLC, Dover/USA		100		[3]
IsoFitters BVBA, Herentals/Belgium		100	617	331
Isoprofs België BVBA, Hasselt/Belgium		100	–96	–157
Isoprofs B.V., Meijel/Netherlands		100	68	–110
iSWITCH GmbH, Essen		100	25	[1]

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	Direct	Total	€ '000	€ '000
It's a beautiful world B.V., Amersfoort/Netherlands		100	4,987	2,625
Jurchen Technology GmbH, Kitzingen		100	2,665	–1,702
Kernkraftwerk Gundremmingen GmbH, Gundremmingen		75	90,464	8,343
Kernkraftwerk Lingen Gesellschaft mit beschränkter Haftung, Lingen (Ems)		100	20,034	[1]
Kernkraftwerke Lippe-Ems Gesellschaft mit beschränkter Haftung, Lingen (Ems)		99	432,269	[1]
KMG Kernbrennstoff-Management Gesellschaft mit beschränkter Haftung, Essen		100	696,225	[1]
Knabs Ridge Wind Farm Limited, Swindon/United Kingdom		100	9,485	663
Koprivnica Opskrba d.o.o., Koprivnica/Croatia		75	112	111
Koprivnica Plin d.o.o., Koprivnica/Croatia		75	8,857	489
Kraftwerksbeteiligungs-OHG der RWE Nuclear GmbH und der PreussenElektra GmbH, Lingen/Ems		88	144,433	6,204
Lechwerke AG, Augsburg		90	501,772	78,205
Leitungspartner GmbH, Düren		100	100	[1]
LEW Anlagenverwaltung Gesellschaft mit beschränkter Haftung, Gundremmingen		100	295,990	13,873
LEW Beteiligungsgesellschaft mbH, Gundremmingen		100	461,243	10,154
LEW Netzservice GmbH, Augsburg		100	87	[1]
LEW Service & Consulting GmbH, Augsburg		100	1,250	[1]
LEW TelNet GmbH, Neusäß		100	8,548	7,289
LEW Verteilnetz GmbH, Augsburg		100	139,816	[1]
Licht Groen B.V., Amsterdam/Netherlands		100	192	101
Limondale Sun Farm Pty. Ltd., Southbank/Australia		100		[3]
Little Cheyne Court Wind Farm Limited, Swindon/United Kingdom		59	48,751	4,668
MI-FONDS 178, Frankfurt am Main		100	753,875	5,415
MI-FONDS F55, Frankfurt am Main		100	573,856	3,967
MI-FONDS G50, Frankfurt am Main	100	100	1,738,989	–17,193
MI-FONDS G55, Frankfurt am Main		100	277,938	1,333
MI-FONDS J55, Frankfurt am Main		100	15,185	–440
MI-FONDS K55, Frankfurt am Main		100	121,755	–2,856
MITGAS Mitteldeutsche Gasversorgung GmbH, Halle (Saale)		75	129,988	38,032
Mitteldeutsche Netzgesellschaft Gas mbH, Halle (Saale)		100	25	[1]
Mitteldeutsche Netzgesellschaft Strom mbH, Halle (Saale)		100	4,171	[1]
Mittlere Donau Kraftwerke AG, Munich		40[8]	5,113	0
ML Wind LLP, Swindon/United Kingdom		51	77,984	9,050
Montcogim - Plinara d.o.o., Sveta Nedelja/Croatia		100	14,712	424
Nederland Isoleert B.V., Amersfoort/Netherlands		100	1,921	1,782
Nederland Schildert B.V., Amersfoort/Netherlands		100	–293	–174
Nederland Schildert Rijnmond B.V., Amersfoort/Netherlands		100	–2	–4
Nederland Verkoopt B.V., Amersfoort/Netherlands		100	189	176
NEW AG, Mönchengladbach		40[4]	175,895	59,552
NEW Netz GmbH, Geilenkirchen		100	95,699	17,896
NEW Niederrhein Energie und Wasser GmbH, Mönchengladbach		100	15,587	41,904
NEW NiederrheinWasser GmbH, Viersen		100	46,613	11,501
NEW Tönisvorst GmbH, Tönisvorst		98	13,961	2,022

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NEW Viersen GmbH, Viersen		100	13,330	4,139
Nordsee Windpark Beteiligungs GmbH, Essen		90	9,943	1,855
Npower Business and Social Housing Limited, Swindon/United Kingdom		100	4,647	701
Npower Commercial Gas Limited, Swindon/United Kingdom		100	6,879	5,673
Npower Direct Limited, Swindon/United Kingdom		100	58,278	–43,143
Npower Financial Services Limited, Swindon/United Kingdom		100	–157	15
Npower Gas Limited, Swindon/United Kingdom		100	–216,413	–2,303
Npower Group Limited, Swindon/United Kingdom		100	2,087	–283
Npower Limited, Swindon/United Kingdom		100	275,006	–34,991
Npower Northern Limited, Swindon/United Kingdom		100	–1,256,531	–117,388
Npower Yorkshire Limited, Swindon/United Kingdom		100	–784,395	–26,653
Npower Yorkshire Supply Limited, Swindon/United Kingdom		100	0	0
NRW Pellets GmbH, Erndtebrück		100	312	[1]
Octopus Electrical Limited, Swindon/United Kingdom		100	2,420	0
OIE Aktiengesellschaft, Idar-Oberstein		100	9,081	[1]
Padcon GmbH, Kitzingen		100	1,980	1
Piecki Sp. z o.o., Warsaw/Poland		51	18,548	–730
Plus Shipping Services Limited, Swindon/United Kingdom		100	26,639	–426
Powerhouse B.V., Almere/Netherlands		100	56,718	7,900
Primus Projekt GmbH & Co. KG, Hanover		100	0	–1,013
PS Energy UK Limited, Swindon/United Kingdom		100	–3,961	–3,023
Recargo Inc., El Segundo/USA		100		[3]
Regionetz GmbH, Aachen		49[4]	269,214	0
Rheinbraun Brennstoff GmbH, Cologne		100	82,619	[1]
Rheinische Baustoffwerke GmbH, Bergheim		100	9,236	[1]
Rheinkraftwerk Albbruck-Dogern Aktiengesellschaft, Waldshut-Tiengen		77	31,817	1,757
Rhein-Sieg Netz GmbH, Siegburg		100	20,774	[1]
rhenag Rheinische Energie Aktiengesellschaft, Cologne		67	139,972	25,788
Rhenas Insurance Limited, Sliema/Malta	100	100	59,174	942
Rhyl Flats Wind Farm Limited, Swindon/United Kingdom		50	158,966	15,566
RL Besitzgesellschaft mbH, Gundremmingen		100	115,086	14,683
RL Beteiligungsverwaltung beschr. haft. OHG, Gundremmingen		100	356,579	27,991
RUMM Limited, Ystrad Mynach/United Kingdom		100	91	–256
RV Rheinbraun Handel und Dienstleistungen GmbH, Cologne		100	36,694	[1]
RWE & Turcas Güney Elektrik Üretim A.S., Ankara/Turkey		70	222,050	–6,911
RWE Aktiengesellschaft, Essen			5,653,514	472,184
RWE Cogen UK (Hythe) Limited, Swindon/United Kingdom		100	12,153	1,204
RWE Cogen UK Limited, Swindon/United Kingdom		100	163,508	511
RWE Eemshaven Holding II B.V., Geertruidenberg/Netherlands		100	–57,873	–4,451
RWE Energija d.o.o., Zagreb/Croatia		100	719	–1,068
RWE Generation Belgium N.V., Antwerp/Belgium		100	73,949	2,943
RWE Generation NL B.V., Arnhem/Netherlands		100	167,713	–61,783
RWE Generation NL Corner Participations B.V., Geertruidenberg/Netherlands		100	45,241	9,982

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9 Immaterial.
10 Financial statements not available.
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I. Affiliated companies which are included in the consolidated financial statements	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
RWE Generation NL Participations B.V., Arnhem/Netherlands		100	−12,700	−16,300
RWE Generation NL Personeel B.V., Arnhem/Netherlands		100	11,825	−327
RWE Generation SE, Essen	100	100	264,673	[1]
RWE Generation UK Holdings Limited, Swindon/United Kingdom		100	3,049,658	14,673
RWE Generation UK plc, Swindon/United Kingdom		100	1,817,722	182,854
RWE Hrvatska d.o.o., Zagreb/Croatia		100	8,185	−3,222
RWE Ljubljana d.o.o., Ljubljana/Slovenia		100	94	−3,263
RWE Markinch Limited, Swindon/United Kingdom		100	52,282	155,115
RWE Nuclear GmbH, Essen	100	100	100,000	[1]
RWE Personeel B.V., Arnhem/Netherlands		100	−40	−40
RWE Plin d.o.o., Zagreb/Croatia		100	266	−798
RWE Power Aktiengesellschaft, Cologne and Essen	100	100	2,037,209	[1]
RWE Supply & Trading Asia-Pacific PTE. LTD., Singapore/Singapore		100	14,381	17,579
RWE Supply & Trading CZ, a.s., Prague/Czech Republic		100	1,128,683	63,846
RWE Supply & Trading CZ GmbH, Essen		100	100,983	314
RWE Supply & Trading GmbH, Essen	100	100	446,778	[1]
RWE Supply & Trading (India) Private Limited, Mumbai/India		100	642	53
RWE Supply & Trading Participations Limited, London/United Kingdom		100	15,817	5,994
RWE Supply & Trading Switzerland S.A., Geneva/Switzerland		100	32,241	3,085
RWE Technology International GmbH, Essen		100	12,463	[1]
RWE Technology Tasarim ve Mühendislik Danismanlik Ticaret Limited Sirketi, Istanbul/Turkey		100	722	105
RWE Technology UK Limited, Swindon/United Kingdom		100	1,819	393
RWE Trading Americas Inc., New York City/USA		100	16,318	6,268
RWE Trading Services GmbH, Essen		100	5,735	[1]
RWEST Middle East Holdings B.V., 's-Hertogenbosch/Netherlands		100	6,544	2,396
RWW Rheinisch-Westfälische Wasserwerksgesellschaft mbH, Mülheim an der Ruhr		80	77,574	5,094
SARIO Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Würzburg KG, Düsseldorf		[8]	−9,640	462
Sofia Offshore Wind Farm Holdings Limited, Swindon/United Kingdom		100	0	0
Sofia Offshore Wind Farm Limited, Swindon/United Kingdom		100	0	0
SRS EcoTherm GmbH, Salzbergen		90	12,052	2,891
Stadtwerke Düren GmbH, Düren		50[4]	27,378	5,414
Südwestsächsische Netz GmbH, Crimmitschau		100	1,400	283
Süwag Energie AG, Frankfurt am Main		78	649,555	67,850
Süwag Grüne Energien und Wasser GmbH, Frankfurt am Main		100	6,441	[1]
Süwag Vertrieb AG & Co. KG, Frankfurt am Main		100	680	[1]
Syna GmbH, Frankfurt am Main		100	8,053	[1]
The Hollies Wind Farm Limited, Swindon/United Kingdom		100	508	17
Transpower Limited, Dublin/Ireland		100	3,528	−1,048
Triton Knoll HoldCo Limited, Swindon/United Kingdom		59		[3]
Triton Knoll Offshore Wind Farm Limited, Swindon/United Kingdom		100	−18,089	−2,504

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Überlandwerk Krumbach GmbH, Krumbach		75	6,015	1,088
Verteilnetz Plauen GmbH, Plauen		100	25	[1]
VKB-GmbH, Neunkirchen		50	43,002	3,427
Volta Energycare N.V., Houthalen-Helchteren/Belgium		100	–310	–68
Volta Limburg B.V., Schinnen/Netherlands		100	44,800	5,800
Volta Service B.V., Schinnen/Netherlands		100	98	0
Volta Solar B.V., Heerlen/Netherlands		95	370	0
Volta Solar VOF, Heerlen/Netherlands		60	1,377	1,143
VSE Aktiengesellschaft, Saarbrücken		51	211,743	17,879
VSE NET GmbH, Saarbrücken		100	14,817	2,731
VSE Verteilnetz GmbH, Saarbrücken		100	3,109	[1]
VWS Verbundwerke Südwestsachsen GmbH, Lichtenstein/Sa.		98	25,989	1,325
Východoslovenská distribucná, a.s., Kosice/Slovakia		100	600,975	30,626
Východoslovenská energetika a.s., Kosice/Slovakia		100	59,243	1,870
Východoslovenská energetika Holding a.s., Kosice/Slovakia		49[4]	576,445	15,824
Wendelsteinbahn Gesellschaft mit beschränkter Haftung, Brannenburg		100	2,882	164
Wendelsteinbahn Verteilnetz GmbH, Brannenburg		100	38	[1]
Westerwald-Netz GmbH, Betzdorf-Alsdorf		100	9,875	[1]
Westnetz GmbH, Dortmund		100	281,306	[1]
Wind Farm Deliceto s.r.l., Bolzano/Italy		100	24,203	746
Windpark Eekerpolder B.V., 's-Hertogenbosch/Netherlands		100	0	0
Windpark Kattenberg B.V., 's-Hertogenbosch/Netherlands		100	367	161
Windpark Nordsee Ost GmbH, Heligoland		100	256	[1]
Windpark Zuidwester B.V., 's-Hertogenbosch/Netherlands		100	9,930	–855
WKN Windkraft Nord GmbH & Co. Windpark Wönkhausen KG, Hanover		100	1,366	228
WTTP B.V., Arnhem/Netherlands		100	12,254	300
2. CR Immobilien-Vermietungsgesellschaft mbH & Co. Objekt MEAG Halle KG, Düsseldorf		[8]	–538	0
2. CR-Immobilien-Vermietungsgesellschaft mbH & Co. KG Cottbus, Düsseldorf		[8]	-966	473

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	Direct	Total	€ '000	€ '000
Adensis GmbH, Dresden		100	381	59
Agenzia Carboni S.R.L., Genoa/Italy		100	317	33
Alfred Thiel-Gedächtnis-Unterstützungskasse GmbH, Essen	50	100	5,113	0
Alvarado Solar S.L., Barcelona/Spain		100	3	–30
Baron Winds LLC, Chicago/USA		100		[9]
Belectric Inc., San Mateo/USA		100	121	603
Belectric International GmbH, Kolitzheim		100	89	44
BELECTRIC JV GmbH, Kolitzheim		100	14	–5
Belectric Mexico Fotovoltaica S.de R.L. de C.V., Bosques de las Lomas/Mexico		100	–490	6
Belectric Polska Sp. z o.o., Warsaw/Poland		100	–144	–44
Belectric PV 10 (SARL), Vendres/France		100	–6	–1
Belectric PV 5 (SARL), Vendres/France		100	–9	–1
Belectric PV 9 (SARL), Vendres/France		100	–5	–6
BELECTRIC Solar Power, S.L., Barcelona/Spain		100		[3]
Beteiligungsgesellschaft Werl mbH, Essen		51	1,281	0
bildungszentrum energie GmbH, Halle (Saale)		100	768	270
Bioenergie Bad Wimpfen GmbH & Co. KG, Bad Wimpfen		51	2,314	210
Bioenergie Bad Wimpfen Verwaltungs-GmbH, Bad Wimpfen		100	33	1
Bioenergie Kirchspiel Anhausen GmbH & Co. KG, Anhausen		51	192	26
Bioenergie Kirchspiel Anhausen Verwaltungs-GmbH, Anhausen		100	33	1
Biogas Schwalmtal GmbH & Co. KG, Schwalmtal		66	631	–57
Biogasanlage Schwalmtal GmbH, Schwalmtal		99	49	4
Biomasseheizkraftwerk Schameder GmbH, Essen		100		[3]
Blueberry Hills LLC, Chicago/USA		100		[9]
Bowler Flats Energy Hub LLC, Chicago/USA		100		[9]
Buckeye Wind LLC, Chicago/USA		100		[9]
Burgar Hill Wind Farm Limited, Swindon/United Kingdom		100	0	0
Cassadaga Wind LLC, Chicago/USA		100		[9]
Catalina-Cypress Holding Limited, Swindon/United Kingdom		100	92	0
Causeymire Two Wind Farm Limited, Swindon/United Kingdom		100	0	0
CERBEROS s.r.o., Prague/Czech Republic		100		[3]
Champaign Wind LLC, Chicago/USA		100		[9]
Ciriè Centrale PV s.a.s. (s.r.l.), Rome/Italy		100	–5	0
Clavellinas Solar, S.L., Barcelona/Spain		100	–6	–9
Climagy Photovoltaikprojekt Verwaltungs-GmbH, Kolitzheim		100	29	0
Climagy PV-Sonnenanlage GmbH & Co. KG, Kolitzheim		100	–27	–2
Climagy PV-Sonnenanlage Verwaltungs-GmbH, Kolitzheim		100	27	0
Climagy Sonneneinstrahlung GmbH & Co. KG, Kolitzheim		100	–18	–2
Climagy Sonneneinstrahlung Verwaltungs-GmbH, Kolitzheim		100	27	0
Climagy Sonnenkraft Verwaltungs-GmbH, Kolitzheim		100	29	0
Climagy Sonnenstrom GmbH & Co. KG, Kolitzheim		100	–29	–2
Climagy Sonnenstrom Verwaltungs-GmbH, Kolitzheim		100	29	0

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	Direct	Total	€ '000	€ '000
Climagy Stromertrag GmbH & Co. KG, Kolitzheim		100	−16	−2
Climagy Stromertrag Verwaltungs-GmbH, Kolitzheim		100	27	0
Clocaenog Wind Farm Limited, Swindon/United Kingdom		100	0	0
CNGvitall s.r.o., Ostrava/Czech Republic		100		[3]
COMCO MCS S.A., Luxembourg/Luxembourg		100	438	300
Conjoule GmbH, Essen		64		[9]
Curns Energy Limited, Kilkenny City/Ireland		70	−234	−232
Decadia GmbH, Essen	50	100		[3]
DigiKoo GmbH, Essen		100	−369	−469
E & Z Industrie-Lösungen GmbH, Essen		100	19,759	1,619
easyOptimize GmbH, Essen		100	−2,771	−4,795
Edgware Energy Limited, Swindon/United Kingdom		100	0	0
Eko-En 1 Sp. z o.o., Warsaw/Poland		100	175	−1,101
El Algarrobo (SpA), Santiago de Chile/Chile		100	1	0
El Chañar (SpA), Santiago de Chile/Chile		100	1	0
El Navajo Solar, S.L., Barcelona/Spain		100	3	−9
El Pimiento (SpA), Santiago de Chile/Chile		100	1	0
El Solar (SpA), Santiago de Chile/Chile		100	1	0
El Tamarugo (SpA), Santiago de Chile/Chile		100	1	0
Enchant Solar 1 Inc., Vancouver/Canada		100		[3]
Enchant Solar 2 Inc., Vancouver/Canada		100		[3]
Enchant Solar 3 Inc., Vancouver/Canada		100		[3]
Enchant Solar 4 Inc., Vancouver/Canada		100		[3]
Energenti plus d.o.o., Cerknica/Slovenia		100	−17	−37[2]
Energiegesellschaft Leimen GmbH & Co. KG, Leimen		75	198	13
Energiegesellschaft Leimen Verwaltungsgesellschaft mbH, Leimen		75	29	1
EnergieRevolte GmbH, Düren		100		[3]
Energieversorgung Timmendorfer Strand GmbH & Co. KG, Timmendorfer Strand		51	3,198	156
Energiewerken B.V., Almere/Netherlands		100		[3]
Energy Ventures GmbH, Saarbrücken		100	501	−5
enervolution GmbH, Bochum		100	48	[1]
Ense Netz Verwaltung GmbH, Ense		100	25	0
enviaM Erneuerbare Energien Verwaltungsgesellschaft mbH, Markkleeberg		100	37	2
enviaM Neue Energie Management GmbH, Halle (Saale)		100	30	4
enviaM Zweite Neue Energie Management GmbH, Halle (Saale)		100	24	−1
Eólica de Sarnago, S.A., Soria/Spain		52	1,579	−22
ESK GmbH, Dortmund		100	128	1,645
EverPower Maine LLC, Chicago/USA		100		[9]
EverPower Ohio LLC, Chicago/USA		100		[9]
EverPower Solar LLC, Chicago/USA		100		[9]
EverPower Wind Development, LLC, Chicago/USA		100		[9]
EWIS BV, Ede/Netherlands		100		[3]

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	Direct	Total	€ '000	€ '000
Fernwärmeversorgung Saarlouis- Steinrausch Investitionsgesellschaft mbH, Saarlouis		100	7,567	1
"Finelectra" Finanzgesellschaft für Elektrizitäts-Beteiligungen AG, Hausen/Switzerland		100	7,962	130
Free Electrons LLC, Palo Alto/USA		100		9
Fresh Energy GmbH, Berlin		62		9
FUCATUS Vermietungsgesellschaft mbH & Co. Objekt Recklinghausen Kommanditgesellschaft, Düsseldorf		94	0	0
Fundacja innogy w Polsce, Warsaw/Poland		100	39	37
Gasnetzgesellschaft Warburg GmbH & Co. KG, Warburg		49	25	0
Gasnetzgesellschaft Windeck mbH & Co. KG, Siegburg		100	100	0
Gazules I Fotovoltaica, S.L., Barcelona/Spain		100	3	−30
Gazules II Solar, S.L., Barcelona/Spain		100	3	−30
GBV Achtunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen		100		3
GBV Dreiunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen	100	100	25	1
GBV Einunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen	100	100	30	1
GBV Fünfunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen		100		3
GBV Sechsunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen		100		3
GBV Siebenunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen		100		3
GBV Siebte Gesellschaft für Beteiligungsverwaltung mbH, Essen		100	100	1
GBV Zweiunddreißigste Gesellschaft für Beteiligungsverwaltung mbH, Essen	100	100	25	1
Gemeindewerke Windeck GmbH & Co. KG, Siegburg		100	100	0
GKB Gesellschaft für Kraftwerksbeteiligungen mbH, Cottbus		100	252	−16
Goole Fields II Wind Farm Limited, Swindon/United Kingdom		100	0	0
Green Gecco Verwaltungs GmbH, Essen		51	38	1
GWG Kommunal GmbH, Grevenbroich		100	1,100	−560
Heizungs- und Sanitärbau WIJA GmbH, Bad Neuenahr-Ahrweiler		100	300	−178
HELIOS MB s.r.o., Prague/Czech Republic		100		3
Highfield Storage Limited, Dublin/Ireland		100	−4	−4
Highland III LLC, Chicago/USA		100		9
Horse Thief Wind Project LLC, Chicago/USA		100		9
Infraestructuras de Aldehuelas, S.A., Barcelona/Spain		100	428	−97
Infrastrukturgesellschaft Netz Lübz mit beschränkter Haftung, Hanover		100	16	−16
innogy Charge Tech GmbH, Dortmund		100	22	−1
innogy Commodity Markets GmbH, Essen		100	25	1
innogy Consulting & Ventures Americas, LLC, Boston/USA		100		10
innogy Consulting GmbH, Essen		100	5,761	4,267
innogy Direkt GmbH, Essen		100	25	1
innogy Dreizehnte Vermögensverwaltungs GmbH, Essen		100		3
innogy Elfte Vermögensverwaltungs GmbH, Essen		100		3
innogy e-Mobility Limited, London/United Kingdom		100		10
innogy eMobility Solutions GmbH, Dortmund		100		3

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	Direct	Total	€ '000	€ '000
Innogy Energy Marketing LLC, Wilmington/USA		100		9
Innogy Energy Services LLC, Wilmington/USA		100		9
innogy Hillston Sun Farm Holding Pty. Ltd., Southbank/Australia		100		3
innogy indeland Windpark Eschweiler Verwaltungs GmbH, Eschweiler		100	41	6
innogy Middle East & North Africa Ltd., Dubai/UAE		100	−7,654	−5,550
innogy Neunte Vermögensverwaltungs GmbH, Essen		100		3
innogy Offshore Wind Netherlands Participations I B.V., 's-Hertogenbosch/Netherlands		100	0	0
innogy Offshore Wind Netherlands Participations II B.V., 's-Hertogenbosch/Netherlands		100	0	0
innogy Offshore Wind Netherlands Participations III B.V., 's-Hertogenbosch/Netherlands		100	0	0
innogy Offshore Wind Netherlands Participations IV B.V., 's-Hertogenbosch/Netherlands		100	0	0
innogy Polska Development Sp. z o.o., Warsaw/Poland		100		3
innogy Polska Operations Sp. z o.o., Warsaw/Poland		100		3
innogy Polska Solutions Sp. z o.o., Warsaw/Poland		100	134	−10
innogy Renewables Canada Inc., Vancouver/Canada		100	2,469	−2,036
innogy Seabreeze II Verwaltungs GmbH, Essen		100	59	6
innogy Solar Netherlands B.V., 's-Hertogenbosch/Netherlands		100	0	0
innogy Solar Polska Sp. z o.o., Warsaw/Poland		100	28	−10
innogy Stiftung für Energie und Gesellschaft gGmbH, Essen		100	51,602	−3,366
innogy TelNet Holding, s.r.o., Prague/Czech Republic		100	9,995	25
Innogy US Renewable Projects LLC, Dover/USA		100	0	0
innogy Ventures Vermögensverwaltung 6 GmbH, Essen		100		9
innogy Vierzehnte Vermögensverwaltungs GmbH, Essen		100		3
innogy Windpark Bedburg Verwaltungs GmbH, Bedburg		51	43	2
innogy Windpark Garzweiler GmbH & Co. KG, Essen		51	284	−16
Innogy Windpark Jüchen A44n Verwaltungs GmbH, Essen		100	34	8
innogy Zehnte Vermögensverwaltungs GmbH, Essen		100		3
Jerez Fotovoltaica S.L., Barcelona/Spain		100	3	−30
Jurchen Technology USA Inc., Newark/USA		100	3	−5
Kieswerk Kaarst GmbH & Co. KG, Bergheim		51	1,544	436
Kieswerk Kaarst Verwaltungs GmbH, Bergheim		51	30	0
Kiln Pit Hill Wind Farm Limited, Swindon/United Kingdom		100	0	0
Kimberly Run LLC, Chicago/USA		100		9
Korproject Energy Sp. z o.o., Warsaw/Poland		100		10
KWS Kommunal-Wasserversorgung Saar GmbH, Saarbrücken		100	282	87
Lampasas Wind LLC, Chicago/USA		100		9
Las Vaguadas I Fotovoltaica S.L., Barcelona/Spain		100	3	−30
Las Vaguadas II Solar S.L., Barcelona/Spain		100	3	−30
Lech Energie Gersthofen GmbH & Co. KG, Gersthofen		100	1	8
Lech Energie Verwaltung GmbH, Augsburg		100	25	0

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Lemonbeat GmbH, Dortmund		100	9,952	–3,169
Livisi GmbH, Essen		100		[3]
Lochelbank Wind Farm Limited, Swindon/United Kingdom		100	0	0
Lößnitz Netz GmbH & Co. KG, Lößnitz		100	7	–3
Lößnitz Netz Verwaltungs GmbH, Lößnitz		100	27	0
Magnalink, a.s., Hradec Králové/Czech Republic		85		[3]
Mahanoy Mountain, LLC, Chicago/USA		100		[9]
Mason Dixon Wind LLC, Chicago/USA		100		[9]
Mitteldeutsche Netzgesellschaft Gas HD mbH, Halle (Saale)		100	25	[1]
Mitteldeutsche Netzgesellschaft mbH, Chemnitz		100	21	0
MONTCOGIM-KARLOVAC d.o.o., Karlovac/Croatia		100	2	–2
MONTCOGIM-SISAK d.o.o., Sisak/Croatia		100	26	1
MotionWerk GmbH, Essen		60		[9]
Mud Springs Wind Project LLC, Chicago/USA		100		[9]
Netzwerke Saarwellingen GmbH, Saarwellingen		100	50	[1]
NEW b_gas Eicken GmbH, Schwalmtal		100	–871	8
NEW Re GmbH, Mönchengladbach		95	9,863	–172
NEW Smart City GmbH, Mönchengladbach		100	825	136
NEW Windenergie Verwaltung GmbH, Mönchengladbach		100	28	3
NEW Windpark Linnich GmbH & Co. KG, Mönchengladbach		100	3,935	–149
NEW Windpark Viersen GmbH & Co. KG, Mönchengladbach		100	20	–6
Novar Two Wind Farm Limited, Swindon/United Kingdom		100	0	0
Npower Northern Supply Limited, Swindon/United Kingdom		100	0	0
NRF Neue Regionale Fortbildung GmbH, Halle (Saale)		100	174	32
Oer-Erkenschwick Netz Verwaltung GmbH, Oer-Erkenschwick		100	25	0
Oranje Wind Power B.V., 's-Hertogenbosch/Netherlands		100	0	0
Oranje Wind Power C.V., 's-Hertogenbosch/Netherlands		100	0	0
Oschatz Netz GmbH & Co. KG, Oschatz		75	518	174
Oschatz Netz Verwaltungs GmbH, Oschatz		100	26	0
Parc Ynni Cymunedol Alwen Cyfyngedig, Swindon/United Kingdom		100		[3]
Park Wiatrowy Dolice Sp. z o.o., Warsaw/Poland		100	–2,408	–3,444
Park Wiatrowy Elk Sp. z o.o., Warsaw/Poland		100	602	1
Park Wiatrowy Gaworzyce Sp. z o.o., Warsaw/Poland		100	–266	–1,348
Park Wiatrowy Msciwojów Sp. z o.o., Warsaw/Poland		100	202	–60
Park Wiatrowy Smigiel I Sp. z o.o., Warsaw/Poland		100	605	–51
Pe Ell North LLC, Chicago/USA		100		[3]
Peg Project #1 Pty Ltd, Southbank/Australia		100		[3]
Peg Project #2 Pty Ltd, Southbank/Australia		100		[3]
Photovoltaikkraftwerk Götz Verwaltungs-GmbH, Kolitzheim		100	29	0
Photovoltaikkraftwerk Groß Dölln Infrastruktur GmbH & Co. KG, Templin		100	–16	–1
Photovoltaikkraftwerk Groß Dölln Infrastruktur Verwaltungs-GmbH, Templin		100	28	0
Photovoltaikkraftwerk Reinsdorf GmbH & Co. KG, Kolitzheim		100	–30	–2

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9 Immaterial.
10 Financial statements not available.
11 Profit and loss-pooling agreement with non-Group companies.

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	Direct	Total	€ '000	€ '000
Photovoltaikkraftwerk Reinsdorf Verwaltungs-GmbH, Kolitzheim		100	30	0
Photovoltaikkraftwerk Tramm GmbH & Co. KG, Kolitzheim		100	−29	−2
Photovoltaikkraftwerk Tramm Netzanschluss GmbH & Co. KG, Kolitzheim		100	−27	−2
Photovoltaikkraftwerk Tramm Netzanschluss Verwaltungs-GmbH, Kolitzheim		100	27	0
Photovoltaikkraftwerk Tramm PV-Finanzierung GmbH & Co. KG, Kolitzheim		100	−17	−2
Photovoltaikkraftwerk Tramm PV-Finanzierung Verwaltungs-GmbH, Kolitzheim		100	27	0
Photovoltaikkraftwerk Tramm Verwaltungs-GmbH, Kolitzheim		100	30	0
PI E&P Holding Limited, George Town/Cayman Islands		100	26,030	−15
PI E&P US Holding LLC, New York City/USA		100	25,966	−37
Plum Energie S.A.S., Saint-Denis La Plaine/France		51		3
Powerhouse Energy Solutions S.L., Madrid/Spain		100	45	18
Proyecto Rio Putaendo S.p.A., Santiago de Chile/Chile		100		3
Proyecto Tabalongo Solar S.p.A., Santiago de Chile/Chile		100		3
Proyectos Solares Iberia I, S.L., Barcelona/Spain		100		3
Proyectos Solares Iberia II, S.L., Barcelona/Spain		100		3
Proyectos Solares Iberia III, S.L., Barcelona/Spain		100		3
Proyectos Solares Iberia IV, S.L., Barcelona/Spain		100		3
Proyectos Solares Iberia V, S.L., Barcelona/Spain		100		3
Pryor Caves Wind Project LLC, Chicago/USA		100		9
PT Rheincoal Supply & Trading Indonesia, PT, Jakarta/Indonesia		100	269	16
Qualitas-AMS GmbH, Siegen		100	−1,127	−1,015
Quintana Fotovoltaica SLU, Madrid/Spain		100	−2	0
RD Hanau GmbH, Hanau		100	0	0
Rheinland Westfalen Energiepartner GmbH, Essen		100	5,369	1
RHENAGBAU Gesellschaft mit beschränkter Haftung, Cologne		100	4,058	1
Rowantree Wind Farm Ltd., Swindon/United Kingdom		100	0	0
RWE & Turcas Dogalgaz Ithalat ve Ihracat A.S., Istanbul/Turkey		100	774	53
RWE Australia Pty. Ltd., Brisbane/Australia		100	63	99
RWE Belgium BVBA, Brussels/Belgium		100		3
RWE Enerji Toptan Satis A.S., Istanbul/Turkey		100	4,482	−165
RWE Ingen!us Limited, Swindon/United Kingdom		100	10,923	−1,147
RWE NSW PTY LTD, Sydney/Australia		100	32,625	−19
RWE Nuclear Beteiligungs-GmbH, Essen		100	25	1
RWE Pensionsfonds AG, Essen	100	100	3,839	82
RWE Power Climate Protection China GmbH, Essen		100	25	1
RWE Power Climate Protection Clean Energy Technology (Beijing) Co., Ltd., Beijing/China		100	2,066	13
RWE Power Climate Protection GmbH, Essen		100	23	1
RWE Power Climate Protection Southeast Asia Co., Ltd., Bangkok/Thailand		100	2,806	44
RWE Power International Ukraine LLC, Kiev/Ukraine		100	0	0
RWE Supply & Trading Asia-Pacific Holdings PTE. Ltd., Singapore/Singapore		100		3
RWE Supply & Trading China Holdings PTE. Ltd., Singapore/Singapore		100		3
RWE Supply and Trading (Shanghai) Co. Ltd, Shanghai/China		100		3

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	Direct	Total	€ '000	€ '000
RWE SUPPLY TRADING TURKEY ENERJI ANONIM SIRKETI, Istanbul/Turkey		100	995	–14
RWE Trading Services Limited, Swindon/United Kingdom		100	1,252	35
RWE-EnBW Magyarország Energiaszolgáltató Korlátolt Felelösségü Társaság, Budapest/Hungary		70	399	20
RWEST PI Bras Limited, London/United Kingdom		100		3
RWEST PI FRE Holding LLC, New York City/USA		100	0	–9,908
RWEST PI LNG 1 LLC, New York City/USA		100	635	498
RWEST PI WALDEN HOLDING LLC, New York City/USA		100	12,310	–46
RWEST PI WALDEN 1 LLC, New York City/USA		100	12,284	–17
Santa Severa Centrale PV s.a.s. (s.r.l.), Rome/Italy		100	–151	0
Scarcroft Investments Limited, Swindon/United Kingdom		100	10	10
Scharbeutzer Energie- und Netzgesellschaft mbH & Co. KG, Scharbeutz		51	4,399	227
SchlauTherm GmbH, Saarbrücken		75	312	71
SEG Solarenergie Guben Management GmbH, Halle (Saale)		100	24	–1
SOLARENGO Energia, Unipessoal, Lda., Cascais/Portugal		100	–81	–81
Solarkraftwerk Herlheim GmbH & Co. KG, Kolitzheim		100	–29	–2
Solarkraftwerk Herlheim Verwaltungs-GmbH, Kolitzheim		100	29	0
Solarkraftwerk Meuro GmbH & Co. KG, Kolitzheim		100	–29	–2
Solarkraftwerk Meuro Verwaltungs-GmbH, Kolitzheim		100	28	0
Solarkraftwerk Oberspiesheim GmbH & Co. KG, Kolitzheim		100	–29	–2
Solarkraftwerk Oberspiesheim Verwaltungs-GmbH, Kolitzheim		100	29	0
SP Solarprojekte 1 GmbH & Co. KG, Kolitzheim		100		10
SP Solarprojekte 1 Verwaltungs-GmbH, Kolitzheim		100	25	0
SP Solarprojekte 2 GmbH & Co. KG, Kolitzheim		100	–2	0
SP Solarprojekte 2 Verwaltungs-GmbH, Kolitzheim		100	25	0
SP Solarprojekte 3 GmbH & Co. KG, Kolitzheim		100	–2	–3
SP Solarprojekte 3 Verwaltungs-GmbH, Kolitzheim		100	25	0
SP Solarprojekte 4 GmbH & Co. KG, Kolitzheim		100	–2	–3
SP Solarprojekte 4 Verwaltungs-GmbH, Kolitzheim		100	25	0
SP Solarprojekte 5 GmbH & Co. KG, Kolitzheim		100	–2	–3
SP Solarprojekte 5 Verwaltungs-GmbH, Kolitzheim		100	25	0
SP Solarprojekte 6 GmbH & Co. KG, Kolitzheim		100	–2	–3
SP Solarprojekte 6 Verwaltungs-GmbH, Kolitzheim		100	25	0
SP Solarprojekte 7 GmbH & Co. KG, Kolitzheim		100	–2	–3
SP Solarprojekte 7 Verwaltungs-GmbH, Kolitzheim		100	25	0
Stadtwerke Korschenbroich GmbH, Mönchengladbach		100	40	–6
STAWAG Abwasser GmbH, Aachen		100	25	0
STAWAG Infrastruktur Monschau GmbH & Co.KG, Monschau		100	3,162	0
STAWAG Infrastruktur Monschau Verwaltungs GmbH, Monschau		100	29	0
STAWAG Infrastruktur Simmerath GmbH & Co.KG, Simmerath		100	3,485	0
STAWAG Infrastruktur Simmerath Verwaltungs GmbH, Simmerath		100	29	0
Storage Facility 1 Ltd., Slough/United Kingdom		100	0	0

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	Direct	Total	€ '000	€ '000
Stromnetzgesellschaft Windeck mbH & Co. KG, Siegburg		100	100	0
Sun Data GmbH, Kolitzheim		100	74	70
Sunpow 1 Sp. z o.o., Warsaw/Poland		100		10
Sunrise Energy Generation Pvt. Ltd., Mumbai/India		100	70	3
Sunrise Wind Holdings, LLC, Chicago/USA		100		9
Süwag Vertrieb Management GmbH, Frankfurt am Main		100	28	1
SVFR 12 (SAS), Vendres/France		100	–112	–2
Terrapin Hills LLC, Chicago/USA		100		9
Trireme Energy Development III, LLC, Wilmington/USA		100		9
TWS Technische Werke der Gemeinde Saarwellingen GmbH, Saarwellingen		51	1,697	–2,523
ucair GmbH, Berlin		95		9
Versuchsatomkraftwerk Kahl GmbH, Karlstein am Main		80	573	31
Verwaltungsgesellschaft Energieversorgung Timmendorfer Strand mbH, Timmendorfer Strand		51	28	1
Verwaltungsgesellschaft Scharbeutzer Energie- und Netzgesellschaft mbH, Scharbeutz		51	28	1
VSE - Windpark Merchingen GmbH & Co. KG, Saarbrücken		100	2,800	161
VSE - Windpark Merchingen VerwaltungsGmbH, Saarbrücken		100	64	1
VSE Agentur GmbH, Saarbrücken		100	229	171
VSE Call centrum, s.r.o., Kosice/Slovakia		100	26	–29
VSE Ekoenergia, s.r.o., Kosice/Slovakia		100	184	–59
VSE-Stiftung Gemeinnützige Gesellschaft zur Förderung von Bildung, Erziehung, Kunst und Kultur mbH, Saarbrücken		100	2,568	–3
Wärmeversorgung Schwaben GmbH, Augsburg		100	–456	–543
Wärmeversorgung Würselen GmbH, Würselen		100	1,511	62
Warsun Project Sp. z o.o., Warsaw/Poland		100		10
WEK Windenergie Kolkwitz GmbH & Co.KG, Kolkwitz		100	6,180	446
WGK Windenergie Großkorbetha GmbH & Co.KG, Lützen		90	8,093	217
Windkraft Hochheim GmbH & Co. KG, Hochheim		90	3,194	363
Windpark Büschdorf GmbH, Perl		100	2,325	–100
Windpark Eschweiler Beteiligungs GmbH, Stolberg		59	10,118	–576
Windpark Oostpolderdijk B.V., 's-Hertogenbosch/Netherlands		100	0	0
Windpark Verwaltungsgesellschaft mbH, Lützen		100	37	6
Windpark Wadern-Felsenberg GmbH, Wadern		100	4,123	48
WK Solar Project Sp. z o.o., Warsaw/Poland		100		10
WKH Windkraft Hochheim Management GmbH, Halle (Saale)		100	24	–1
ZonnigBeheer B.V., Lelystad/Netherlands		100		3
2. CR Immobilien-Vermietungsgesellschaft mbH & Co. Objekt Naumburg KG, Düsseldorf		8	0	0
4Motions GmbH, Leipzig		100		10

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III. Joint operations	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
EnergieRegion Taunus - Goldener Grund - GmbH & Co. KG, Bad Camberg		49	29,903	1,757
Gas-Netzgesellschaft Kolpingstadt Kerpen GmbH & Co. KG, Kerpen		25	4,211	1,155
Gas-Netzgesellschaft Kreisstadt Bergheim GmbH & Co. KG, Bergheim		25	3,656	1,167
Greater Gabbard Offshore Winds Limited, Reading/United Kingdom		50	1,160,950	84,316
Netzgesellschaft Südwestfalen mbH & Co. KG, Netphen		49	12,548	[11]
N.V. Elektriciteits-Produktiemaatschappij Zuid-Nederland EPZ, Borssele/Netherlands		30	64,729	9,142

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IV. Affiliated companies of joint operations	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
EnergieRegion Taunus - Goldener Grund Verwaltungsgesellschaft mbH, Bad Camberg		100	28	1
Gas-Netzgesellschaft Kolpingstadt Kerpen Verwaltungs-GmbH, Kerpen		100	33	2

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V. Associated companies of joint operations	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
B.V. NEA, Arnhem/Netherlands		28	71,498	706

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9 Immaterial.
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VI. Joint ventures accounted for using the equity method	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
AS 3 Beteiligungs GmbH, Essen		51[5]	39,914	5,335
C-Power N.V., Ostend/Belgium		27	227,455	18,081
Galloper Wind Farm Holding Company Limited, Swindon/United Kingdom		25	−132,797	−8,149
Gwynt y Môr Offshore Wind Farm Limited, Swindon/United Kingdom		50	−1,029	−936
Innogy Venture Capital GmbH, Dortmund		75[5]	595	123
Société Electrique de l'Our S.A., Luxembourg/Luxembourg		40	5,697	5,137[2]
TCP Petcoke Corporation, Dover/USA		50	22,139	10,746[2]
URANIT GmbH, Jülich		50	71,317	98,284

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9 Immaterial.
10 Financial statements not available.
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VII. Joint ventures not accounted for using the equity method due to application of IFRS 5	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
AVU Aktiengesellschaft für Versorgungs-Unternehmen, Gevelsberg		50	95,950	10,936
BEW Netze GmbH, Wipperfürth		61[5]	11,410	438
Budapesti Disz- es Közvilagitasi Korlatolt Felelösségü Tarsasag, Budapest/Hungary		50	30,694	1,567
Energie Nordeifel GmbH & Co. KG, Kall		33	13,691	4,579
FSO GmbH & Co. KG, Oberhausen		50	33,007	11,445
Konsortium Energieversorgung Opel beschränkt haftende oHG, Karlstein		67[5]	29,032	5,257
PRENU Projektgesellschaft für Rationelle Energienutzung in Neuss mit beschränkter Haftung, Neuss		50	165	−13
Rain Biomasse Wärmegesellschaft mbH, Rain		70[5]	6,165	525
SHW/RWE Umwelt Aqua Vodogradnja d.o.o., Zagreb/Croatia		50	568	156
Stadtwerke Dülmen Dienstleistungs- und Beteiligungs-GmbH & Co. KG, Dülmen		50	27,020	4,260
Stadtwerke Lingen GmbH, Lingen (Ems)		40	13,971	[11]
Stromnetz Friedberg GmbH & Co. KG, Friedberg		49	35	0
Stromnetz Gersthofen GmbH & Co. KG, Gersthofen		49	431	0
Stromnetz Günzburg GmbH & Co. KG, Günzburg		49	2,999	113
SVS-Versorgungsbetriebe GmbH, Stadtlohn		30	25,340	1,123
Zagrebacke otpadne vode d.o.o., Zagreb/Croatia		48	221,901	24,383

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VIII. Associates accounted for using the equity method	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Amprion GmbH, Dortmund	25	25	1,717,100	173,700
ATBERG - Eólicas do Alto Tâmega e Barroso, Lda., Ribeira de Pena/Portugal		40	4,583	315
Belectric Gulf Limited, Abu Dhabi/UAE		49	4,664	3,962
Bray Offshore Wind Limited, Kilkenny City/Ireland		50	−71	−1
GNS Gesellschaft für Nuklear-Service mbH, Essen		28	47,872	24,182[2]
Grosskraftwerk Mannheim Aktiengesellschaft, Mannheim		40	120,788	6,647
HIDROERG - Projectos Energéticos, Lda., Lisbon/Portugal		32	11,730	586
Innogy Renewables Technology Fund I GmbH & Co. KG, Dortmund		78[5]	16,362	−1,070
Kish Offshore Wind Limited, Kilkenny City/Ireland		50	−91	−1
Mingas-Power GmbH, Essen		40	6,742	6,073
PEARL PETROLEUM COMPANY LIMITED, Road Town/British Virgin Islands		10[7]	2,027,129	198,287
Schluchseewerk Aktiengesellschaft, Laufenburg Baden		50	62,148	2,809
Vliegasunie B.V., De Bilt/Netherlands		60[5]	12,608	2,660

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IX. Associated companies not accounted for using the equity method due to application of IFRS 5	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Dortmunder Energie- und Wasserversorgung Gesellschaft mit beschränkter Haftung, Dortmund		40	188,831	[11]
EnergieServicePlus GmbH, Düsseldorf		49	6,296	2,066
Energieversorgung Guben GmbH, Guben		45	17,338	1,246
Energieversorgung Hürth GmbH, Hürth		25	4,960	[11]
Energieversorgung Oberhausen Aktiengesellschaft, Oberhausen		10[6]	34,345	13,323
ENNI Energie & Umwelt Niederrhein GmbH, Moers		20	35,915	[11]
e-regio GmbH & Co. KG, Euskirchen		43	89,342	15,624
EWR Aktiengesellschaft, Worms		1[6]	74,307	12,896
EWR Dienstleistungen GmbH & Co. KG, Worms		25	147,781	0
EWR GmbH, Remscheid		20	83,816	0
Freiberger Stromversorgung GmbH (FSG), Freiberg		30	11,429	2,192
Gas- und Wasserwerke Bous - Schwalbach GmbH, Bous		49	14,161	2,424
Kärntner Energieholding Beteiligungs GmbH, Klagenfurt/Austria		49	871,074	79,257[2]
KELAG-Kärntner Elektrizitäts-AG, Klagenfurt/Austria		13[6]	855,527	81,400
Kemkens B.V., Oss/Netherlands		49	37,941	8,411
KEW Kommunale Energie- und Wasserversorgung Aktiengesellschaft, Neunkirchen		29	73,736	10,522
MAINGAU Energie GmbH, Obertshausen		47	40,371	12,539
medl GmbH, Mülheim an der Ruhr		39	21,829	[11]
Nebelhornbahn-Aktiengesellschaft, Oberstdorf		20	5,971	812
PFALZWERKE AKTIENGESELLSCHAFT, Ludwigshafen am Rhein		27	261,971	30,285
Projecta 14 GmbH, Saarbrücken		50	38,127	1,902
Propan Rheingas GmbH & Co Kommanditgesellschaft, Brühl		30	9,813	2,076
Recklinghausen Netzgesellschaft mbH & Co. KG, Recklinghausen		50	16,044	1,125
RheinEnergie AG, Cologne		20	896,918	145,309
Rhein-Main-Donau GmbH, Munich		22	110,112	0
Siegener Versorgungsbetriebe GmbH, Siegen		25	25,335	4,613
SpreeGas Gesellschaft für Gasversorgung und Energiedienstleistung mbH, Cottbus		33	34,554	5,783
SSW - Stadtwerke St. Wendel GmbH & Co KG., St. Wendel		50	20,215	2,147
Stadtwerke Aschersleben GmbH, Aschersleben		35	17,536	2,577
Stadtwerke Bernburg GmbH, Bernburg (Saale)		45	32,759	5,815
Stadtwerke Bitterfeld-Wolfen GmbH, Bitterfeld-Wolfen		40	20,239	1,802
Stadtwerke Duisburg Aktiengesellschaft, Duisburg		20	193,636	48,754
Stadtwerke Emmerich GmbH, Emmerich am Rhein		25	12,115	[11]
Stadtwerke Essen Aktiengesellschaft, Essen		29	132,112	0
Stadtwerke Geldern GmbH, Geldern		49	13,408	2,923
Stadtwerke GmbH Bad Kreuznach, Bad Kreuznach		25	39,925	[11]
Stadtwerke Kamp-Lintfort GmbH, Kamp-Lintfort		49	14,607	3,417
Stadtwerke Kirn GmbH, Kirn/Nahe		49	2,137	232
Stadtwerke Meerane GmbH, Meerane		24	14,048	2,202
Stadtwerke Meerbusch GmbH, Meerbusch		40	24,310	5,106

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IX. Associated companies not accounted for using the equity method due to application of IFRS 5	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Stadtwerke Merseburg GmbH, Merseburg		40	25,092	3,000
Stadtwerke Merzig Gesellschaft mit beschränkter Haftung, Merzig		50	15,906	253
Stadtwerke Neuss Energie und Wasser GmbH, Neuss		25	88,344	19,852
Stadtwerke Radevormwald GmbH, Radevormwald		50	6,627	2,607
Stadtwerke Ratingen GmbH, Ratingen		25	58,756	4,835
Stadtwerke Reichenbach/Vogtland GmbH, Reichenbach im Vogtland		24	14,056	1,551
Stadtwerke Saarlouis GmbH, Saarlouis		49	38,022	4,074
Stadtwerke Velbert GmbH, Velbert		30	82,005	[11]
Stadtwerke Weißenfels Gesellschaft mit beschränkter Haftung, Weißenfels		24	25,254	4,029
Stadtwerke Willich Gesellschaft mit beschränkter Haftung, Willich		25	13,981	24,221
Stadtwerke Zeitz GmbH, Zeitz		24	21,420	3,041
SWTE Netz GmbH & Co. KG, Ibbenbüren		33	36,640	4,642
Tankey B.V., 's-Hertogenbosch/Netherlands		42		[3]
WVW Wasser- und Energieversorgung Kreis St. Wendel Gesellschaft mit beschränkter Haftung, St. Wendel		28	23,778	1,818
Xelan SAS, Saint-Denis La Plaine/France		34	1,015	–770
Zagrebacke otpadne vode-upravljanje i pogon d.o.o., Zagreb/Croatia		31	3,376	3,371
Zwickauer Energieversorgung GmbH, Zwickau		27	44,360	12,106

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9 Immaterial.
10 Financial statements not available.
11 Profit and loss-pooling agreement with non-Group companies.

X. Companies which are not accounted for using the equity method due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Abwasser-Gesellschaft Knapsack, Gesellschaft mit beschränkter Haftung, Hürth		33	443	213
Ascent Energy LLC, Wilmington/USA		50	48,307	−2,962
CARBON Climate Protection GmbH, Langenlois/Austria		50	3,130	2,283
CARBON Egypt Ltd., Cairo/Egypt		49	−1,773	−341
DBO Projectos e Participacoes S.A., Leblon/Brazil		30	9	0
Deutsche Gesellschaft für Wiederaufarbeitung von Kernbrennstoffen AG & Co. oHG, Gorleben		31	1,384	873
Elsta B.V., Middelburg/Netherlands		25	40,154	32,683
EMDO S.A.S., Paris/France		30	−4,984	−4,999
Fassi Coal Pty. Ltd., Newcastle-Rutherford/Australia		47	−9,816	−3,021
First River Energy LLC, Denver/USA		40	−1,384	−7,211
Focal Energy Photovoltaic Holdings Limited, Nicosia/Cyprus		50	1,476	−4
Gemeinschaftswerk Hattingen Gesellschaft mit beschränkter Haftung, Essen		52	2,045	−506
GfS Gesellschaft für Simulatorschulung mbH, Essen		33	59	3
Kraftwerk Buer GbR, Gelsenkirchen		50	5,113	0
KSG Kraftwerks-Simulator-Gesellschaft mbH, Essen		33	589	26
KÜCKHOVENER Deponiebetrieb GmbH & Co. Kommanditgesellschaft, Bergheim		50	33	−8
KÜCKHOVENER Deponiebetrieb Verwaltungs-GmbH, Bergheim		50	39	0
LDO Coal Pty. Ltd., Ruthersford/Australia		47	−99	78
Moravske Hidroelektrane d.o.o., Belgrade/Serbia		51	3,540	−16
Netzanbindung Tewel OHG, Cuxhaven		25	668	−30
PV Projects GmbH & Co. KG (i.L.), Kolitzheim		50	377	285
PV Projects Komplementär GmbH (i.L.), Kolitzheim		50	24	0
TetraSpar Demonstrator ApS, Copenhagen/Denmark		33		[3]
The Bristol Bulk Company Limited, London/United Kingdom		25	1	0
Toledo PV A.E.I.E., Madrid/Spain		33	1,619	693
Umspannwerk Putlitz GmbH & Co. KG, Oldenburg		25	0	−179
WALDEN GREEN ENERGY LLC, New York City/USA		74	11,978	−826
Windesco Inc, Boston/USA		22	86	−1,172
Windpark Paffendorf GmbH & Co. KG, Essen		49	4,474	−27
WINDTEST Grevenbroich GmbH, Grevenbroich		38	2,276	118

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XI. Associates and joint ventures of secondary importance for the assets, liabilities, financial position and profit or loss of the Group falling under the scope of IFRS 5	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Alt Han Company Limited, London/United Kingdom		21	0	0
AWOTEC Gebäude Servicegesellschaft mit beschränkter Haftung, Saarbrücken		48	114	14
Bäderbetriebsgesellschaft St. Ingbert mbH, St. Ingbert		49	90	4
Balve Netz GmbH & Co. KG, Balve		25	3,284	590
Basking Automation GmbH, Berlin		46		9
Bayerische Ray Energietechnik GmbH, Garching		49	1,255	5
Biogas Wassenberg GmbH & Co. KG, Wassenberg		32	1,323	76
Biogas Wassenberg Verwaltungs GmbH, Wassenberg		32	38	1
Breitband-Infrastrukturgesellschaft Cochem-Zell mbH, Cochem		21	0	141
bremacon GmbH, Bremen		48	−18	103
Brüggen.E-Netz GmbH & Co. KG, Brüggen		25	3,780	530
Brüggen.E-Netz Verwaltungs-GmbH, Brüggen		25	31	2
Centralny System Wymiany Informacji Sp. z o.o., Poznan/Poland		20		10
DES Dezentrale Energien Schmalkalden GmbH, Schmalkalden		33	282	2
Dii GmbH, Munich		20	288	24
Discovergy GmbH, Aachen		24	3,643	−2,170
Dorsten Netz GmbH & Co. KG, Dorsten		49	5,744	772
EfD Energie-für-Dich GmbH, Potsdam		49	1,134	1,105
ELE - GEW Photovoltaikgesellschaft mbH, Gelsenkirchen		49	84	59
ELE-RAG Montan Immobilien Erneuerbare Energien GmbH, Bottrop		50	44	9
ELE-Scholven-Wind GmbH, Gelsenkirchen		30	843	318
Energie BOL GmbH, Ottersweier		50	39	3
Energie Mechernich GmbH & Co. KG, Mechernich		49	3,618	225
Energie Mechernich Verwaltungs-GmbH, Mechernich		49	33	2
Energie Nordeifel Beteiligungs-GmbH, Kall		33	25	0
Energie Schmallenberg GmbH, Schmallenberg		44	30	1
energienatur Gesellschaft für Erneuerbare Energien mbH, Siegburg		44	115	3
Energienetze Holzwickede GmbH, Holzwickede		25	25	0
Energiepartner Dörth GmbH, Dörth		49	36	4
Energiepartner Elsdorf GmbH, Elsdorf		40	72	16
Energiepartner Hermeskeil GmbH, Hermeskeil		20	71	20
Energiepartner Kerpen GmbH, Kerpen		49	47	20
Energiepartner Niederzier GmbH, Niederzier		49	16	−9
Energiepartner Projekt GmbH, Essen		49	26	1
Energiepartner Solar Kreuztal GmbH, Kreuztal		40	23	−1
Energiepartner Wesseling GmbH, Wesseling		30	25	−2
Energie-Service-Saar GmbH, Völklingen		50	−1,796	0
Energieversorgung Bad Bentheim GmbH & Co. KG, Bad Bentheim		25	2,909	556
Energieversorgung Bad Bentheim Verwaltungs-GmbH, Bad Bentheim		25	33	2
Energieversorgung Beckum GmbH & Co. KG, Beckum		34	5,701	3,470
Energieversorgung Beckum Verwaltungs-GmbH, Beckum		34	61	2

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	Direct	Total	€ '000	€ '000
Energieversorgung Horstmar/Laer GmbH & Co. KG, Horstmar		49	4,386	275
Energieversorgung Kranenburg Netze GmbH & Co. KG, Kranenburg		25	1,698	206
Energieversorgung Kranenburg Netze Verwaltungs GmbH, Kranenburg		25	29	2
Energieversorgung Marienberg GmbH, Marienberg		49	3,007	1,231
Energieversorgung Niederkassel GmbH & Co. KG, Niederkassel		49	2,745	127
Energotel, a.s., Bratislava/Slovakia		20	6,805	1,293
energy4u GmbH & Co. KG, Siegburg		49	25	–154
enermarket GmbH, Frankfurt am Main		60		[3]
ENERVENTIS GmbH & Co. KG, Saarbrücken		25	1,090	227
Erdgasversorgung Industriepark Leipzig Nord GmbH, Leipzig		50	252	2
Erdgasversorgung Schwalmtal GmbH & Co. KG, Viersen		50	3,109	1,496
Erdgasversorgung Schwalmtal Verwaltungs-GmbH, Viersen		50		[10]
Erneuerbare Energien Rheingau-Taunus GmbH, Bad Schwalbach		25	526	57
eShare.one GmbH, Dortmund		25	78	–58
Esta VOF, Ridderkerk/Netherlands		50	993	–79
evm Windpark Höhn GmbH & Co. KG, Höhn		33	–763	–108
EWV Baesweiler GmbH & Co. KG, Baesweiler		45	2,404	873
EWV Baesweiler Verwaltungs GmbH, Baesweiler		45	31	1
FAMOS - Facility Management Osnabrück GmbH, Osnabrück		49	105	5
Fernwärmeversorgung Zwönitz GmbH (FVZ), Zwönitz		50	3,320	17,434
Foton Technik Sp. z o.o., Warsaw/Poland		50	–1,264	–917
FSO Verwaltungs-GmbH, Oberhausen		50	64	0
Gasgesellschaft Kerken Wachtendonk mbH, Kerken		49	4,405	588
Gas-Netzgesellschaft Bedburg GmbH & Co. KG, Bedburg		49	2,012	454
Gas-Netzgesellschaft Elsdorf GmbH & Co. KG, Elsdorf		25	1,538	439
Gasnetzgesellschaft Mettmann GmbH & Co. KG, Mettmann		25	3,211	351
Gas-Netzgesellschaft Rheda-Wiedenbrück GmbH & Co. KG, Rheda-Wiedenbrück		49	1,930	819
Gas-Netzgesellschaft Rheda-Wiedenbrück Verwaltungs-GmbH, Rheda-Wiedenbrück		49	26	1
Gasnetzgesellschaft Wörrstadt mbH & Co. KG, Saulheim		49	2,143	724
Gasnetzgesellschaft Wörrstadt Verwaltung mbH, Saulheim		49	33	2
Gemeindewerke Bad Sassendorf Gasnetz GmbH & Co. KG, Bad Sassendorf		25	25	0
Gemeindewerke Bad Sassendorf Netze GmbH & Co. KG, Bad Sassendorf		25	1,837	301
Gemeindewerke Bad Sassendorf Netze Verwaltung GmbH, Bad Sassendorf		25	31	2
Gemeindewerke Bissendorf Netze GmbH & Co. KG, Bissendorf		49	2,756	482
Gemeindewerke Bissendorf Netze Verwaltungs-GmbH, Bissendorf		49	27	1
Gemeindewerke Everswinkel GmbH, Everswinkel		45	6,871	210
Gemeindewerke Namborn, Gesellschaft mit beschränkter Haftung, Namborn		49	811	–3
GfB, Gesellschaft für Baudenkmalpflege mbH, Idar-Oberstein		20	20	7
Gichtgaskraftwerk Dillingen GmbH & Co. KG, Dillingen		25	32,685	3,696
GISA GmbH, Halle (Saale)		24	9,958	2,566
GkD Gesellschaft für kommunale Dienstleistungen mbH, Cologne		50	56	1

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XI. Associates and joint ventures of secondary importance for the assets, liabilities, financial position and profit or loss of the Group falling under the scope of IFRS 5	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
G&L Gastro-Service GmbH, Augsburg		35	28	3
GNEE Gesellschaft zur Nutzung erneuerbarer Energien mbH Freisen, Freisen		49	690	4
GREEN GECCO Beteiligungsgesellschaft mbH & Co. KG, Troisdorf		21	49,843	2,110
GREEN GECCO Beteiligungsgesellschaft-Verwaltungs GmbH, Troisdorf		21	40	1
GREEN Gesellschaft für regionale und erneuerbare Energie mbH, Stolberg		49	707	30
Green Solar Herzogenrath GmbH, Herzogenrath		45	3,788	327
Greenergetic GmbH, Bielefeld		35	4,126	606
Greenplug GmbH, Hamburg		49	605	–5
HaseNetz GmbH & Co. KG, Gehrde		25	2,293	469
HCL Netze GmbH & Co. KG, Herzebrock-Clarholz		25	3,402	589
Heizkraftwerk Zwickau Süd GmbH & Co. KG, Zwickau		40	1,000	362
Hennef (Sieg) Netz GmbH & Co. KG, Hennef		49	61	–14
hmstr GmbH, Saarbrücken		25	106	14
Hochsauerland Netze GmbH & Co. KG, Meschede		25	6,236	2,045
Hochsauerland Netze Verwaltung GmbH, Meschede		25	28	1
innogy International Middle East, Dubai/UAE		49	–2,069	0
innogy.C3 GmbH, Essen		25	15	0
Kavernengesellschaft Staßfurt mbH, Staßfurt		50	794	0
KAWAG AG & Co. KG, Pleidelsheim		49	15,412	854
KAWAG Netze GmbH & Co. KG, Abstatt		49	2,328	149
KAWAG Netze Verwaltungsgesellschaft mbH, Abstatt		49	30	1
KDT Kommunale Dienste Tholey GmbH, Tholey		49	1,348	41
KEN Geschäftsführungsgesellschaft mbH, Neunkirchen		50	51	0
KEN GmbH & Co. KG, Neunkirchen		46	2,887	42
KEVAG Telekom GmbH, Koblenz		50	2,438	602
Kiwigrid GmbH, Dresden		22	3,350	–5,952
KlickEnergie GmbH & Co. KG, Neuss		65	–1,597	–664
KlickEnergie Verwaltungs-GmbH, Neuss		65	20	–2
KnGrid, Inc., Laguna Hills/USA		42		[9]
Kommunale Dienste Marpingen Gesellschaft mit beschränkter Haftung, Marpingen		49	2,747	75
Kommunale Netzgesellschaft Steinheim a. d. Murr GmbH & Co. KG, Steinheim a. d. Murr		49	4,966	346
Kommunalwerk Rudersberg GmbH & Co. KG, Rudersberg		50	3,082	8
Kommunalwerk Rudersberg Verwaltungs-GmbH, Rudersberg		50	26	1
Kraftwerk Wehrden Gesellschaft mit beschränkter Haftung, Völklingen		33	102	9
KSP Kommunaler Service Püttlingen GmbH, Püttlingen		40	187	67
KVK Kompetenzzentrum Verteilnetze und Konzessionen GmbH, Cologne		75	230	176
Mainzer Wärme PLUS GmbH, Mainz		45	7,632	1,620
MeteringSüd GmbH & Co. KG, Augsburg		34	447	44
MNG Stromnetze GmbH & Co. KG, Lüdinghausen		25	19,599	2,000
MNG Stromnetze Verwaltungs GmbH, Lüdinghausen		25	27	2

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	Direct	Total	€ '000	€ '000
Murrhardt Netz AG & Co. KG, Murrhardt		49	2,790	240
Naturstrom Betriebsgesellschaft Oberhonnefeld mbH, Koblenz		25	159	0
Netzgesellschaft Bedburg Verwaltungs-GmbH, Bedburg		49	29	4
Netzgesellschaft Betzdorf GmbH & Co. KG, Betzdorf		49	1,833	151
Netzgesellschaft Bühlertal GmbH & Co. KG, Bühlertal		50	2,296	175
Netzgesellschaft Elsdorf Verwaltungs-GmbH, Elsdorf		49	37	4
Netzgesellschaft Grimma GmbH & Co. KG, Grimma		49	7,670	501
Netzgesellschaft Horn-Bad Meinberg GmbH & Co. KG, Horn-Bad Meinberg		49		[10]
Netzgesellschaft Hüllhorst GmbH & Co. KG, Hüllhorst		49	1,998	165
Netzgesellschaft Korb GmbH & Co. KG, Korb		50	1,415	98
Netzgesellschaft Korb Verwaltungs-GmbH, Korb		50	29	1
Netzgesellschaft Kreisstadt Bergheim Verwaltungs-GmbH, Bergheim		49	34	4
Netzgesellschaft Lauf GmbH & Co. KG, Lauf		50	819	60
Netzgesellschaft Leutenbach GmbH & Co. KG, Leutenbach		50	1,524	101
Netzgesellschaft Leutenbach Verwaltungs-GmbH, Leutenbach		50	28	1
Netzgesellschaft Maifeld GmbH & Co. KG, Polch		49	6,098	581
Netzgesellschaft Maifeld Verwaltungs GmbH, Polch		49	31	2
Netzgesellschaft Ottersweier GmbH & Co. KG, Ottersweier		50	2,027	159
Netzgesellschaft Rheda-Wiedenbrück GmbH & Co. KG, Rheda-Wiedenbrück		49	2,465	337
Netzgesellschaft Rheda-Wiedenbrück Verwaltungs-GmbH, Rheda-Wiedenbrück		49	31	2
NFPA Holdings Limited, Newcastle upon Tyne/United Kingdom		25	2,000	269
NiersEnergieNetze GmbH & Co. KG, Kevelaer		51	6,158	498
NiersEnergieNetze Verwaltungs-GmbH, Kevelaer		51	36	2
Novenerg limited liability company for energy activities, Zagreb/Croatia		50	65	0
pear.ai Inc., San Francisco/USA		40		[9]
Peißenberger Wärmegesellschaft mbH, Peißenberg		50	5,739	–166
Placense Ltd., Tel Aviv/Israel		20		[10]
prego services GmbH, Saarbrücken		50	–1,894	730
Propan Rheingas GmbH, Brühl		28	53	2
Recklinghausen Netz-Verwaltungsgesellschaft mbH, Recklinghausen		49	28	1
Renergie Stadt Wittlich GmbH, Wittlich		30	21	–1
Rhegio Natur Dienstleistungen GmbH, Rhede		25		[10]
Rhein-Ahr-Energie Netz GmbH & Co. KG, Grafschaft		25		[3]
RIWA GmbH Gesellschaft für Geoinformationen, Kempten		33	1,350	458
RURENERGIE GmbH, Düren		30	12,667	–130
RWE Dhabi Union Energy LLC, Abu Dhabi/UAE		49		[3]
Sandersdorf-Brehna Netz GmbH & Co. KG, Sandersdorf-Brehna		49	4,826	250
SEG Solarenergie Guben GmbH & Co. KG, Guben		25	3,264	105
Selm Netz GmbH & Co. KG, Selm		25	4,198	521
SHS Ventures GmbH & Co. KGaA, Völklingen		50	1,219	34
SolarProjekt Mainaschaff GmbH, Mainaschaff		50	32	–12

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	Direct	Total	€ '000	€ '000
SPX, s.r.o., Zilina/Slovakia		33	153	11
SSW Stadtwerke St. Wendel Geschäftsführungsgesellschaft mbH, St. Wendel		50	128	4
Stadtentwässerung Schwerte GmbH, Schwerte		48	51	0
Städtische Werke Borna GmbH, Borna		37	4,740	795
Städtisches Wasserwerk Eschweiler GmbH, Eschweiler		25	3,439	1,230
Stadtwerk Verl Netz GmbH & Co. KG, Verl		25	3,991	491
Stadtwerke - Strom Plauen GmbH & Co. KG, Plauen		49	5,906	1,384
Stadtwerke Ahaus GmbH, Ahaus		36	11,336	3,113
Stadtwerke Aue GmbH, Aue		24	13,412	2,061
Stadtwerke Dillingen/Saar GmbH, Dillingen		49	4,951	–479
Stadtwerke Dülmen Verwaltungs-GmbH, Dülmen		50	29	0
Stadtwerke Gescher GmbH, Gescher		25	3,304	608
Stadtwerke Geseke Netze GmbH & Co. KG, Geseke		25	3,605	563
Stadtwerke Geseke Netze Verwaltung GmbH, Geseke		25	28	2
Stadtwerke Goch Netze GmbH & Co. KG, Goch		25	2,867	0
Stadtwerke Goch Netze Verwaltungsgesellschaft mbH, Goch		25	29	2
Stadtwerke Haan GmbH, Haan		25	20,778	1,003
Stadtwerke Kerpen GmbH & Co. KG, Kerpen		25		[10]
Stadtwerke Kerpen Verwaltungs-GmbH, Kerpen		25		[10]
Stadtwerke Langenfeld GmbH, Langenfeld		20	9,251	2,863
Stadtwerke Oberkirch GmbH, Oberkirch		33	7,192	804
Stadtwerke Roßlau Fernwärme GmbH, Dessau-Roßlau		49	1,586	406
Stadtwerke Schwarzenberg GmbH, Schwarzenberg/Erzgeb.		28	14,225	774
Stadtwerke Siegburg GmbH & Co. KG, Siegburg		49	8,439	386
Stadtwerke Steinfurt Gesellschaft mit beschränkter Haftung, Steinfurt		33	11,465	2,750
Stadtwerke Unna GmbH, Unna		24	15,838	4,244
Stadtwerke Vlotho GmbH, Vlotho		25	4,897	131
Stadtwerke Wadern GmbH, Wadern		49	1,800	–2,578
Stadtwerke Waltrop Netz GmbH & Co. KG, Waltrop		25	2,778	234
Stadtwerke Weilburg GmbH, Weilburg		20	8,010	464
Stadtwerke Werl GmbH, Werl		25	7,435	2,687
STEAG Windpark Ullersdorf GmbH & Co. KG, Jamlitz		21	19,127	1,355
Stromnetz Diez GmbH & Co. KG, Diez		25	1,546	103
Stromnetz Diez Verwaltungsgesellschaft mbH, Diez		25	31	1
Stromnetz Euskirchen GmbH & Co. KG, Euskirchen		25	4,358	840
Stromnetz Günzburg Verwaltungs GmbH, Günzburg		49	29	0
Stromnetz Hofheim GmbH & Co. KG, Hofheim am Taunus		49	3,590	270
Stromnetz Hofheim Verwaltungs GmbH, Hofheim am Taunus		49	28	1
Stromnetz Neckargemünd GmbH, Neckargemünd		50		[10]
Stromnetz Pulheim GmbH & Co. KG, Pulheim		25		[10]
Stromnetz Verbandsgemeinde Katzenelnbogen GmbH & Co. KG, Katzenelnbogen		49	2,278	177

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6 Significant influence via indirect investments.
7 Significant influence by virtue of company contract.
8 Structured entity pursuant to IFRS 10 and 12.
9 Immaterial.
10 Financial statements not available.
11 Profit and loss-pooling agreement with non-Group companies.

XI. Associates and joint ventures of secondary importance for the assets, liabilities, financial position and profit or loss of the Group falling under the scope of IFRS 5	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Stromnetz Verbandsgemeinde Katzenelnbogen Verwaltungsgesellschaft mbH, Katzenelnbogen		49	30	1
Stromnetz VG Diez GmbH & Co. KG, Altendiez		49	2,407	179
STROMNETZ VG DIEZ Verwaltungsgesellschaft mbH, Altendiez		49	30	1
Strom-Netzgesellschaft Bedburg GmbH & Co. KG, Bedburg		49	3,420	384
Stromnetzgesellschaft Bramsche mbH & Co. KG, Bramsche		25	6,256	378
Strom-Netzgesellschaft Elsdorf GmbH & Co. KG, Elsdorf		49	3,565	373
Stromnetzgesellschaft Gescher GmbH & Co. KG, Gescher		25	1,000	253
Strom-Netzgesellschaft Kolpingstadt Kerpen GmbH & Co. KG, Kerpen		25	4,587	452
Strom-Netzgesellschaft Kreisstadt Bergheim GmbH & Co. KG, Bergheim		49	6,910	690
Stromnetzgesellschaft Mettmann mbH & Co. KG, Mettmann		25	3,156	195
Stromnetzgesellschaft Neuenhaus mbH & Co. KG, Neuenhaus		49	3,330	315
Stromnetzgesellschaft Neuenhaus Verwaltungs-GmbH, Neuenhaus		49	26	1
Stromnetzgesellschaft Neunkirchen-Seelscheid mbH & Co. KG, Neunkirchen-Seelscheid		49	2,601	289
Stromnetzgesellschaft Schwalmtal mbH & Co. KG, Schwalmtal		51	3,553	557
Stromverwaltung Schwalmtal GmbH, Schwalmtal		51	32	2
Südwestfalen Netz-Verwaltungsgesellschaft mbH, Netphen		49	28	1
SWL-energis Netzgesellschaft mbH & Co. KG, Lebach		50	3,239	177
SWL-energis-Geschäftsführungs-GmbH, Lebach		50	37	1
SWT trilan GmbH, Trier		26	1,330	530
SWTE Netz Verwaltungsgesellschaft mbH, Ibbenbüren		33	29	2
Technische Werke Naumburg GmbH, Naumburg (Saale)		47	11,125	3,101
TEPLO Votice s.r.o., Votice/Czech Republic		20	103	3
TNA Talsperren- und Grundwasser-Aufbereitungs- und Vertriebsgesellschaft mbH, Nonnweiler		23	1,132	65
TRANSELEKTRO, s.r.o., Kosice/Slovakia		26	627	–51
TWE Technische Werke der Gemeinde Ensdorf GmbH, Ensdorf		49	2,133	166
TWL Technische Werke der Gemeinde Losheim GmbH, Losheim		50	5,098	–1,631
TWM Technische Werke der Gemeinde Merchweiler Gesellschaft mit beschränkter Haftung, Merchweiler		49	2,139	77
TWN Trinkwasserverbund Niederrhein GmbH, Grevenbroich		33	138	–5
TWRS Technische Werke der Gemeinde Rehlingen-Siersburg GmbH, Rehlingen Siersburg		35	4,718	193
Untere Iller Aktiengesellschaft, Landshut		40	1,176	41
Untermain EnergieProjekt AG & Co. KG., Kelsterbach		49	1,996	77
Untermain Erneuerbare Energien GmbH, Raunheim		25	16	–19
Veiligebuurt B.V., Enschede/Netherlands		50		[9]
VEM Neue Energie Muldental GmbH & Co. KG, Markkleeberg		50	51	7
Verteilnetze Energie Weißenhorn GmbH & Co. KG, Weißenhorn		35	906	312
Verwaltungsgesellschaft Dorsten Netz mbH, Dorsten		49	31	2
Verwaltungsgesellschaft Energie Weißenhorn GmbH, Weißenhorn		35	26	0

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XI. Associates and joint ventures of secondary importance for the assets, liabilities, financial position and profit or loss of the Group falling under the scope of IFRS 5	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Verwaltungsgesellschaft GKW Dillingen mbH, Dillingen		25	187	7
Visualix GmbH, Berlin		50		9
VOLTARIS GmbH, Maxdorf		50	2,946	575
Wadersloh Netz GmbH & Co. KG, Wadersloh		25	3,626	401
Wadersloh Netz Verwaltungs GmbH, Wadersloh		25	27	2
Wärmeversorgung Limburg GmbH, Limburg an der Lahn		50	461	6
Wärmeversorgung Mücheln GmbH, Mücheln		49	929	109
Wärmeversorgung Wachau GmbH, Markkleeberg OT Wachau		49	93	4
Wasser-Netzgesellschaft Kolpingstadt Kerpen GmbH & Co. KG, Kerpen		25		10
Wasserverbund Niederrhein Gesellschaft mit beschränkter Haftung, Moers		38	11,789	851
Wasserversorgung Main-Taunus GmbH, Frankfurt am Main		49	144	8
Wasserzweckverband der Gemeinde Nalbach, Nalbach		49	1,776	19
WeAre GmbH, Essen		50		9
Werne Netz GmbH & Co. KG, Werne		49		10
WEV Warendorfer Energieversorgung GmbH, Warendorf		25	1,023	1,884
Windenergie Briesensee GmbH, Neu Zauche		31	1,616	368
Windenergie Frehne GmbH & Co. KG, Marienfließ		41	5,596	100
Windenergie Merzig GmbH, Merzig		20	3,907	491
Windenergie Schermbeck-Rüste GmbH & Co. KG, Schermbeck		20	2,763	0
Windenergiepark Heidenrod GmbH, Heidenrod		45	12,766	1,480
Windkraft Jerichow - Mangelsdorf I GmbH & Co. KG, Burg		25	4,167	703
Windpark Losheim-Britten GmbH, Losheim		50	1,901	−71
Windpark Nohfelden-Eisen GmbH, Nohfelden		50	3,530	82
Windpark Oberthal GmbH, Oberthal		35	4,685	186
Windpark Perl GmbH, Perl		42	7,987	252
WLN Wasserlabor Niederrhein GmbH, Mönchengladbach		45	521	21
WVG-Warsteiner Verbundgesellschaft mbH, Warstein		25	8,676	1,547
WVL Wasserversorgung Losheim GmbH, Losheim am See		50	5,236	382
WWS Wasserwerk Saarwellingen GmbH, Saarwellingen		49	3,887	345
WWW Wasserwerk Wadern GmbH, Wadern		49	3,892	299
xtechholding GmbH, Berlin		26		9

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7 Significant influence by virtue of company contract.
8 Structured entity pursuant to IFRS 10 and 12.
9 Immaterial.
10 Financial statements not available.
11 Profit and loss-pooling agreement with non-Group companies.

XII. Other investments	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
Abel & Co., Tilburg/Netherlands		1		[10]
Adom Intelligent Transport Ltd., Tel Aviv-Jaffa/Israel		16		[9]
aiPod Inc, Pasadena/USA		8		[9]
AKSELOS S.A., Lausanne/Switzerland		16		[9]
APEP Dachfonds GmbH & Co. KG, Munich	36	36	254,921	84,767
AutoGrid Systems Inc., Wilmington/USA		5		[9]
BeeRides Gepjarmü-kölcsönzö Kft., Székesfehérvár/Hungary		18		[9]
BEW Bergische Energie- und Wasser-GmbH, Wipperfürth		19	32,014	5,700
BFG-Bernburger Freizeit GmbH, Bernburg (Saale)		1	10,397	–1,229
BIDGELY Inc., Sunnyvale/USA		7	9,678	–4,897
BigchainDB GmbH, Berlin		2		[9]
Blackhawk Mining LLC, Lexington/USA		6	–314,857	108,180
Bootstraplabs VC Follow-On Fund 2016, San Francisco/USA		11		[9]
Bootstraplabs VC Seed Fund 2016 L.P., San Francisco/USA		6		[9]
Buildots Ltd., Tel Aviv/Israel		5		[9]
Bürgerenergie Untermain eG, Kelsterbach		4	108	14
CALIPSA LIMITED, London/United Kingdom		7		[9]
Chrysalix Energy II U.S. Limited Partnership, Vancouver/Canada		6	8,988	–7
Chrysalix Energy III U.S. Limited Partnership, Vancouver/Canada		11	114,962	–1,230
Cryptowerk Corp., San Mateo/USA		7		[9]
DCUSA Ltd., London/United Kingdom		10	0	0
Deutsches Forschungszentrum für Künstliche Intelligenz GmbH, Kaiserslautern		3	18,441	1,542
Die BürgerEnergie eG, Dortmund		0	1,802	76
Doozer Real Estate Systems GmbH, Berlin		12		[9]
Dry Bulk Partners 2013 LP, Grand Cayman/Cayman Islands		23	4,704	1,699
eins energie in sachsen GmbH & Co. KG, Chemnitz		9	467,844	82,386
eluminocity GmbH, Munich		18		[10]
Energías Renovables de Ávila, S.A., Madrid/Spain		17	595	0
Energie Rur-Erft GmbH & Co. KG, Kall		0	1,227	1,147
Energie Rur-Erft Verwaltungs-GmbH, Kall		0	30	0
Energieagentur Region Trier GmbH, Trier		14	0	–39
Energiegenossenschaft Chemnitz - Zwickau eG, Chemnitz		7	1,140	16
Energiehandel Saar GmbH & Co. KG, EHS, Neunkirchen		1	391	–5
Energiehandel Saar Verwaltungs-GmbH, Neunkirchen		2	25	0
Energieversorgung Limburg GmbH, Limburg an der Lahn		10	28,327	4,290
Entwicklungsgesellschaft Neu-Oberhausen mbH-ENO, Oberhausen		2	134	–523
ESV-ED GmbH & Co. KG, Buchloe		4	370	59
FirstPoint Mobile Guard Ltd., Tel Aviv/Israel		6		[9]
Focal Energy Solar Three Ltd., Nicosia/Cyprus		8	5,430	–4
Fractal Blockchain GmbH, Berlin		5		[9]
GasLINE Telekommunikationsnetz-Geschäftsführungsgesellschaft deutscher Gasversorgungsunternehmen mbH, Straelen		10	67	2

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XII. Other investments	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
GasLINE Telekommunikationsnetzgesellschaft deutscher Gasversorgungsunternehmen mbH & Co. KG, Straelen		10	99,888	58,888
Gemeinschafts-Lehrwerkstatt Arnsberg GmbH, Arnsberg		8	1,429	–36
Gemserv Limited, London/United Kingdom		14	8,136	1,791
Gesellschaft für Wirtschaftsförderung Duisburg mbH, Duisburg		1	721	25
GETAWAY GmbH, Berlin		9		9
Glenrothes Paper Limited, Glenrothes/United Kingdom		0	852	0
Globus Steel & Power Pvt. Limited, New Delhi/India		18	–1,344	–916
gridX GmbH, Aachen		14		9
Gründerfonds Ruhr GmbH & Co. KG, Essen		1		9
Heliatek GmbH, Dresden		13	8,414	–7,701
High-Tech Gründerfonds II GmbH & Co. KG, Bonn		1	100,631	0
HOCHTEMPERATUR-KERNKRAFTWERK Gesellschaft mit beschränkter Haftung (HKG) Gemeinsames Europäisches Unternehmen, Hamm		31	0	0
Holo-Light GmbH, Westendorf/Austria		7		9
Hubject GmbH, Berlin		13	9,040	–1,957
INDI Energie B.V., 's-Hertogenbosch/Netherlands		30	8	30
INS Insider Navigation Systems GmbH, Vienna/Austria		12		9
Intertrust Technologies Corporation, Sunnyvale/USA		13	73,927	–17,007
iTy Labs Corp., Dover/USA		9		9
IWW Rheinisch-Westfälisches Institut für Wasserforschung gemeinnützige GmbH, Mülheim an der Ruhr		6	904	4
IZES gGmbH, Saarbrücken		8	406	–74
KEV Energie, Gesellschaft mit beschränkter Haftung, Kall		2	457	2,320
Kreis-Energie-Versorgung Schleiden, Gesellschaft mit beschränkter Haftung, Kall		2	16,098	2,221
LEW Bürgerenergie e.G., Augsburg		0	1,770	34
LIBRYO LTD, London/United Kingdom		8		9
ME SolShare International PTE. LTD., Singapore/Singapore		11		9
Moj.io Inc., Vancouver/Canada		3		9
Move24 Group GmbH, Berlin		9	7,964	–1,628
MRA Service Company Limited, London/United Kingdom		3	0	0
Neckar-Aktiengesellschaft, Stuttgart		12	10,179	0
Neue Energie Ostelbien eG, Arzberg		29		10
Neustromland GmbH & Co. KG, Saarbrücken		5	2,759	129
Nordsee One GmbH, Oststeinbek		15	71,977	33,713
Nordsee Three GmbH, Oststeinbek		15	80	–42
Nordsee Two GmbH, Oststeinbek		15	80	–42
Ökostrom Saar Geschäftsführungsgesellschaft mbH & Co. Biogas Losheim KG, Merzig		10	66	82
OPPENHEIM PRIVATE EQUITY Institutionelle Anleger GmbH & Co. KG, Cologne	29	29	442	295
Oriient New Media Ltd., Tel Aviv/Israel		5		9
Parque Eólico Cassiopea, S.L., Oviedo/Spain		10	50	71
Parque Eólico Escorpio, S.A., Oviedo/Spain		10	518	0
Parque Eólico Leo, S.L., Oviedo/Spain		10	126	0

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XII. Other investments	Shareholding in %		Equity	Net income/loss
	Direct	Total	€ '000	€ '000
PEAG Holding GmbH, Dortmund	12	12	17,933	2,007
People Power Company, Redwood City/USA		12	877	–2,194
PIO Security GmbH, Berlin		8		9
pro regionale energie eG, Diez		1	1,861	57
Promocion y Gestion Cáncer, S.L., Oviedo/Spain		10	62	91
PSI Software AG, Berlin		18	85,020	5,007
QMerit Inc., Irvine/USA		11		9
REV LNG LLC, Ulysses/USA		5	8,324	854
ROSOLA Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Alzenau KG, Düsseldorf		100	3,036	423
Rydies GmbH, Hanover		15		9
SALUS Grundstücks-Vermietungsgesellschaft mbH & Co. Objekt Leipzig KG, Düsseldorf		100	17	–3
ScanTrust SA, Lausanne/Switzerland		7		9
Sdruzení k vytvorení a vyuzívání digitální technické mapy mesta Pardubic, Pardubice/Czech Republic		12	2	1
SE SAUBER ENERGIE GmbH & Co. KG, Cologne		17	1,978	389
SE SAUBER ENERGIE Verwaltungs-GmbH, Cologne		17	142	7
Segasec Labs Ltd., Tel Aviv/Israel		19		9
SET Fund II C.V., Amsterdam/Netherlands		13	31,868	–467
SkenarioLabs Oy, Espoo/Finland		10		9
Smart Energy Code Company Limited, London/United Kingdom		7	0	0
Solarpark Freisen: "Auf der Schwann" GmbH, Freisen		15	382	70
Solarpark St. Wendel GmbH, St. Wendel		15	1,190	154
SolarRegion RengsdorferLAND eG, Rengsdorf		2	315	13
Solidified Technologies LLC, Garland/USA		12		9
SPAA Ltd, London/United Kingdom		10	15	0
St. Clements Services Limited, London/United Kingdom		12	1,844	–91
Stadtmarketing-Gesellschaft Gelsenkirchen mbH, Gelsenkirchen		2	98	14
Stadtwerke Delitzsch GmbH, Delitzsch		18	16,072	2,878
Stadtwerke Detmold GmbH, Detmold		12	31,495	0
Stadtwerke Ostmünsterland GmbH & Co. KG, Telgte		10	27,483	4,380
Stadtwerke Porta Westfalica Gesellschaft mit beschränkter Haftung, Porta Westfalica		12	16,438	259
Stadtwerke Sulzbach/Saar GmbH, Sulzbach		15	11,431	1,487
Stadtwerke Tecklenburger Land Energie GmbH, Ibbenbüren		15	0	–451
Stadtwerke Tecklenburger Land GmbH & Co. KG, Ibbenbüren		1	1,006	687
Stadtwerke Völklingen Netz GmbH, Völklingen		18	16,387	1,818
Stadtwerke Völklingen Vertrieb GmbH, Völklingen		18	7,301	3,400
Stem Inc., Milbrae/USA		7	–47,097	–52,279
Sustainable Energy Technology Fund C.V., Amsterdam/Netherlands		50	16,742	–810
SWT Stadtwerke Trier Versorgungs-GmbH, Trier		19	55,225	3,920
SWTE Verwaltungsgesellschaft mbH, Ibbenbüren		1	25	2

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	Direct	Total	€ '000	€ '000
Technologiezentrum Jülich GmbH, Jülich		5	1,593	162
TechSee Augmented Vision Ltd., Herzliya/Israel		9		[9]
Telecom Plus plc, London/United Kingdom		1	221,660	35,864[2]
Transport- und Frischbeton-Gesellschaft mit beschränkter Haftung & Co. Kommanditgesellschaft Aachen, Aachen		17	390	118
T-REX Group Inc., New York City/USA		6		[9]
Trianel Erneuerbare Energien GmbH & Co. KG, Aachen		2	64,750	−1,112
Trianel GmbH, Aachen		3	85,442	1,504
Trinkaus Secondary GmbH & Co. KGaA, Düsseldorf	43	43	1,822	139
Umspannwerk Lübz GbR, Lübz		18	57	9
Union Group, a.s., Ostrava/Czech Republic		2	89,401	0
Westly Capital Partners Fund III, L.P., Dover/USA		8	1,203	−262
WiN Emscher-Lippe Gesellschaft zur Strukturverbesserung mbH, Herten		2	254	−212
Windenergie Schermbeck-Rüste Verwaltungsgesellschaft m.b.H., Schermbeck		14	28	1
Windpark Jüchen GmbH & Co. KG, Roth		15	2,110	216
Windpark Mengerskirchen GmbH, Mengerskirchen		15	3,013	297
Windpark Saar GmbH & Co. Repower KG, Freisen		10	7,474	718
Windpark Saar 2016 GmbH & Co. KG, Freisen		12	4,204	−368

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Changes in shareholding with change of control	Shareholding in % 31 Dec 2018	Shareholding in % 31 Dec 2017	Change
Additions to affiliated companies included in the consolidated financial statements			
Broadband TelCom Power, Inc., Santa Ana/USA	100		100
Business Improvers B.V., Amsterdam/Netherlands	100		100
Certified B.V., Amsterdam/Netherlands	100		100
Charity Improvers B.V., Amsterdam/Netherlands	100		100
Deal Improvers B.V., Amsterdam/Netherlands	100		100
Dealmakers B.V., Amsterdam/Netherlands	100		100
Dealmakers Community B.V., Amsterdam/Netherlands	100		100
Dealmakers Contract B.V., Amsterdam/Netherlands	100		100
DealmakersNetwork B.V., Amsterdam/Netherlands	100		100
ELMU-ÉMÁSZ Solutions Kft., Budapest/Hungary	100		100
Energy Dealmakers B.V., Amsterdam/Netherlands	100		100
Energy Improvers B.V., Amsterdam/Netherlands	100		100
Essent Rights B.V., 's-Hertogenbosch/Netherlands	100		100
Facility Dealmakers B.V., Amsterdam/Netherlands	100		100
Finance Dealmakers B.V., Amsterdam/Netherlands	100		100
FlexQuarters B.V., Amsterdam/Netherlands	100		100
Generación Fotovoltaica De Alarcos, S.L.U., Barcelona/Spain	100		100
Hardin Wind LLC, Chicago/USA	100		100
Improvers B.V., Amsterdam/Netherlands	100		100
Improvers B.V., 's-Hertogenbosch/Netherlands	100		100
Improvers Community B.V., Amsterdam/Netherlands	100		100
Improvers Concepts B.V., Amsterdam/Netherlands	100		100
Improvers Contracts B.V., Amsterdam/Netherlands	100		100
Improvers Network B.V., Amsterdam/Netherlands	100		100
innogy Limondale Sun Farm Holding Pty. Ltd., Southbank/Australia	100		100
innogy Polska IT Support Sp. z o.o., Warsaw/Poland	100		100
Innogy Renewables Australia Pty Ltd., Southbank/Australia	100		100
innogy Rheinhessen Beteiligungs GmbH, Essen	100		100
Installatietechniek Totaal B.V., Leeuwarden/Netherlands	100		100
IRUS Solar Development LLC, Dover/USA	100		100
IRUS Solar Holdings LLC, Dover/USA	100		100
IRUS Wind Development LLC, Dover/USA	100		100
IsoFitters BVBA, Herentals/Belgium	100		100
Isoprofs België BVBA, Hasselt/Belgium	100		100
Konnektor B.V., Amsterdam/Netherlands	100		100
Licht Groen B.V., Amsterdam/Netherlands	100		100
Limondale Sun Farm Pty. Ltd., Southbank/Australia	100		100
Lottery Improvers B.V., Amsterdam/Netherlands	100		100
Media Improvers B.V., Amsterdam/Netherlands	100		100
Montcogim - Plinara d.o.o., Sveta Nedelja/Croatia	100		100
Nederland Isoleert B.V., Amersfoort/Netherlands	100		100
Nederland Schildert B.V., Amersfoort/Netherlands	100		100
Nederland Schildert Rijnmond B.V., Amersfoort/Netherlands	100		100
Nederland Verkoopt B.V., Amersfoort/Netherlands	100		100
Recargo Inc., El Segundo, CA/USA	100		100
Regionetz GmbH, Aachen	49[1]		49

1 Control by virtue of company contract.

Changes in shareholding with change of control	Shareholding in % 31 Dec 2018	Shareholding in % 31 Dec 2017	Change
Additions to affiliated companies included in the consolidated financial statements			
RomeoDelta B.V., Amsterdam/Netherlands	100		100
Telecom Dealmakers B.V., Amsterdam/Netherlands	100		100
Telecom Improvers B.V., Amsterdam/Netherlands	100		100
Triton Knoll HoldCo Limited, Swindon/United Kingdom	59		59
Wind Farm Deliceto s.r.l., Bolzano/Italy	100		100
Additions to associates accounted for using the equity method			
Bray Offshore Wind Limited, Kilkenny City/Ireland	50		50
Kish Offshore Wind Limited, Kilkenny City/Ireland	50		50
Additions to associates not accounted for using the equity method due to application of IFRS 5			
Tankey B.V., 's-Hertogenbosch/Netherlands	43		43
Reclassification of companies not accounted for using the equity method due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group to affiliated companies included in the consolidated financial statements			
Sofia Offshore Wind Farm Limited, Swindon/United Kingdom	100	25	75
Reclassification of companies not included in the consolidated financial statements due to secondary importance for the assets, liabilities, financial position and profit or loss of the Group to joint ventures not accounted for using the equity method due to application of IFRS 5			
Stromnetz Friedberg GmbH & Co. KG, Friedberg	49	100	–51
Disposal of affiliated companies included in the consolidated financial statements			
ÉMÁSZ DSO Holding Korlátolt Felelosségu Társaság, Miskolc/Hungary		100	–100
Great Yarmouth Power Limited, Swindon/United Kingdom		100	–100
Immobilien-Vermietungsgesellschaft Schumacher GmbH & Co. Objekt Kundenzentren KG, Düsseldorf		[1]	
innogy Energetyka Trzemeszno Sp. z o.o., Wroclaw/Poland		100	–100
innogy Polska Contracting Sp. z o.o., Wroclaw/Poland		100	–100
Mátrai Erömü Zártkörüen Müködö Részvénytársaság, Visonta/Hungary		51	–51
Regenesys Holdings Limited, Swindon/United Kingdom		100	–100
Regenesys Technologies, Swindon/United Kingdom		100	–100
RegioTemp GmbH, Eschweiler		100	–100
RWE Cogen UK Trading Limited, Swindon/United Kingdom		100	–100
RWE East, s.r.o., Prague/Czech Republic		100	–100
RWE Energie S.R.L., Bucharest/Romania		100	–100

1 Structured entity pursuant to IFRS 10 and 12.

Changes in shareholding without change of control	Shareholding in % 31 Dec 2018	Shareholding in % 31 Dec 2017	Change
Affiliated companies which are included in the consolidated financial statements			
Nordsee Windpark Beteiligungs GmbH, Essen	90	100	–10
Associates not accounted for using the equity method due to application of IFRS 5			
EWR Aktiengesellschaft, Worms	1	2	–1
EWR Dienstleistungen GmbH & Co. KG, Worms	25	50	–25
Nebelhornbahn–Aktiengesellschaft, Oberstdorf	20	27	–7
Stadtwerke Velbert GmbH, Velbert	30	50	–20
Joint ventures not accounted for using the equity method due to application of IFRS 5			
Rain Biomasse Wärmegesellschaft mbH, Rain	70	75	–5
Joint operations			
Gas–Netzgesellschaft Kolpingstadt Kerpen GmbH & Co. KG, Kerpen	25	49	–24
Gas–Netzgesellschaft Kreisstadt Bergheim GmbH & Co. KG, Bergheim	25	49	–24

3.8 BOARDS (PART OF THE NOTES)

As of: 28 February 2019

Supervisory Board

(End of term: 2021 Annual General Meeting)

Dr. Werner Brandt
Bad Homburg
Chairman
Chairman of the Supervisory Board of ProSiebenSat.1 Media SE
Year of birth: 1954
Member since: 18 April 2013

Other appointments:
- ▪ ProSiebenSat.1 Media SE (Chairman)[1]
- ▪ Siemens AG[1]

Frank Bsirske[2]
Berlin
Deputy Chairman
Chairman of ver.di Vereinte Dienstleistungsgewerkschaft
Year of birth: 1952
Member since: 9 January 2001

Other appointments:
- ▪ DB Privat- und Firmenkundenbank AG
- ▪ Deutsche Bank AG[1]
- ▪ innogy SE[1,3]

Michael Bochinsky[2]
Grevenbroich
Deputy Chairman of the General Works Council of RWE Power AG
Year of birth: 1967
Member since: 1 August 2018

Reiner Böhle[2]
Witten
Consultant for Special Tasks and Project Work
Year of birth: 1960
Member since: 1 January 2013

Sandra Bossemeyer[2]
Duisburg
Chairwoman of the Works Council of RWE AG
Representative of the disabled
Year of birth: 1965
Member since: 20 April 2016

Martin Bröker[2]
Bochum
Head of HR & Business Functions IT at RWE Generation SE
Year of birth: 1966
Member since: 1 September 2018

Ute Gerbaulet
Düsseldorf
General Partner of Bankhaus Lampe KG
Year of birth: 1968
Member since: 27 April 2017

Other appointments:
- ▪ Gerry Weber International AG[1]
- \- NRW.Bank AöR

Reinhold Gispert[2,4]
Worms
Former Chairman of the Group Works Council of RWE AG
Year of birth: 1960
Member from 27 April 2017 to 31 July 2018

Andreas Henrich[2,4]
Mülheim an der Ruhr
Former Head of Human Resources at RWE AG
Year of birth: 1956
Member from 20 April 2016 to 31 August 2018

Prof. Dr.-Ing. Dr.-Ing. E. h. Hans-Peter Keitel
Essen
Former Chairman of the Executive Board of HOCHTIEF AG
Year of birth: 1947
Member since: 18 April 2013

Other appointments:
- ▪ National-Bank AG
- ▪ Voith GmbH & Co. KGaA (Chairman)

▪ Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
\- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.
4 Information valid as of the date of retirement.

Mag. Dr. h.c. Monika Kircher
Krumpendorf, Austria
Consultant
Year of birth: 1957
Member since: 15 October 2016

Other appointments:
- Andritz AG[1]
- Austrian Airlines AG
- Kärntner Energieholding Beteiligungs GmbH (Chairwoman)[3]
- KELAG-Kärntner Elektrizitäts AG[3]
- Siemens AG Österreich

Monika Krebber[2]
Mülheim an der Ruhr
Deputy Chairwoman of the General Works Council of innogy SE
Deputy Chairwoman of the Group Works Council of RWE AG
Year of birth: 1962
Member since: 20 April 2016

Other appointments:
▪ innogy SE[1,3]

Harald Louis[2]
Jülich
Chairman of the General Works Council of RWE Power AG
Year of birth: 1967
Member since: 20 April 2016

Other appointments:
▪ RWE Power AG[3]

Dagmar Mühlenfeld
Mülheim an der Ruhr
Former Mayor of Mülheim an der Ruhr
Year of birth: 1951
Member since: 4 January 2005

Other appointments:
▪ RW Holding AG (in liquidation)

Peter Ottmann
Nettetal
Managing Director of Verband der kommunalen
RWE-Aktionäre GmbH
Attorney, Former Chief Administrative Officer of Viersen County
Year of birth: 1951
Member since: 20 April 2016

Other appointments:
▪ RW Holding AG (in liquidation)

Günther Schartz
Wincheringen
Chief Administrative Officer of the District of Trier-Saarburg
Year of birth: 1962
Member since: 20 April 2016

Other appointments:
▪ RW Holding AG (in liquidation)
- A.R.T. Abfallberatungs- und Verwertungsgesellschaft mbH (Chairman)
- Kreiskrankenhaus St. Franziskus Saarburg GmbH (Chairman)
- LBBW-RheinLand-Pfalz-Bank Verwaltungsrat (Deputy Member)
- Sparkassenverband Rheinland-Pfalz
- Sparkasse Trier
- Trierer Hafengesellschaft mbH
- Zweckverband Abfallwirtschaft Region Trier

Dr. Erhard Schipporeit
Hanover
Independent Corporate Consultant
Year of birth: 1949
Member since: 20 April 2016

Other appointments:
▪ BDO AG
▪ Fuchs Petrolub SE[1]
▪ Hannover Rück SE[1]
▪ HDI V. a. G.
▪ innogy SE[1,3] (Chairman)
▪ SAP SE[1]
▪ Talanx AG[1]

▪ Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.

Dr. Wolfgang Schüssel
Vienna, Austria
Former Federal Chancellor of the Republic of Austria
Year of birth: 1945
Member since: 1 March 2010

Other appointments:
- Adenauer Stiftung (Chairman of the Board of Trustees)
- Mobile Telesystems PJSC[1]

Ullrich Sierau
Dortmund
Mayor of the City of Dortmund
Year of birth: 1956
Member since: 20 April 2011

Other appointments:
▪ Dortmunder Energie- und Wasserversorgung GmbH (Chairman)
▪ Dortmunder Stadtwerke AG (Chairman)
▪ Dortmunder Stadtwerke Holding GmbH (Chairman)
▪ KEB Holding AG (Chairman)
- KSBG Kommunale Verwaltungsgesellschaft GmbH
- Schüchtermann-Schiller'sche Kliniken Bad Rothenfelde GmbH & Co. KG
- Sparkasse Dortmund (Chairman)

Ralf Sikorski[2]
Hanover
Member of the Main Executive Board
of IG Bergbau, Chemie, Energie
Year of birth: 1961
Member since: 1 July 2014

Other appointments:
▪ Chemie Pensionsfonds AG (Chairman)
▪ KSBG Kommunale Verwaltungsgesellschaft GmbH, Essen
▪ Lanxess AG[1]
▪ Lanxess Deutschland GmbH
▪ RAG AG
▪ RWE Generation SE[3]
▪ RWE Power AG[3]

Marion Weckes[2]
Dormagen
Head of Unit, Institut für Mitbestimmung und Unternehmensführung, Hans-Böckler-Stiftung
Year of birth: 1975
Member since: 20 April 2016

Leonhard Zubrowski[2]
Lippetal
Chairman of the Group Works Council of RWE AG
Year of birth: 1961
Member since: 1 July 2014

Other appointments:
▪ RWE Generation SE[3]

▪ Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
2 Employee representative.
3 Office within the Group.

Supervisory Board Committees

Executive Committee of the Supervisory Board
Dr. Werner Brandt (Chairman)
Frank Bsirske
Sandra Bossemeyer
Prof. Dr. Hans-Peter Keitel
Monika Krebber
Dagmar Mühlenfeld
Dr. Wolfgang Schüssel
Leonhard Zubrowski

Mediation Committee in accordance with Sec. 27, Para. 3 of the German Co-Determination Act (MitbestG)
Dr. Werner Brandt (Chairman)
Frank Bsirske
Dr. Wolfgang Schüssel
Ralf Sikorski

Personnel Affairs Committee
Dr. Werner Brandt (Chairman)
Frank Bsirske
Reiner Böhle
Harald Louis
Peter Ottmann
Dr. Wolfgang Schüssel

Audit Committee
Dr. Erhard Schipporeit (Chairman)
Michael Bochinsky
Dr. Wolfgang Schüssel
Ullrich Sierau
Ralf Sikorski
Marion Weckes

Nomination Committee
Dr. Werner Brandt (Chairman)
Prof. Dr. Hans-Peter Keitel
Peter Ottmann

Strategy Committee
Dr. Werner Brandt (Chairman)
Frank Bsirske
Prof. Dr. Hans-Peter Keitel
Günther Schartz
Ralf Sikorski
Leonhard Zubrowski

The Executive Board

Dr. Rolf Martin Schmitz (Chief Executive Officer)
Chairman of the Executive Board of RWE AG since 15 October 2016
Member of the Executive Board of RWE AG since 1 May 2009, appointed until 30 June 2021
Labour Director of RWE AG since 1 May 2017

Other appointments:
▪ Amprion GmbH[3]
▪ RWE Generation SE[3] (Chairman)
▪ RWE Power AG[3] (Chairman)
▪ RWE Supply & Trading GmbH[3]
▪ TÜV Rheinland AG[1]
- Jaeger-Gruppe (Chairman)
- Kärntner Energieholding Beteiligungs GmbH[3]
- KELAG-Kärntner Elektrizitäts-AG[1,3]

Dr. Markus Krebber (Chief Financial Officer)
Member of the Executive Board of RWE AG since 1 October 2016, appointed until 30 September 2024

Other appointments:
▪ innogy SE[1,3]
▪ RWE Generation SE[3]
▪ RWE Pensionsfonds AG[3]
▪ RWE Power AG[3]
▪ RWE Supply & Trading GmbH[3] (Chairman)

▪ Member of other mandatory supervisory boards as defined in Section 125 of the German Stock Corporation Act.
- Member of comparable domestic and foreign supervisory boards of commercial enterprises as defined in Section 125 of the German Stock Corporation Act.

1 Listed company.
3 Office within the Group.

3.9 INDEPENDENT AUDITOR'S REPORT

To RWE Aktiengesellschaft, Essen

Report on the audit of the consolidated financial statements and of the group management report

Audit Opinions
We have audited the consolidated financial statements of RWE Aktiengesellschaft, Essen, and its subsidiaries (the Group), which comprise the statement of financial position as at 31 December 2018, and the statement of profit or loss, statement of comprehensive income, statement of cash flows and statement of changes in equity for the financial year from 1 January to 31 December 2018, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of RWE Aktiengesellschaft, which is combined with the Company's management report, for the financial year from 1 January to 31 December 2018. We have not audited the content of those parts of the group management report listed in the 'Other Information' section of our auditor's report in accordance with the German legal requirements.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to § [Article] 315e Abs. [paragraph] 1 HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as at 31 December 2018, and of its financial performance for the financial year from 1 January to 31 December 2018, and

- the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the group management report does not cover the content of those parts of the group management report listed in the 'Other Information' section of our auditor's report.

Pursuant to § 322 Abs. 3 Satz [sentence] 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

Basis for the Audit Opinions
We conducted our audit of the consolidated financial statements and of the group management report in accordance with § 317 HGB and the EU Audit Regulation (No. 537/2014, referred to subsequently as 'EU Audit Regulation') and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). We performed the audit of the consolidated financial statements in supplementary compliance with the International Standards on Auditing (ISAs). Our responsibilities under those requirements, principles and standards are further described in the 'Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report' section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2) point (f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the consolidated financial statements and on the group management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements
Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2018. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In our view, the matters of most significance in our audit were as follows:

❶ Accounting of discontinued operations
❷ Recoverability of goodwill
❸ Recognition and measurement of pension provisions

Our presentation of these key audit matters has been structured in each case as follows:

① Matter and issue
② Audit approach and findings
③ Reference to further information

Hereinafter we present the key audit matters:

❶ **Accounting of discontinued operations**
① On March 12, 2018, RWE Aktiengesellschaft and E.ON SE (E.ON) agreed on a comprehensive exchange of their business operations. It stipulates the following, amongst other things: RWE AG will transfer its entire stake in innogy SE (76.8 %) to E.ON. In return, innogy's renewable energy business will be

returned to the Group as well as the renewable energy business of E.ON. The transaction is subject to regulatory approvals and, in the opinion of the executive directors, will be completed during the course of 2019.

Since June 30, 2018, RWE Aktiengesellschaft has accounted for the operations of innogy to be transferred on a long-term basis to E.ON – essentially the grid and retail business – as discontinued operations in accordance with IFRS 5. The change in the accounting of discontinued operations resulted in extensive adjustments being made to the Group's consolidation system. These adjustments also take into account the option exercised to allocate the elimination entries to the discontinued operations. The presentation of the business to be transferred is shown in the income statement and in the cash flow statement under 'discontinued operations' and in the balance sheet as 'assets held for sale' and as 'liabilities held for sale'. The measurement of these balance sheet items is based on the specific provisions of IFRS 5, which generally require measurement at the lower of the carrying amount and fair value less costs of disposal. The Company's impairment test carried out at the date of transition did not identify any need for write-downs.

Given the material importance of the discontinued operations, this matter of the adjustment in presentation and measurement according to the provisions of IFRS 5 was of particular significance in the context of our audit.

② As part of our audit, we first evaluated whether and which business operations fall under the scope of IFRS 5 'Non-current Assets Held for Sale and Discontinued Operations'. For this purpose, we evaluated the provisions contained in the contractual agreements with E.ON and obtained information on the status of the antitrust authorities' proceedings. On this basis, we assessed whether the criteria are met for accounting innogy's grid and retail business as discontinued operations and whether innogy's renewable energy operations are appropriately reported unchanged as continuing operations.

We also evaluated the appropriateness of the IT concept underlying the change in accounting and reviewed the implementation of the changes in the consolidation system. In addition, we examined the impairment test for the discontinued operations conducted at the date of transition.

Furthermore, we assessed the completeness and accuracy of the disclosures in the notes required under IFRS 5 and the prescribed adjustments of the prior year figures in the income statement and in the cash flow statement.

In our view, the estimates applied and assumptions made by the executive directors regarding the accounting presentation of innogy's operations to be transferred to E.ON are sufficiently documented and justified and result in a fair presentation in the consolidated financial statements overall.

③ The disclosures required under IFRS 5 are contained in the notes to the consolidated financial statements in the section 'discontinued operations'. In addition, information from the Group concerning the transaction in general can be found in the section 'Strategy and structure' of the Group Management Report.

❷ Recoverability of goodwill

① In the consolidated financial statements of RWE Aktiengesellschaft, goodwill amounting to €1.7 billion (2 % of consolidated total assets) (prior year: €11.2 billion or 16 % of consolidated total assets) is reported under the balance sheet item 'Intangible assets'. Since the 2018 financial year, this item has only included the goodwill of the cash-generating units Renewable Energy and Energy Trading. The remaining goodwill shown under intangible assets up to the previous year is reported under the balance sheet item 'Assets held for sale' and measured in accordance with the provisions for 'discontinued operations'.

Goodwill is tested for impairment annually or when there are indications of impairment, to determine any possible need for write-downs. The carrying amounts of the relevant cash-generating units, including goodwill, are compared with the corresponding recoverable amounts in the context of the impairment tests. The recoverable amount is generally calculated on the basis of fair value less costs of disposal. The impairment tests are performed at the level of the cash-generating units or groups of cash-generating units to which the respective goodwill is allocated. The measurements to calculate the fair value less costs of disposal carried out for the purposes of the impairment tests are based on the present values of the future cash flows derived from the planning projections for the next three years (medium-term plan) prepared by the executive directors and acknowledged by the supervisory board. In doing so, expectations relating to future market developments and country-specific assumptions about the performance of macroeconomic indicators are also taken into account. Present values are calculated using discounted cash flow models. The discount rate applied is the weighted average cost of capital for the relevant cash-generating unit. The impairment test did not result in the recognition of a write-down. The outcome of these valuations is dependent to a large extent on the estimates made by the executive directors of the future cash inflows of the cash-generating units, and on the respective discount rates and rates of growth employed as well as on further assumptions. The valuation is therefore subject to considerable uncertainty. Against this background and due to the underlying complexity of the valuation, this matter was of particular significance in the context of our audit.

② As part of our audit, we evaluated the methodology used for the purpose of performing the impairment tests and assessed the calculation of the weighted average cost of capital, among other things. In addition, we assessed whether the future cash inflows underlying the measurements together with the weighted cost of capital used represent an appropriate basis for the impairment tests overall. We evaluated the appropriateness of the future cash inflows used in the calculations, among other things by comparing this data with the Group's medium-term plan and by reconciling it against general and sector-specific market expectations. In this context, we also assessed whether the costs of Group functions were properly included in the respective cash-generating unit. In the knowledge that even relatively small changes in the discount rate applied can in some cases have a material impact on the value of the entity calculated using this method, we also evaluated the parameters used to determine the discount rate applied and assessed the measurement model. Furthermore, we evaluated the sensitivity analyses performed by the Company in order to evaluate any impairment risk (carrying amount higher than recoverable amount) in the event of a reasonably possible change in a material assumption underlying the measurement. Overall, the measurement parameters and assumptions used by the executive directors are in line with our expectations and are also within the ranges considered by us to be reasonable.

③ The Company's disclosures relating to goodwill are contained in the notes to the consolidated financial statements in section 'Notes to the Balance Sheet' in note '(10) Intangible assets'.

❸ **Recognition and measurement of pension provisions**

① In the consolidated financial statements of RWE Aktiengesellschaft provisions for pensions and similar obligations are reported under the balance sheet item 'Provisions'. The pension provisions comprise obligations from defined benefit pension plans amounting to €15.0 billion, plan assets of €11.9 billion and a reported surplus of plan assets over benefit obligations of €0.2 billion. The obligations from defined benefit pension plans were measured using the projected unit credit method. This requires assumptions to be made in particular about long-term rates of growth in salaries and pensions, average life expectancy, and staff turnover. The new reference tables of Heubeck-Richttafeln GmbH (Heubeck RT 2018 G reference tables) were used for the first time in Germany for the average life expectancy as of 31 December 2018. The effect from the first-time adoption of the mortality tables amounts to -€105 million. The discount rate must be determined by reference to market yields on high-quality corporate bonds with matching currencies and consistent maturities. This usually requires the data to be extrapolated, since there is an insufficient number of long-term corporate bonds. The plan assets are measured at fair value, which in turn involves making estimates that are subject to uncertainties.

In our view, these matters were of particular significance in the context of our audit because the recognition and measurement of this significant item in terms of its amount are based to a material extent on estimates and assumptions made by the Company's executive directors.

② For the purposes of our audit, we firstly assessed whether the criteria for recognition as defined benefit or defined contribution pension commitments were met and evaluated the actuarial expert reports obtained and the professional qualifications of the external actuarial experts. We also examined the specific features of the actuarial calculations and evaluated the numerical data, the actuarial parameters and the valuation methods on which the valuations were based for compliance with standards and appropriateness, in addition to other procedures. In addition, we analysed the changes in the obligation and the cost components in accordance with actuarial expert reports in the light of changes occurring in the valuation parameters and the numerical data, and assessed their plausibility. For the audit of the fair value of the plan assets, we obtained bank and fund confirmations and evaluated the methods on which the respective valuation was based and the valuation parameters applied.

Based on our audit procedures, we were able to satisfy ourselves that the estimates applied and assumptions made by the executive directors are justified and sufficiently documented.

③ The Company's disclosures relating to the pension provisions are contained in the notes to the consolidated financial statements in section 'Notes to the Balance Sheet' in note '(22) Provisions'.

Other information

The executive directors are responsible for the other information. The other information comprises the following non-audited parts of the group management report:

- the statement on corporate governance pursuant to § 289f HGB and § 315d HGB included in section 1.8 of the group management report

- the separate non-financial group report pursuant to § 315b Abs. 3 HGB

The other information comprises further the remaining parts of the annual report – excluding cross-references to external information – with the exception of the audited consolidated financial statements, the audited group management report and our auditor's report.

Our audit opinions on the consolidated financial statements and on the group management report do not cover the other information, and consequently we do not express an audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the group management report or our knowledge obtained in the audit, or

- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Group Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The supervisory board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Group Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with § 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) and supplementary compliance with the ISAs will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgement and maintain professional skepticism throughout the audit. We also

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.

- Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor’s report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor’s report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to § 315e Abs. 1 HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express audit opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.

- Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with German law, and the view of the Group’s position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor’s report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 26 April 2018. We were engaged by the supervisory board on 27 April 2018. We have been the group auditor of RWE Aktiengesellschaft, Essen, without interruption since the financial year 2001.

We declare that the audit opinions expressed in this auditor's report are consistent with the additional report to the audit committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Ralph Welter.

Essen, 28 February 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Michael Reuther	Ralph Welter
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

3.10 INFORMATION ON THE AUDITOR

The consolidated financial statements of RWE AG and its subsidiaries for the 2018 fiscal year – consisting of the Group balance sheet, Group income statement and statement of comprehensive income, Group statement of changes in equity, Group cash flow statement and Group notes to the financial statements – were audited by the auditing company PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft.

The auditor at PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft responsible for RWE is Mr Ralph Welter. Mr Welter has performed this function in five previous audits of RWE.

FIVE-YEAR OVERVIEW

Key figures of the RWE Group[1]		2018	2017	2016	2015	2014
External revenue (excluding natural gas tax/electricity tax)	€ million	13,388	13,822	43,590	45,848	46,149
Income						
Adjusted EBITDA	€ million	1,538	2,149	5,403	7,017	7,131
Adjusted EBIT	€ million	619	1,170	3,082	3,837	4,017
Income before tax	€ million	49	2,056	−5,807	−637	2,246
Net income/RWE AG shareholders' share in income	€ million	335	1,900	−5,710	−170	1,704
Earnings per share	€	0.54	3.09	−9.29	−0.28	2.77
Cash flow/capital expenditure/depreciation and amortisation						
Cash flows from operating activities	€ million	4,611	−3,771	2,352	3,339	5,556
Free cash flow	€ million	3,439	−4,439	809	441	2,311
Free cash flow per share	€	5.59	−7.22	1.32	0.72	3.76
Asset/capital structure						
Non-current assets	€ million	18,595	45,694	45,911	51,453	54,224
Current assets	€ million	61,513	23,365	30,491	27,881	32,092
Balance sheet equity	€ million	14,257	11,991	7,990	8,894	11,772
Non-current liabilities	€ million	20,007	36,774	39,646	45,315	46,324
Current liabilities	€ million	45,844	20,294	28,766	25,125	28,220
Balance sheet total	€ million	80,108	69,059	76,402	79,334	86,316
Equity ratio	%	17.8	17.4	10.5	11.2	13.6
Net debt	€ million	19,339	20,227	22,709	25,463	30,972
Net debt of continuing operations	€ million	4,389	–	–	–	–
Workforce						
Workforce at year-end[2]		17,748	59,547	58,652	59,762	59,784
Research & development						
Operating R & D costs	€ million	116	182	165	101	110
Emissions balance						
CO_2 emissions	million metric tons	118.0	131.8	148.3	150.8	155.2
Free allocation of CO_2 certificates	million metric tons	1.3	1.3	4.5	5.6	5.8
Shortage of CO_2 certificates[3]	million metric tons	115.6	129.1	142.6	143.9	148.3
Specific CO_2 emissions	metric tons/ MWh	0.670	0.658	0.686	0.708	0.745

1 The comparability of some of the figures for various fiscal years is limited due to changes in reporting (also see page 40).
2 Converted to full-time positions.
3 As Turkey does not participate in the European Union Emissions Trading System, we do not need emission allowances for our CO_2 emissions in that country.

IMPRINT

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For annual reports, interim reports, interim statements and further information on RWE, please visit us on the internet at www.rwe.com.

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Financial Calendar 2019/2020

3 May 2019	Annual General Meeting
8 May 2019	Dividend payment
15 May 2019	Interim statement on the first quarter of 2019
14 August 2019	Interim report on the first half of 2019
14 November 2019	Interim statement on the first three quarters of 2019
12 March 2020	Annual report for fiscal 2019
28 April 2020	Annual General Meeting
4 May 2020	Dividend payment
14 May 2020	Interim statement on the first quarter of 2020
13 August 2020	Interim report on the first half of 2020
12 November 2020	Interim statement on the first three quarters of 2020

The Annual General Meeting (until the beginning of the Q&A session) and all events concerning the publication of our financial reports are broadcast live on the internet and recorded. We will keep the recordings on our website for at least twelve months.

RWE

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