

OUR RESPONSIBILITY

2016

POWERING. RELIABLE. FUTURE.

RWE

## ABOUT THE REPORT

The report entitled “Our Responsibility 2016” is aimed at analysts and investors, non-governmental organisations (NGOs) and our workforce, customers and suppliers, policy-makers and government agencies and the people living in the regions where we do business. It describes the most important social, environmental and economic challenges facing our core business, the conflicting aims that can arise, and the Corporate Responsibility (CR) strategy we have developed in response.

This report is published in pdf format. The accountancy firm PricewaterhouseCoopers GmbH performed an engagement audit on the disclosures indicated with  and provided a limited assurance relating to compliance of the disclosures with the G4 requirements of the GRI. The limited assurance engagement was carried out in accordance with the auditing principles of the International Standard on Assurance Engagements (ISAE) 3000 (revised), ► see page 72 for Assurance Report. The CR Report includes an overview of all the important indicators, ► see page 74.

### Approach

The CR Report of RWE AG is published as a GRI Report and conforms with the Guidelines of the ► **Global Reporting Initiative (GRI)** in a selection based on a Materiality Analysis of the topics relevant for our business. We have also implemented GRI requirements for the electricity industry (G4 Electric Utilities Sector Disclosures) in accordance with materiality. The report was prepared in conformity with the GRI G4 Standard in the option “in accordance” core. This “Our Responsibility 2016” was available for the implementation of the GRI Materiality Disclosure Service. The correct positioning of the “G4 materiality disclosures” (G4-17 – G4-27) was confirmed by GRI. The report also serves as our progress report for the ► **Global Compact of the United Nations**, ► see page 75.

### Dates

The period under review is fiscal 2016, which began on 1 January and ended on 31 December. The data provided in this report relate to all affiliated companies of the RWE Group which are included in the consolidated financial statements. Any deviations from this are clearly stated. The financial data were taken from the ► **Annual Report 2016 of RWE AG**. We present financial data denominated in the relevant national currency and have converted these based on the average annual values for 2016 (1 US dollar = € 0.91, 1 UK pound sterling = € 1.22, 100 Czech crowns = € 3.70, 100 Hungarian forints = € 0.32, 1 Polish zloty = € 0.23). The commercial rounding of certain figures can result in the sum of the rounded figures or percentages deviating from the rounded totals in some cases.

### For reference

This report is published in German and English. The Executive Board of RWE AG has approved the report for publication. The editorial deadline was on 24 March 2017. This report continues our policy of annual reporting. The next report will be published in the spring of 2018. Naturally, the term “employee” refers to male and female employees throughout.

### ► RWE Archive CR Reports

### Forward-looking statements

This report contains forward-looking statements regarding the future development of the RWE Group and its companies as well as economic and political developments. These statements are assessments that we have made based on information available at the time this report was drawn up. In the event that the underlying assumptions do not materialise or additional developments arise, actual performance may deviate from the performance expected at present. We are therefore unable to assume any responsibility whatsoever for the accuracy of these statements.

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Materiality  
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# GENERAL STANDARD DISCLOSURES

## STRATEGY AND ANALYSIS

### G4-1 Statement from the organisation's most senior decision-maker

#### Dear Readers,

RWE has undergone a large number of changes. However, the establishment of the subsidiary company innogy SE in spring of 2016 and its initial public offering on the stock exchange were a watershed. They represented the biggest changes ever experienced in the history of our company. The operations of RWE are now based on two stable pillars. Firstly, our Conventional Power Generation Division has the biggest flexible power plant portfolio in Germany and highly efficient power plants in the United Kingdom and the Netherlands. Secondly, RWE Supply & Trading is one of the leading energy trading companies in Europe. RWE also continues to remain committed to the market segments of Renewables, Grid & Infrastructure and Retail through innogy.

RWE has made a commitment to a new claim which reflects the self-image of the company, its role in the energy system and its role within society: Powering. Reliable. Future. Energy supply must be secure at all times: RWE is committed to that claim. And this is how RWE is contributing to the success of the energy transition as a reliable partner.

Our conventional generating plants mean that we are indispensable for providing a secure electricity supply in Germany, the Netherlands and the United Kingdom. A major task is presented by decommissioning our nuclear power stations and financing the nuclear energy fund that German lawmakers have adopted for intermediate storage and final disposal in a repository. In trading business, we want to be even more proactive in global commodity markets than has been the case in the past. This will enable us to generate a robust result for RWE AG. We also intend to drive forward the expansion of our business with major industrial and corporate customers.

Ethical business conduct is the foundation for building our future perspectives. RWE is strongly committed to its responsibility towards the environment, its employees and the community. Over the past twenty years, we have continuously modernised our power plant portfolio and increased the efficiency of our plants. Our policy has been to drive forward a programme for expanding renewable energies. We have prioritised nature conservation when restoring natural habitats in opencast mines and in the context of grid expansion, while always providing our workforce with healthy workplaces that are hazard-free to the greatest possible extent. RWE is dedicated to these objectives. The Group also remains committed to creating transparency for our entrepreneurial operations. We were delighted that our [► CR Report 2015](#) was positioned in 14th place among 150 selected reports in a [► ranking of German sustainability reports](#).

The report has been produced on the basis of this objective while at the same time also serving as our progress report for the [► Global Compact of the United Nations](#). Signing this compact represents our commitment to actively promoting human rights, creating good working conditions, and environmental protection within our sphere of influence. It also provides a strong signal that we are taking a decisive stand in combatting corruption and bribery. The report provides a detailed insight into how we achieve these objectives.

The fact is that we continue to place great emphasis on providing evidence-based high-quality and informative communications for our stakeholders – in particular policymakers, investors, customers, local authorities and the general public. This tells them all about what we are doing and our future plans. And we will be delighted if this leads to ongoing dialogue.

Yours,



Rolf Martin Schmitz  
Chief Executive Officer

## G4-2 Key impacts, risks and opportunities for sustainability

Key sustainability impacts from RWE AG result partly from the CO<sub>2</sub> emissions in conventional power generation. In future, these emissions will be reduced continuously. Important factors driving this process include political regulations such as the transfer of older lignite-fired units to security standby, and potentially further shutdowns of older plants. In future, the declining utilisation of our power plant capacity and ongoing expansion of renewable energies will also contribute to a reduction in emissions. The utilisation of efficient gas-fired power stations is likely to become more frequent. The latter development is driven by improved market conditions in this area and the final exit from nuclear energy in Germany. Other aspects of sustainability impacts are the safe operation of our plants, decommissioning of nuclear power plants, and high-quality recultivation and reinstatement of opencast mines that have come to the end of their lifetime.

The sustainability requirements in the supply chain are regularly another strong focus, particularly in the case of hard coal and biomass.

During the year under review, RWE AG underwent massive changes. Restructuring and efficiency measures ensure a future-proof alignment for the segments, but also create uncertainties for employees. The accelerated cultural change within the company presents significant challenges for flexibility and readiness to change in the workforce.

RWE AG will increasingly develop its own constructive role for implementation of the energy transition. We will make even more flexible use of our power plant portfolio and provide urgently needed backup capacities for further expansion of renewable energies.

The spin-off and initial public offering of innogy on the stock exchange have enabled us to create a business with good opportunities for growth in Renewables, Grid & Infrastructure and Retail.

Important political and social framework conditions for RWE AG have been defined in the resolutions reached by the Paris Climate Conference COP21 on the global reduction of greenhouse gas emissions. Relevant factors in this connection are the planned changes for European emissions trading, the [Climate Protection Plan 2050](#) of the German Federal Government, and the ongoing discussions in the Netherlands and the United Kingdom.

Securing the future of lignite in mutual agreement with the state government of North Rhine-Westphalia is a key issue for us because lignite will continue to remain an important pillar for the business model of RWE AG over the foreseeable future. The planned development of lignite production and use (keyword: landmark decision NRW) is in accordance with the national and European climate protection targets, which are based on the resolutions passed at the Paris Climate Conference COP 21.

The Act on [Reorganising Responsibility for Nuclear Waste Management](#) was finally passed at the end of December. The law will come into force as soon as the EU has approved state aid. This is likely to be given in spring of 2017.

The act implements the recommendations of the Commission for Reviewing the Finance of Exit from Nuclear Energy (KFK), [see Aspect: Plant Decommissioning – management approach, page 35](#).

The business model and alignment of RWE AG also present a range of diverse opportunities. We are confident that conventional power generation will continue to be the partner of the energy transition in Europe for many years to come. Our power plant portfolio places us in a good position to support this. We will also be able to develop new business areas with our know-how in generation and trading business. The initial public offering of innogy has enabled us to increase our financial scope for action and to improve our financial position.

Sustainability is the core of our business model. We require the acceptance of the community in order to be successful over the long term – starting with government, continuing through associations and employees, and including environmental and consumer organisations. With this end in mind, we are continuously engaging in discussion in the public domain and monitoring the positions of our stakeholders in relation to all issues of sustainability. This is carried out through focused communication with colleagues from the relevant specialist departments and the companies in the various countries where we operate. The key task is to integrate the fundamental concepts of Corporate Responsibility in all our business processes in a way that generates value added for the RWE Group.



## ORGANISATIONAL PROFILE

### G4-3 Name of the company

RWE AG

### G4-4 Primary brands, products and services

RWE AG with its two operational segments of conventional power generation and the energy trading business is indispensable for streamlining the entire energy system and for security of supply in Europe.

Our third pillar is the majority holding in innogy SE with its three divisions of Renewables, Grid & Infrastructure, and Retail. We manage these three divisions as a fully consolidated financial investment, ► see G4-13, page 10. For disclosures on the products and services of innogy ► see G4-4 in the innogy Sustainability Report 2016 page 11.



RWE and innogy have a broad spectrum of know-how in the production and refinement of lignite, power generation from gas, coal, nuclear power and renewable sources, energy trading, the distribution and sale of electricity and gas, and the development and provision of innovative energy management solutions. This expertise enables RWE and its subsidiary company innogy to operate at all levels of the value chain in the energy industry.

### G4-5 Location of the headquarters

Essen, Germany

### G4-6 Countries with major operations

RWE is an international group which including its subsidiary company innogy is represented at business locations in 24 countries.

The key business operations are distributed across the following countries and regions.

- Germany
- Netherlands, Belgium
- United Kingdom
- Central Eastern and South Eastern Europe (Czech Republic, Hungary, Poland, Slovakia, Croatia, Slovenia, Romania)
- Western and Southern Europe (Spain and Italy)

### G4-7 Nature of ownership and legal form

RWE AG is a listed joint-stock company (Aktiengesellschaft, AG) under German law.

The share capital of RWE AG is divided into 614,745,499 shares, of which 39,000,000 are preference shares without voting rights. At the end of 2016, around 86% of RWE shares were in the ownership of institutional investors, while shares held by employee shareholders and other private investors amounted to 1% and 13% respectively. 27% of the equity capital was attributable to institutional shareholders in Germany (2015: 28%). Meanwhile, in North America, the United Kingdom and Ireland, this group of shareholders

amounted to 35% (2015: 32%) and in Continental Europe not including Germany the proportion was 20% (2015: 24%) of the shares. A large proportion of local-authority shares are bundled in RWEB GmbH and at 13% this entity remains the biggest individual shareholder of RWE. Our second largest individual shareholder is BlackRock: In November, notification was received from the US asset manager that it held 4% in RWE. The proportion of RWE ordinary shares in free float amounted to 86% most recently. This forms the basis for the index weighting of the German Stock Exchange (Deutsche Börse).

## G4-8 Markets served

### Conventional Power Generation ► (RWE Generation)

Our German, British, Dutch and Turkish power generation business with conventional power plants is grouped in this segment. Lignite production operated by RWE Power in the Rhineland also forms part of this segment alongside ► [RWE Technology International](#), which specialises in project management and engineering services. Since 2016, we have also recognised our majority shareholding in Mátra, Hungary, here. This company specialises in the production of lignite and downstream lignite-fired generation of electricity. The segment also includes the Markinch biomass power station in Scotland.

### Trading/Gas Midstream ► (RWE Supply & Trading)

The business of the Trading/Gas Midstream segment encompasses all tradable energy commodities in physical and derivative form, for example gas, coal, oil and electricity. They also include emissions certificates, freight, weather

derivatives and biomass. RWE Supply & Trading offers trade-based portfolio management and a broad range of commodity-based services to large industrial customers, distributors and trading counterparties, ► see [G4-EC2](#), page 28. The Trading/Gas Midstream segment sold 39.3 TWh of electricity in 2016 (2015: 34.6 TWh) and 25.0 TWh of gas (2015: 29.2 TWh) to consumers, ► see [the Annual Report 2016 of RWE AG](#), page 45.

### Renewables Energies, Grid & Infrastructure and Retail ► (innogy)

The key markets served by innogy are Germany, Benelux, the United Kingdom and Central Eastern and South Eastern Europe. In these markets, innogy operates in sales activities, distribution grids and with plants for power generation from renewable energies, ► see [G4-8 in the innogy Sustainability Report 2016](#), page 12.

## G4-9 Scale of the reporting organisation

Size of the company	Unit	2016	2015
Workforce	FTE	58,652	59,762
	Headcount	62,598	63,708
Business locations <sup>1</sup>	Countries	24	24
External revenue (including natural gas tax /electricity tax)	€ billion	45.8	48.1
Equity	€ billion	8.0	8.9
Net debt	€ billion	22.7	25.5
Lignite produced (opencast Rhineland mining area)	million mt	90.5	95.2
External electricity sales volume <sup>2</sup>	billion kWh	264.6	261.5
External gas sales volume	billion kWh	265.1	273.0

1 Number of countries in which fully consolidated companies and joint operations of RWE have their registered office.

2 For data on power generation ► see [EU2](#), page 12.



#### G4-10 Breakdown of workforce by employment types, gender and regions

Headcount of employees	2016			2015
	Women	Men	Total	Total
Germany	8,343	29,686	38,029	38,863
United Kingdom	3,570	5,011	8,581	9,176
Netherlands/Belgium	1,057	2,356	3,413	3,261
Central Eastern and South Eastern Europe	4,042	8,340	12,382	12,209
Other countries	150	43	193	199
<b>RWE Group</b>	<b>17,162</b>	<b>45,436</b>	<b>62,598</b>	<b>63,708</b>
Part-time employees			4,841	4,535
Full-time employees			57,757	59,173
Permanent contract			59,121	60,587
Fixed-term contract			3,477	3,121

No data are available to us for subcontractors. This will continue to remain the case in the future since the subcontractors do not have an obligation to inform us about these data.

#### G4-11 Percentage of total employees covered by collective bargaining agreements



99.7% of the employees of the RWE Group work in Europe and are represented by the European Works Council. The RWE and the innogy ► [Social Charter](#) cover 100% of our employees.

Our business partners are required to acknowledge the ► [Code of Conduct](#) and therefore to accept the principles of the ► [United Nations Global Compact](#), which include the right to collective bargaining.



#### G4-12 Description of the supply chain



Key elements of our value chain are the procurement of hard coal and gas, as well as trading in combustion fuels. Raw materials are traded as standardised products with defined quality attributes on international wholesale markets. These markets are the most important source of procurement. The procurement volume of combustion fuels (hard coal, natural gas and biomass) was around € 7.6 billion in 2016.

When purchasing goods, services and plant components for our business operations, RWE is in direct contact with service providers and suppliers. It also has contractual relationships with them. In 2016, the purchasing volume was € 6.1 billion. In order to meet the differing requirements relating to procurement, we have adjusted our internal processes to ensure compliance with our sustainability requirements in the supply chain, ► see Aspect: Procurement Practices-management approach, page 30.

#### G4-13 Significant changes during the reporting period regarding the company's size, structure, ownership, or its supply chain

RWE has bundled the Renewables, Grid & Infrastructure and Supply Divisions into a new company known as innogy SE. On 7 October 2016, the innogy share was traded for the first time on the Frankfurt Stock Exchange. RWE's shareholding in innogy fell from 100% to 76.8%. Taken together, the Renewables, Grid & Infrastructure and Retail Divisions, which were included in the new company contributed around €4.2 billion to the adjusted EBITDA for the RWE

Group of € 5.4 billion, ► see the [Annual Report 2016 of RWE AG](#), page 46. As a fully consolidated financial investment the new company is included in the data which form the basis for this report. We manage innogy purely as a financial investment. innogy is structured with its own set of internal rules and regulations with identical meaning and coverage. Where there are significant differences in the management approaches, we will address these at the appropriate point.



#### G4-14 Implementation of the precautionary principle

Identifying, assessing and managing risks at the earliest possible stage are the functions of the Controlling & Risk Management Department at RWE AG. This includes our group-wide reporting and controlling systems. It also encompasses our guidelines on handling risks, and risk analysis within the scope of strategic, planning and controlling processes. The activities of the Risk Committee and internal auditing are also fundamental tenets of this work alongside reporting on the basis of the Act on Control and Transparency of Enterprise (KonTraG).

The Internal Auditing & Compliance Department ensures compliance with the ► [RWE Code of Conduct](#) in the course of the audits carried out. Its principles are included in the audit criteria. The Chief Compliance Officer reports on this matter regularly to the Executive Board of RWE AG and to the Audit Committee of the Supervisory Board.

For more information on risk management ► see the [Annual Report 2016 of RWE AG](#), page 77 to 86.



#### G4-15 Externally developed economic, environmental and social charters, principles or other initiatives



##### UN Global Compact

Since January 2004, the RWE Group has been a member of the ► [UN Global Compact \(UNGC\)](#).

By signing up to the Global Compact, RWE made a commitment to observe the ten principles underlying the Global Compact. This entails respecting human rights and labour standards, promoting environmental protection in its work, and preventing corruption. We present the contribution we have made to global implementation of the principles of the Global Compact in an annual Progress Report.



##### Bettercoal initiative

Cooperating with other energy companies is absolutely essential in order to be in a position to exert more pressure and achieve sustainable production and transport conditions in the supply chain for hard coal. In 2012, we joined forces with other large purchasers of hard coal to launch the ► [Bettercoal initiative](#). By the end of 2016, 13 of the big European energy companies were already members of Bettercoal (2015: 12). The Dutch ports also joined the initiative as associate members. Bettercoal audits hard-coal production sites throughout the world and presents the results to its members, ► see Aspect: Procurement Practices – management approach, page 31.



## G4-16 Memberships of associations and advocacy organisations

We are an active member of a large number of different committees and specialist associations as part of our social, environmental and business responsibility. The following memberships are important for RWE AG (in alphabetical order):

- Bettercoal Ltd.
- BDEW German Association of Energy and Water Industries (Bundesverband der Energie- und Wasserwirtschaft e. V.)
- DEBRIV – Federal Lignite Association (Bundesverband Braunkohle)
- econsense – Forum for Sustainable Development of the German Economy (Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e. V.)
- EFET – European Federation of Energy Traders
- Energy Netherlands (Energie Nederland)
- Energy UK
- Eurogas
- German-Russian Forum (Deutsch-Russisches Forum e.V.)
- IETA (International Emissions Trading Association)
- If.E Innovation Forum for the Energy Transition of IGBCE (Innovationsforum Energiewende)
- Sustainable Biomass Program (SBP)
- VdV Association of the German Integrated Economy (Verband der Deutschen Verbundwirtschaft e. V.)
- VRB – Association of Raw Materials and Mining (Vereinigung Rohstoffe und Bergbau e.V.)
- World Energy Council

For memberships of innogy, ► see G4-16 in the innogy Sustainability Report 2016, page 15.



## EU1 Installed capacity



Power generation capacity in MW								
	Gas	Lignite	Hard coal	Renewable energies	Nuclear energy	Pumped water, oil, other	Total 2016	Total 2015
Conventional Power Generation	14,964	11,059	8,688	284	4,054	2,831	41,880	42,977
of which:								
Germany <sup>1</sup>	4,411	10,296	5,071	55	3,908	2,549	26,290	26,496
Netherlands/Belgium	3,057	–	2,057	158	146	–	5,418	6,228
United Kingdom	6,649	–	1,560	55	–	282	8,546	8,627
Hungary/Turkey	847	763	–	16	–	–	1,626	1,626
innogy	243	17	399	3,735	–	137	4,531	4,680 <sup>2</sup>
<b>RWE Group</b>	<b>15,207</b>	<b>11,076</b>	<b>9,087</b>	<b>4,019</b>	<b>4,054</b>	<b>2,968</b>	<b>46,411</b>	<b>48,052<sup>3</sup></b>

1 Including generating capacities which are not owned by RWE but that we can deploy at our discretion on the basis of long-term contracts. At the end of 2016, this amounted to 4,373 MW (4,629 MW) in the Conventional Power Generation Division, including hard-coal power stations with a total output of 2,173 MW (unchanged).

2 The value still includes a share of the generating capacity of Zephyr Investments Limited.

3 Including the Lynemouth hard-coal power station in the United Kingdom. This was sold at the beginning of 2016 in the Trading/Gas Midstream segment.

## EU2 Net output broken down by primary energy source



Power generation in billion kWh	Lignite		Hard coal		Gas		Nuclear energy		Renewable energies		Pumped water, oil, other		Total	
	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015
Conventional Power Generation	74.3	77.8	44.2	44.7	52.6	42.0	30.1	31.7	1.1	1.1	3.0	3.0	205.3	200.3
of which:														
Germany <sup>1</sup>	68.9	72.5	22.4	21.7	6.3	3.5	29.0	30.6	0.7	0.8	3.0	3.0	130.3	132.1
Netherlands/ Belgium	-	-	15.1	15.4	6.9	5.8	1.1	1.1	-	-	-	-	23.1	22.3
United Kingdom	-	-	6.7	7.6	36.2	29.3	-	-	0.4	0.3	-	-	43.3	37.2
Hungary/Turkey	5.4	5.3	-	-	3.2	3.4	-	-	-	-	-	-	8.6	8.7
innogy <sup>2</sup>	-	-	0.1	0.2	0.7	0.6	-	-	10.0	10.3	-	-	10.8	11.1
RWE Group <sup>2</sup>	74.3	77.8	44.3	46.5 <sup>3</sup>	53.3	42.6	30.1	31.7	11.1	11.4	3.0	3.0	216.1	213.0 <sup>3</sup>

1 Including electricity purchases from power plants which are not owned by RWE but that we can deploy at our discretion on the basis of long-term contracts. In 2016, this electricity amounted to 11.0 billion kWh (previous year: 11.1 billion kWh) in the Conventional Power Generation Division, of which 7.8 billion kWh (previous year: 7.7 billion kWh) electricity generating capacity was based on hard coal.

2 Up to the sale of our shareholding in Zephyr Investments Limited in the middle of 2016, electricity purchased from the wind farms operated by Zephyr was also included in this calculation. In 2016, this amounted to 0.3 billion kWh (previous year: 0.8 billion kWh).

3 Including generation of the Lynemouth hard-coal power station in the United Kingdom. This was sold at the beginning of 2016 in the Trading/Gas Midstream segment.

## EU3 Number of residential, industrial, institutional and commercial customers



Our subsidiary innogy is able to build on a broad customer base in all its markets. In 2016, the residential and commercial customer segment essentially included a total of over 16,000 electricity customers and around 6,800 gas customers, ► see EU3 in the innogy Sustainability Report 2016, page 18.

The size of the customer base in our Trading/Gas Midstream segment is significantly less. However, even today it generates around 15% of electricity and around 9% of gas sales, ► see the Annual Report 2016 of RWE AG, page 45.

External electricity sales volume <sup>1</sup> in billion kWh	Residential and commercial customers		Industrial and corporate customers		Distributors		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
Conventional Power Generation	0.2	0.2	2.4	2.4	17.5	19.2	20.1	21.8
Trading/Gas Midstream	-	-	30.3	31.2	-	-	39.3 <sup>2</sup>	34.6 <sup>2</sup>
innogy	52.3	53.7	73.5	76.9	79.3	74.4	205.1	205.0
RWE Group <sup>3</sup>	52.6	54.0	106.2	110.5	96.8	93.6	264.6	261.5

1 Methodological changes in the recognition of trading transactions resulted in the adjustment of prior-year figures; ► see Notes on reporting in the Annual Report 2016 of RWE AG, page 41.

2 Including volume effects of the sale of self-generated electricity on the wholesale market. If these sales volumes exceed the purchases made for supply purposes, the positive balance.

3 Including volumes subsumed under "Other, consolidation".

External gas sales volume <sup>1</sup> in billion kWh	Residential and commercial customers		Industrial and corporate customers		Distributors		Total	
	2016	2015	2016	2015	2016	2015	2016	2015
Trading/Gas Midstream	-	-	24.7	25.5	0.3	3.7	25.0	29.2
innogy	102.9	102.6	83.1	81.1	54.1	60.1	240.1	243.8
RWE Group <sup>3</sup>	102.9	102.6	107.8	106.6	54.4	63.8	265.1	273.0

1 Methodological changes in the recognition of trading transactions resulted in the adjustment of prior-year figures; ► see Notes on reporting in the Annual Report 2016, page 41.

## EU4 Length of above and underground transmission and distribution lines



innogy operates electricity and gas distribution grids with a total length of around 570,000 km in Germany, the Czech Republic, Hungary, Poland and Slovakia. For more information on the countries ► see EU4 in the innogy Sustainability Report 2016, page 19.



## EU5 Allocation of CO<sub>2</sub> emissions allowances



Since the beginning of the third trading period of the European Emissions Trading Scheme on 1 January 2013, operators of plants subject to mandatory emissions trading have only received a basic allocation of emission allowances free of charge on application. This allocation is strictly regulated and limited in accordance with uniform allocation regulations throughout the EU. Out of the 148.3 million metric tons (mt) of CO<sub>2</sub> emitted by RWE in EU countries in 2016, we were only able to cover 4.5 million metric tons due to an

allocation of emissions allowances of this type that are free of charge. This yields an insufficient allowance of CO<sub>2</sub> emissions certificates amounting to 142.6 million metric tons. We covered the shortfall by purchasing emissions allowances. To a very limited extent, we were also able to use certificates from international climate protection projects which were created under the Kyoto mechanisms "Clean Development Mechanisms" and "Joint Implementation".

Emissions balance by division <sup>1</sup> in million metric tons of CO <sub>2</sub>	CO <sub>2</sub> emissions		Free allocation of CO <sub>2</sub> certificates		Shortage of CO <sub>2</sub> certificates	
	2016	2015	2016	2015	2016	2015
Conventional Power Generation	147.6	148.9	4.2	5.2	142.2	142.4
of which:						
Germany <sup>2</sup>	106.8	109.1	4.2	5.1	102.6	104.0
Netherlands/Belgium	14.0	14.8	-	0.1	14.0	14.7
United Kingdom	19.1	17.4	-	-	19.1	17.4
Hungary/Turkey <sup>3</sup>	7.7	7.6	-	-	6.5	6.3
innogy	0.7	0.7	0.3	0.4	0.4	0.3
<b>RWE Group</b>	<b>148.3</b>	<b>150.8<sup>4</sup></b>	<b>4.5</b>	<b>5.6</b>	<b>142.6</b>	<b>143.9<sup>4</sup></b>

1 Only plants which participate in the European Emissions Trading Scheme.

2 Includes generation capacities not owned by RWE that we can deploy at our discretion on the basis of long-term agreements. In 2016, they produced 7.1 million metric tons of CO<sub>2</sub> (previous year: 6.9 million metric tons).

3 Since Turkey does not participate in the European Union Emissions Trading Scheme, we do not need emission allowances for our CO<sub>2</sub> emissions in that country.

4 Including the emissions of the hard coal-fired power plant Lynemouth in the Trading/Gas Midstream segment, which was sold in early 2016.

## IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES

### G4-17 List of consolidated entities and consolidated financial statements



► See list in the Annual Report 2016 of RWE AG, pages 155 to 181.

### G4-18 Process for selecting the report content



Our management of Corporate Responsibility and reporting take into account the relevant issues that we have determined and evaluated in a Materiality Analysis. This approach corresponds to the current G4 Guidelines of the Global Reporting Initiative (GRI) which form the basis for this report. We carried out a comprehensive Materiality Analysis for the ► [CR Report 2015](#). This involved adopting two perspectives for evaluating the issues that are particularly important for sustainable governance at RWE. These views are from the perspective of the stakeholders and the standpoint of the company.

In this context, we asked representatives of our most important stakeholders in 2015 about the challenges and issues they believed to be particularly important for the company from their perspective. We also asked them about what they expect from RWE. Our objective was to obtain a broad range of views. We therefore conducted detailed and structured interviews with 38 representatives of organisations and institutions from civil society in Germany, the United Kingdom, the Netherlands, Poland and the Czech Republic. These results were then supplemented with information we obtained from other conversations with our stakeholders. The evaluation of this information was agreed in a joint discussion with the CR Officers of the RWE companies and it was incorporated into the Materiality Analysis.

We performed the subsequent internal evaluation within the scope of reporting on the year 2015 in a group-wide consul-

tation process. Initially, we brought together the key issues and assessed their relevance for RWE at the level of experts and line managers within the Group companies. A second stage took the form of a validation process and involved the departmental managers of RWE AG and the board members of the Group companies responsible for CR at the time.

Since the restructuring of the Group has not yet been completed, we took a decision this year to update the results of the Materiality Analysis from 2015. The starting point for this is the list of key GRI aspects from the last report. We modified these at the level of internal experts and specialist process owners to match the current materiality landscape. We also took account of the results of the external survey from the previous year's materiality process, the results of the ratings that we took part in this year, and current political and legislative developments. Experts and specialist process owners from the Group companies were integrated in reporting for purposes of evaluation this year.

The feedback we received from our external stakeholders focused on the medium to long-term perspective of RWE. Furthermore, there is a stream of enquiries relating to controversial issues of an individual nature that our stakeholders raise. In cases like this, we get into dialogue directly and work on developing a solution. We do not report on such individual cases at this point.

### G4-19 List of material aspects identified in the process for defining the report content (also includes disclosures for G4-20 and G4-21)



RWE is not responsible for process steps and their impacts which involve upstream and downstream activities in our value chain and therefore take place outside our company. Nevertheless, we are indirectly associated with these stages

and we are able to exert an influence on them within the individually defined framework. We can also directly manage the impacts that are caused within our company.

Overview of the key aspects and where their impacts are caused:

Material impact	Preliminary value added phase	RWE	Consumption phase
<b>GRI Aspect</b>			
<b>Economic performance indicators</b>			
Economic Performance	■	■	■
Indirect Economic Impacts		■	
Procurement Practices	■		
Availability and Reliability		■	
Demand-side Management			■
Research and Development		■	
Decommissioning of Power Plants		■	
Efficiency of the Power Plant Portfolio and Distribution Grid		■	
<b>Environmental Performance Indicators</b>			
Energy		■	
Water		■	
Biodiversity		■	
Emissions		■	■
Waste and Effluents		■	
Products and Services			■
Compliance (Environment)		■	
Overview (expenditure Environment)		■	
Supplier Environmental Assessment	■		
Environmental Grievance Mechanisms	■	■	■
<b>Social Performance Indicators</b>			
<b>Labour Practices</b>			
Employment		■	
Labour/Management Relations		■	
Occupational Health and Safety	■	■	
Basic and Career Training		■	
Diversity and Equal Opportunity		■	
Equal Pay for Women and Men		■	
Supplier Assessment for Labour Practices	■		
Labour Practices Grievance Mechanisms	■	■	
<b>Human Rights</b>			
Supplier Human Rights Assessment	■		
Human Rights Grievance Mechanisms	■	■	
<b>Society</b>			
Local Community	■	■	■
Anti-corruption	■	■	
Public Policy		■	
Anti-competitive Behaviour		■	
Compliance (Society)	■	■	
Supplier Assessment of Impacts on Society	■		
Grievance Mechanisms for Impacts on Society	■	■	
Disaster/Emergency Planning and Response		■	
<b>Product Responsibility</b>			
Product and Service Labelling		■	■

#### G4-20 Material aspects identified within the company

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▶ See G4-19, page 14.

#### G4-21 Material aspects identified outside the company

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▶ See G4-19, page 14.

#### G4-22 The effect of any restatements of information provided in previous reports, and the reasons for such changes

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We have amended our reporting methods in the context of the new bundling of large parts of our business,

▶ see the [Annual Report 2016 of RWE AG](#), page 41.

#### G4-23 Significant changes from previous reporting periods in the scope and aspect boundaries

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We have amended our reporting methods in the context of the new bundling of large parts of our business,

▶ see the [Annual Report 2016 of RWE AG](#), page 41.



# STAKEHOLDER ENGAGEMENT

## G4-24 Stakeholder groups engaged by the company

Our company regularly engages in communication in different ways with customers, academics, politicians, representatives of environmental organisations, local government agencies, neighbours around our locations and other citi-

zens. We also seek contact with players who are otherwise involved in issues relating to the energy industry, as well as the corporate activities of RWE and its impacts on society as a whole.

## G4-25 Basis for identification and selection of stakeholder groups

Our stakeholders include all persons and organisations we have relationships with and engage in dialogue with. We also regard individuals and entities who seek communication with us, or who are interested in our company, as stakeholders. There is no prior selection process. In order to identify the various aspirations and take account of them in our corporate policy, we are in continuous dialogue with our stake-

holders and open to their concerns. Expectations that stakeholders have of RWE are nuanced and defined by their attitude to energy issues and the extent to which those stakeholders are affected by them. The different countries show a varying basic attitude to topics associated with energy. Their views are informed by the individual national background.

## G4-26 Approaches to stakeholder engagement including frequency of engagement

Communication with our stakeholders gives us valuable ideas for the orientation of our corporate activities. Since our company is going through a process of change, it is particularly important for us to discuss expectations and projections about the future of energy supply with external stakeholders. At the same time, this dialogue provides us with the opportunity to reflect and convey our company decisions and underlying motivation more effectively.

follow our projects and activities with a great deal of interest, perhaps because they are looking for positive effects to give upside impact on the local economy. Alternatively, they may be anxious about negative effects on their own lives and the surrounding environment. We meet these expectations with an honest exchange of views and an interest in constructive proposals. At national level, we engage in discussions with our stakeholders in particular on the following issues: our contribution to the energy transition and climate change, the future of the energy market, sustainability in international supply relationships and a responsible approach to our customers and the environment.

The dialogue takes place at different levels. We engage in discussions at local level with neighbouring residents and citizen's initiatives, for example about construction measures and approval proceedings. Local residents frequently

## G4-27 Key topics and concerns of stakeholders and response of the company

In 2016 as in the previous year, the dominant issue in the context of the dialogue with stakeholders continued to be the contributions that the energy industry can make to achieving the national climate change targets, and the role that conventional power generation is able to play in the energy transition. We engaged in an intensive dialogue at all levels on this issue with a large number of representatives from the political sphere, business, unions and the general public.

One example of dialogue was local and regional forums. Interaction in the Rhineland lignite mining area took place at the level of local authorities and at meetings of elected politicians and various specialist conferences. These included the [► Mining Damage Forum](#) and the Water Industry Conference. Alongside issues relating to the energy transition and climate protection, key topics were security of supply, job security and perspectives for the future at the locations. Another area of increasing involvement was the innovation region



Rhineland lignite mining area (Innovationsregion Rheinisches Revier), which supports the structural change in this area.

As part of this involvement, a representative of RWE Power AG is a Member of the Supervisory Board of the ► [Innovationsregion Rheinisches Revier GmbH](#). Furthermore, RWE participates in a large number of different projects and initiatives in the areas of opencast mining to shape the region, for example the ► [development company Indeland GmbH](#). Paradigmatic examples here are research into applications for the use of lignite as a material, ► see [Aspect: Research and Development – management approach, page 34](#), the commitment to constructing a climate protection settlement and the project “Factor X – Resource Efficient Building”. In accordance with these activities, the event series “Future Laboratory Indeland” was continued this year, focusing on the topic “Living Locations of the Future” – Resource efficient living in a rural area”.

The ► [Neighbourhood Forum \(Nachbarschaftsforum\) Niederaußem](#), which RWE set up at the power plant there, was given a positive reception. The forum offers neighbours, associations and other regional stakeholders the opportunity to engage in discussion with RWE about issues related to power generation and power plants with particular reference to the Niederaußem site. In 2016, the forum met twice. The agenda focused on the following topics: the impacts of cold air flows on agriculture, perspectives on the use of CO<sub>2</sub> as a material, the climate protection plan in North Rhine-Westphalia and international climate protection policy.

This year, we also held the first energy conversation in the context of our Inden opencast mine and the Weisweiler power plant. The purpose of the discussion was to promote dialogue with local stakeholders about the future of the region and the promotion of structural change.

In 2016, we additionally held a power plant discussion at each of our nuclear power locations. We also rolled out a Transparency Initiative at all three locations. The objective of this is to create even more transparency in the future for providing information to various regional special-interest groups about licensing procedures currently under way. Openness in relation to planning for decommissioning and the process involved is also part of this approach.

We continue to hold regular events at national and European level, for example our RWE Talks. In 2016, these were held in Berlin and in Brussels. Members of the Executive Board and Managing Directors reported in this forum on the latest developments in the energy industry and held discussions with a wide range of different special-interest groups. The discussions focused on various topics including the transformation of the world of work against the background of digitalisation. They also addressed the role of the distribution grids in the energy transition and the importance of energy trading. Additionally, we discussed the challenges of the energy transition with a view to more expansion and integration of renewable energies.

Over the course of 2016, representatives of RWE Generation in the United Kingdom engaged in dialogue on environmental conservation issues with the regulatory authorities and politicians. The discussions centred on implementation of the EC Directive on Industrial Emissions and a reference document outlining the best available technology for large combustion plants (LCP BREF). Local Liaison Committees continue their work at our power plant locations, including Didcot B and Aberthaw.

In 2016, the Dutch Economics Minister issued an invitation for energy dialogues so as to give the general public the opportunity to play a role in further development of the energy transition. We played a proactive role and organised round-table discussions at Geertruidenberg and Amsterdam.

RWE also held an event in Groningen intended to promote knowledge exchange about the important role of combined combustion of biomass for a more sustainable economy in the future. Representatives of local and national government, universities, energy companies and port authorities participated in the discussion. The principal topics were the need for biomass in order to meet Dutch targets for decarbonisation, the plans drawn up by RWE for combined combustion of biomass in the power plant at Eemshaven, and new Dutch sustainability criteria for biomass and the refinement of biomass for the purpose of enhancing value in use.

For more information on the stakeholder dialogues of innogy ► [see the innogy Sustainability Report 2016](#) under G4-26 and G4-27, page 23.



# REPORT PROFILE

## G4-28 Reporting period

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The reporting period covers the financial year 2016:  
1 January 2016 – 31 December 2016

## G4-29 Date of the most recent previous report

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March 2016

## G4-30 Reporting cycle

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Annually

## G4-31 Contact point for questions on the report

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RWE Aktiengesellschaft  
Alexander Nolden  
Political Affairs, Corporate Responsibility  
45128 Essen  
Tel.: +49 201 12-00  
Email [responsibility@rwe.com](mailto:responsibility@rwe.com)

## G4-32 The "in accordance" option for compliance with GRI and the index for the chosen option

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This report was prepared on the basis of our established reporting and our findings from the dialogue with stakeholders. In 2016, we prepared the report in accordance with the current guidelines of the Global Reporting Initiative (GRI) in order to facilitate a comparison of our services with those of other companies. It also presents the GRI G4 Content Index at the same time. In this context, we took account of

the "G4 Electric Utilities Sector Disclosures". The report was prepared in conformity with the option "in accordance" core. The values were not available to us with the necessary differentiation for a number of the indicators derived from the GRI. We have provided a justification in each case and used disclosures which came closest to the requirements.

## G4-33 External assurance of the report

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The disclosures indicated with  were subject to an engagement audit carried out by the accountancy firm PricewaterhouseCoopers (PwC) with a limited assurance. The engagement audit was performed in accordance with

the auditing principles of the International Standard on Assurance Engagements (ISAE) 3000 (Revised). For the Assurance Report ► see page 72.

## GOVERNANCE

### G4-34 Governance structure of the company, including committees of the highest governance body



The governance of RWE as a German joint-stock company listed on the stock exchange is primarily determined by the Stock Corporation Act (Aktiengesetz) and also by the regulations of the ► [German Corporate Governance Code](#) in its latest current version.

Pursuant to the statutory regulations, RWE is subject to the “dual governance system”. This is characterised by a strict separation of personnel between the Executive Board as a management body and the Supervisory Board as a monitoring body. The Executive Board and the Supervisory Board work closely together in pursuing the interests of the company.

The Executive Board manages the company with the objective of generating sustainable value added under its own responsibility. The principle of overall responsibility applies to their work, and this means that the members of the Executive Board bear joint responsibility for the entire executive management. They develop the corporate strategy and ensure implementation in consultation with the Supervisory Board.

The Supervisory Board advises the Executive Board on managing the company and monitors its activity. It appoints and dismisses Members of the Executive Board, passes resolutions on the compensation system for the Members of the Executive Board and defines individual compensation packages for each member. The Supervisory Board is involved in all decisions that are fundamentally important for RWE.

The RWE Supervisory Board currently has five permanent committees and the Executive Committee: the Mediation Committee pursuant to Article 27 Section 3 Co-determination Act (MitbestG), the Personnel Affairs Committee, the Audit Committee, the Nomination Committee and the Strategy Committee. Last year, a special committee “NewCo IPO Committee” was added, which had to make decisions on the details of the initial public offering of innogy SE. The committees prepare topics and resolutions in advance of meetings of the Supervisory Board. They sometimes also have decision-making powers delegated to them by the Supervisory Board. The chairs of the committees regularly inform the Supervisory Board about the work of the committees. Additional detailed information on the concrete work of the Supervisory Board and its committees is provided in the latest Supervisory Board Report in the ► [Annual Report 2016 of RWE AG](#), page 8 to 12.



The group-wide implementation and realisation of Corporate Responsibility is coordinated by the Political Affairs and Group Corporate Responsibility Department within Group Communications & Public Affairs. The head of this department reports directly to the Chief Executive Officer. In 2016, representatives from the Group Centre and the major operating companies came together a number of times at the meetings held by the staff of the CR officers. These meetings serve as forums for sharing ideas and discussing joint activities.

For information on the governance structure of innogy ► see [G4-34 in the innogy Sustainability Report 2016](#), page 28.



### G4-35 Process of delegating authority for economic, environmental and social topics

Powers of attorney are granted by the Executive Board in the form of authorised officers and general agents to the individual departmental and section managers who are empow-

ered to take decisions independently within their sphere of responsibility, so long as a higher level of authority has not reserved the right to approve certain decisions.

### G4-36 Responsibility for economic, environmental and social topics

The Executive Board has adopted a portfolio distribution which gives specified members of the Executive Board responsibility for various topics. The current portfolio distribution provides for the following powers of responsibility over economic, environmental and social topics: The Chairman of the Executive Board deals with the group-level responsibilities Group Communications & Public Affairs including the coordi-

nation of Corporate Responsibility, Legal, Corporate Development and Internal Audit & Compliance. The responsibilities of the Chief Financial Officer include Accounting, Business Services, Controlling & Risk Management, Finance & Credit Risk, Investor Relations, Portfolio Management/Mergers & Acquisitions and Tax. Human Resources is allocated to the Chief HR Officer and Labour Director.

The Centre of Expertise Health & Safety and Industrial Medicine, Environmental Coordination and Group Purchasing are situated in RWE Generation and carry out their function for the entire Group from there.

The Group Executive Board reports to the Supervisory Board of the company as the highest governance body.

#### G4-37 Processes for consultation between stakeholders and the Executive Board and Supervisory Board

Each shareholder has the right to submit a countermotion with substantiation against the proposals put forward by the Executive Board and/or the Supervisory Board on a specific agenda item at the Annual General Meeting. Shareholders whose shares taken together make up one twentieth of the entire share capital or a proportionate amount of €500,000

can demand that items are placed on the agenda and announced. The publication of the business results is accompanied by an investors' and analysts' teleconference. In 2016, a Capital Market Day was held in London. Additionally, managers take part in Group roadshows and participate in conferences.

#### G4-38 Composition of the Executive Board and the Supervisory Board and its committees

The Supervisory Board is a non-executive supervisory body. It consists of 20 members, ten of which are elected by the Annual General Meeting pursuant to the provisions of the German Stock Corporation Act (Aktiengesetz). Ten of the members are elected by the employees pursuant to the Co-determination Act (Mitbestimmungsgesetz) dated 4 May 1976 (MitbestG). The period of office for current members started with the Annual General Meeting in 2016 and ends with the Annual General Meeting in 2021. At the moment, the Supervisory Board of RWE AG includes six women, of which three were elected by the employees. RWE AG therefore complies with the statutory gender quota of 30%.

means that the necessary knowledge and experience is reflected by the Supervisory Board as a whole. Another aim is to ensure that the Supervisory Board includes members with international experience who come from outside Germany or who have spent a considerable number of years working in other countries. Members of the Supervisory Board are expected to be familiar with the business areas of the RWE Group, the market landscape, the needs of customers and the strategic direction of the company. They should possess all the skills and know-how necessary for their activity as a member of the Supervisory Board including assessment of reports provided by the Executive Board, weighing up business decisions and evaluating the documents associated with the annual financial statements. Alternatively, they need to be willing to engage in a learning curve to acquire the necessary knowledge and skills. The needs profile also includes special areas of expertise and qualifications that are important for the business activities. This may include e.g. experience from an international role or management functions in politics and business, know-how in the energy sector, employee co-determination, accounting or auditing, and expertise in the public sector.



A presentation of the Executive Board and the Supervisory Board is provided in the ► [Annual Report 2016 of RWE AG](#), page 182 to 186. This gives an overview of the number of additional important positions or duties of individual persons and the type of duties involved.

As envisaged in the Stock Corporation Act and in the German Corporate Governance Code, the Supervisory Board is intended to provide expert monitoring and consultation for the Executive Board. The objective is for at least one member of the Supervisory Board to be able to provide expertise for each aspect of the activity of the Supervisory Board. This

You will find more information in the Annual Report 2016 of RWE AG and on our ► [Website](#).



#### G4-39 Independence of the Chair of the Supervisory Board

Dr Werner Brandt has been in post as the Chairman of the Supervisory Board since April 2016 and he is not simultaneously a Member of the Executive Board. Dr Brandt has also not been a Member of the Executive Board of RWE AG in the past.

#### G4-40 Nomination and selection processes for the Supervisory Board and the Executive Board

As defined in the Rules of Procedure of the Supervisory Board, the Nomination Committee convenes as necessary and proposes suitable candidates to the Supervisory Board as its nominations for election by the Annual General Meeting. When the committee selects the nomination proposals, it takes into account the international operations of the company, potential conflicts of interest, and diversity. There is also a needs profile for Supervisory Board members which is intended to ensure a heterogeneous composition of the Supervisory Board, ► see G4-38, page 21.

As is also defined in the Rules of Procedure of the Supervisory Board, the Personnel Affairs Committee prepares the groundwork for decisions on personnel by the Supervisory

Board. The committee makes decisions on behalf of the Supervisory Board in a number of areas including the conclusion, the amendment and the termination of contracts of employment with the members of the Executive Board. This work does not include the decisions reserved for the Supervisory Board pursuant to Article 87 Section 1 and Section 2 Sentence 1 and Sentence 2 Stock Corporation Act (AktG), although the Personnel Affairs Committee prepares the groundwork for such decisions. Furthermore, the committee regularly gives advice on long-term succession planning for the Executive Board. In this context, the committee takes account of planning for the management of the company and also considers the need for diversity.

#### G4-41 Processes for ensuring conflicts of interest are avoided and managed

Transparency is a core element of good corporate governance. It is absolutely indispensable in cases where transactions concluded by the Executive Board may lead to conflicts of interest. The members of the Executive Board and the Supervisory Board have not registered any conflicts of interest with us. Furthermore, no contracts were concluded between members of the Supervisory Board and RWE AG.

The memberships in other governance bodies held by members of the Executive Board and Supervisory Board are disclosed transparently in the presentation of governance bodies in the ► [Annual Report 2016 of RWE AG](#), page 182 to 188. RWE AG has no controlling shareholder. Transactions with related parties are included in financial reporting.

For additional information on Directors' Dealings see our ► [Website](#).

#### G4-42 The role of the Executive Board and the Supervisory Board in the development, approval and updating of the organisations' purpose, value or mission statements, policies, goals and strategies

We have created long-term incentives for sustainable corporate governance in which part of the variable compensation for the Executive Board has been linked to CR indicators, ► see G4-51, page 23.

#### G4-46 Role of the Executive Board and the Supervisory Board in reviewing the effectiveness of the organisation's risk management processes

The Executive Board of RWE AG holds the principal responsibility for our risk management system. The board monitors and manages the overall risk of the Group. The responsibility for applying and developing the risk management system is at the level below the Executive Board with the Controlling & Risk Management of RWE AG. This department regularly

reports to the Executive Board and the Supervisory Board of RWE AG on the risk position of the Group.

The Internal Audit Department regularly reviews the quality and the functional capability of the risk management system.



#### G4-47 Frequency of the review of the economic, environmental and social impacts by the Executive Board and the Supervisory Board

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The Executive Board of RWE AG is informed immediately if there are any significant changes to the risk situation. The management and supervisory bodies are informed about the risk situation as part of quarterly reporting.

The entrepreneurial actions of RWE are defined by integrity and compliance with the law. The RWE Code of Conduct sets out the targets and principles for this and forms the basis for the corporate culture. The Compliance Management System focuses in particular on the identification of potential structural risks of corruption. The Compliance Management System was set up to combat any corruption. It was audited

by an auditing firm in accordance with IDW Audit Standard 980. The efficacy audit was successfully completed at year-end 2013/14. The Chief Compliance Officer reports at regular intervals to the Executive Board of RWE AG and to the Audit Committee of the Supervisory Board on issues relevant to compliance. This includes in principle all the topic areas of the Code of Conduct and he/she provides consolidated information about this. Every manager with responsibility for human resources additionally needs to submit an annual report on implementation of the Code of Conduct in his/her area of responsibility.

#### G4-48 The highest committee or position that formally reviews the organisation's sustainability report and ensures that all material aspects are covered

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This report was reviewed and released by the Executive Board of RWE AG.

#### G4-51 The remuneration policies and the performance criteria for the Executive Board and the Supervisory Board

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Following intensive deliberation and with the support of an external compensation expert, the Supervisory Board defined a new compensation system for Members of the Executive Board. This has been applied since 1 October 2016. The new system provides even better support for the strategic alignment of RWE AG and promotes it even more effectively. Important sustainability factors and the motivation of employees form an important basis of assessment. Other factors are also used to assess the bonuses of the members of the Executive Board.

Further details on the compensation policy and criteria for the Executive Board, including disclosures on components of the compensation package, are included in the compensation report in the ► [Annual Report 2016 of RWE AG](#), page 62 to 76. This takes account of all statutory regulations and follows all the recommendations of the ► [German Corporate Governance Code](#).



## ETHICS AND INTEGRITY

### G4-56 The organisation's values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics

At RWE we are well aware of our role in the community and of our responsibility towards customers and business partners, as well as shareholders and employees. We therefore have clearly defined principles which form the framework for our corporate and community engagement. The focus of our actions is on the common values of trust, passion and performance. They ensure a unified, overarching identity throughout all the companies of the RWE Group. These values are supplemented by our Code of Conduct and the principles for good conduct defined in the Code. The principles are intended as guidelines for the actions of our employees.

The code also establishes the benchmark for collaboration with contractual partners and is intended to give a unified foundation for the contractual relationship.

Responsible management and supervision of the company rank among the cornerstones for long-term success. Our benchmark is provided by the ► [German Corporate Governance Code](#) in the relevant latest version. We fully comply with the recommendations of the code – and this strengthens the trust placed in us by our investors, customers, employees and the general public.



### G4-57 Internal and external mechanisms for seeking advice on ethical and lawful behaviour, and matters related to organisational integrity



Every single employee is encouraged to be proactive in bringing any issues relating to our ► [Code of Conduct](#) and compliance with the code to the attention of their supervisor and/or the responsible compliance officer. The same applies to any indications relating to breaches of the Code of Conduct. Compliance officers are appointed for all divi-

sions and Group companies, and they are always available as points of contact for such matters. They are particularly keen to receive information about issues relating to prevention of corruption. Contact details for compliance officers are available on the Intranet.

### G4-58 Internal and external mechanisms for reporting concerns about unethical or unlawful behaviour, and matters related to organisational integrity



Information on any breaches of the ► [Code of Conduct](#) can be forwarded to supervisors or compliance officers through a range of different channels. It is also possible to contact an independent external ombudsperson. This contact is available for employees and also accepts information from third parties outside the company, for example suppliers or

other business partners. Information relating to any potential breaches is recorded by the Compliance Department. Each case is reviewed by the Group function responsible for investigating such a breach, and any remedial measures necessary are initiated in the context of a systematic follow-up process.



# SPECIFIC STANDARD DISCLOSURES

# ECONOMIC PERFORMANCE INDICATORS

## ASPECT: ECONOMIC PERFORMANCE – MANAGEMENT APPROACH

### Challenges

Our market environment and the demands of society at large are changing with the transition of energy systems in Europe. We are meeting the diverse challenges faced by the RWE Group at all stages of the value chain and in all the regions where we are operating.

In Germany, the development of wholesale prices in the electricity market is largely dependent on feed-ins of renewable energies. These reduce the utilisation of conventional power plants, in particular of gas-fired power plants. Consequently, this also brings down the prices that power producers are able to achieve in the marketplace. Another aspect is that hard-coal power stations, which traditionally exert a considerable influence on electricity pricing, are able to offer their electricity at very favourable conditions. These factors mean that the current quotations on the German electricity wholesale market are far below the level of the prices offered a few years ago. Prices have also come down compared with 2015, even if the reduction is only slight. As far as power generation by our German lignite-fired and nuclear power stations is concerned, we achieved on average significantly lower income than in 2015. The loss of revenues resulting from the price of electricity in the case of our hard-coal power stations but above all our gas-fired power stations was compensated by lower charges owing to reductions in fuel costs. Gas-fired power stations were therefore used more intensively. For more information on this ► see the Annual Report 2016 of RWE AG, page 26. The use of these power plants is popular with a large number of stakeholders because they can be deployed particularly flexibly. Furthermore, by comparison with coal-fired power stations, they emit less CO<sub>2</sub> per unit of electricity generated. RWE has adopted a number of measures so that we are able to remain competitive as one of the biggest European energy suppliers operating in the marketplace. These include comprehensive measures to reduce costs and a strategic realignment with a stronger focus on new business models so that we are in a position to offer our customers innovative solutions.

In 2016, innogy SE was established and operations were bundled in the Renewables, Grid & Infrastructure, and Retail Divisions. The restructuring has created a future-proof company under the financial control of RWE AG with a clearly defined strategic focus and greater financial scope for manoeuvre. The new subsidiary company, which is managed as a financial investment, will use the additional capital to make bigger investments in renewable energies and in the trends defining

the energy world of tomorrow. RWE AG will benefit from the success of innogy as the majority shareholder.

### Organisation, management and performance measurement

The new corporate structure has enabled RWE to establish the basis for creating a more robust financial platform, improving the performance of the Group and making it more competitive. However, we inevitably require the acceptance of society in order to be successful over the long term – starting with government, continuing through associations and employees, to nature conservation organisations.

### Economic performance and value generation for our shareholders

We provide a transparent presentation in our value creation calculation showing how we distribute the value generated to the individual stakeholder groups, ► see G4-EC1, page 27.

RWE will continue to optimise its own portfolio in a consolidating market. We are also going to make use of options for the additional construction of local generation plants such as power plants for customers. However, the focus is also on other generation, storage and flexibility solutions which open up new opportunities for making profits especially in regulated business and are intended to provide opportunities for increasing the use of electricity.

Furthermore, ► RWE Technology International (RWE TI) offers independent services as a project management and engineering company to RWE in the areas of mining, thermal power plants, renewable energies and infrastructure. The focuses of packages provided in this context are on consulting, engineering, training and safety in planning, construction, operation and decommissioning industrial projects. The portfolio of RWE TI also includes optimising and modernising traditional energy generation, and rolling out new technology solutions like energy storage. RWE TI makes use of the extensive expert knowledge available from the RWE Group in carrying out its operations.

### Driving forward innovations

The energy industry needs innovations more urgently than other sectors. The business models and processes of the past are losing their profitability in many areas and are no longer fit for purpose. They need to be modified by new ideas and in some cases even replaced, ► see Aspect: Research and Development – management approach, page 34.

Alongside the overarching restructuring of the Group, the motivator of innovations is also driving forward new conceptual and operational approaches within the organisation of RWE.

In 2016, measures supporting cultural change included continuation of the following projects:

- The programme New Way of Working (NwoW) represents a new mindset and approach to carrying out work, ► see Aspect: Employment – management approach, page 52.

The project is enabling us to strengthen the orientation of our employees on performance and customers, and involve them more closely in the decision-making processes. At the same time, we are ensuring more efficient cooperation within the entire Group.

- Next Level Leadership (NLL) is a programme for our top managers. It is intended to empower them to successfully bring about the transformation of RWE
- Deliver Breakthrough Performance (DBP) is used to roll out group-wide projects and a uniform understanding of change and leadership.

#### G4-EC1 Direct economic value generated and distributed

Distribution of value added in € million	Total 2016	Total 2015
Total	5,329	11,391
to employees (wages, salaries, social security contributions)	4,777	4,803
to the government (taxes and deductions) <sup>1</sup>	1,920	2,845
to lenders	4,111	3,454
to other shareholders	226	454
Net income	-5,710	-170
Dividend payment to shareholders <sup>2</sup>	5	5

1 Only the taxes paid are included, not tax expense.

2 Dividend proposal of RWE AG for the business year 2016 subject to the adoption of the resolution by the Annual General Meeting to be held on 27 April 2017.

Donations and sponsorship in € million	Total 2016	Total 2015
Donations	2.2	3.5
Sponsorship	13.1	5.7

This year we succeeded in concluding a major sponsorship initiative in the Netherlands with football club PSV Eindhoven. The sponsorship volume has increased significantly com-

pared with the previous year as a result of this venture and a variety of other activities.

#### G4-EC2 Financial implications and other risks and opportunities for the organisation's activities due to climate change

Once again, climate protection was one of the key political issues in 2016 and it is also crucial for RWE. Key factors in our business are the ongoing expansion of renewable energies, increasing requirements for climate protection, and digitalisation. Alongside the necessary modifications in our power plant portfolio, we also perceive entrepreneurial opportunities for us in the area of climate protection, and we intend to exploit them. Our conventional power plant portfolio will guarantee security for the electricity supply

with advanced and flexible power plants. innogy will continue to increase power generation from renewable sources and develop and expand the technology for the grid infrastructure. We will offer our residential, commercial, industrial and corporate customers innovative products and services that enable them to benefit from the opportunities presented by digitalisation and to use energy more efficiently. As a result, they can generate and market energy themselves. Following a successful initial public offering on the



stock exchange, innogy is able to draw on additional funds for capital expenditure. Our trading subsidiary RWE Supply & Trading has expanded its existing offering for major industrial customers and distributors. In addition to conventional energy supplies, the company also makes ► [specialist commercial service offerings](#) to its major customers, such as optimisation and enhanced flexibility for portfolios and plants. ► [RWE Technology](#) and ► [RWE Generation](#) are contracted by customers to construct and operate plants for combined heat and power, and for power generation from renewable energies. The two companies are also commissioned to operate and maintain existing generating plants belonging to customers. RWE Supply & Trading also offers its services for these plants.

#### Impacts associated with the risk or opportunity

We support ambitious political goals for climate protection, for expanding renewable energies and for improvement of energy efficiency. At the same time, we are addressing the enormous challenges that these objectives present in terms of competitiveness, innovative power and financial strength.

#### Financial implications of the risk or opportunity before action is taken

We have already carried out a large range of measures to make our processes even more efficient, our organisation even more effective and our corporate culture still more performance-oriented. Financial risks associated with emissions trading are reflected in our risk management. We reduce these risks by concluding appropriate hedging transactions. When a specified amount of electricity is sold on the futures market, the risk is hedged by purchasing appropriate amounts of combustion fuels and the necessary emissions certificates.

The Executive Board engages with the financial risks and opportunities associated with climate change in the control processes. However, the quantified results are not disclosed for competitive reasons.

### G4-EC3 Coverage of organisation's defined benefit plan obligations

Company pension provision in Germany includes defined contribution and defined benefit provision systems. There are various systems for company pension provision in the countries where we are operating. Additional information

on this and on company pension provision for employees outside Germany is provided in the ► [Annual Report 2016 of RWE AG](#), pages 130 to 134.



### G4-EC4 Financial assistance received from government



RWE does not receive any financial grants or subsidies from the government for its operating business. We also finance all capital expenditure from our own resources. On the other hand, we receive financial assistance from government agencies for projects in ► [research and development \(R&D\)](#) activities. The EU Transparency Register is one of the sources providing information on R&D projects with EU subsidies. We also receive agricultural subsidies from the EU for the

use of agricultural operational areas. These subsidies are for interim agricultural use in the course of reinstating former opencast mining sites and they last for a limited period of time. In 2015, the subsidies amounted to € 420,501.73. The value for 2016 was not yet known by the editorial deadline. The state does not hold any shares in RWE. Our biggest single shareholder is RWEB GmbH in which the majority of the shares held by local authorities is bundled.

## ASPECT: INDIRECT ECONOMIC IMPACTS – MANAGEMENT APPROACH

**Challenges**

The challenges of the energy transition can only be solved at the level of society as a whole. We want to be the credible partner for this challenge and our aim is to enhance trust in our company both within our regional and local environment, and in society as a whole. RWE makes an important contribution to the regional economy through the secure supply of electricity and gas at all times. The provision of jobs and allocation of orders to local companies constitute additional contributions.

We promote social developments through initiatives in social, environmental and cultural spheres, with volunteering engagement by RWE employees and through financial assistance.

**Organisation, management and performance measurement****Allocation of resources in compliance with rules**

We want to use the resources available to us effectively and in conformity with our compliance objectives. We have defined rules for the allocation of resources in our Guideline on Donations and Sponsorship which applies throughout the Group. Promotional gifts and resources that are relevant according to our guidelines are documented in a group-wide register. These included gifts and resources provided to holders of public office, donations and sponsorship measures, and consultancy and intermediary contracts. For information on donations and sponsorship ▶ see G4-EC1, page 27.

**Promotion of corporate volunteering**

▶ See G4-EC8, page 30.

**Promotion of education on energy and engineering issues**

“Education with Energy” is the slogan we are using to generate enthusiasm among young people for energy and technological issues. We discuss the energy supply of the future with them in this context. “3MaE – Education with Energy” bundles the education packages of all RWE companies in Germany. The initiative is intended to help young people

research, discover and experience energy. For figures on ▶ 3MaE ▶ see G4-SO1, page 63.

**innogy Foundation for Energy and Community playing a role as a corporate citizen**

Since 1 September 2016, the RWE Foundation has been operating in a new form as the ▶ [innogy Foundation for Energy and Community \(innogy Stiftung für Energie und Gesellschaft gGmbH\)](#). The innogy Foundation supports projects, collaborations and campaigns that focus on the energy transition in the regional context, digitalisation and education. The foundation regularly provides information transparently about projects, successes and finance in its annual reports.

**Supporting structural change in areas with opencast mining**

A contribution to a broad spectrum of jobs and training places in other companies can be made in the area of opencast mining by the development of building land and industrial zones. Research leisure amenities can also be expanded. These developments will contribute to safeguarding the future in the region over the long term. Our objective is to remain a dependable partner for local people and communities after opencast mining comes to an end. We are therefore collaborating with the region to shape the structural change by supporting initiatives which drive forward economic and structural development. These include the ▶ [Innovation Region Rhineland Industrial Area \(Innovationsregion Rheinisches Revier, IRR\)](#) and joint ventures between local authorities, such as the ▶ [Indeland Development Company](#) and the Terra Nova Special-purpose Association. Our contribution ranges from providing specialist and financial assistance, through cooperation on master plans and individual projects, to research into sectors of the future. For example, we are involved in a project to safeguard the energy location Weisweiler, a scheme to promote structural diversity in arable areas, and an initiative to create community areas by expanding the recreational and leisure amenities at the future Inden legacy lake.

**G4-EC7 Development and impact of infrastructure investments and services supported**

As an operator of energy infrastructures, we help to ameliorate fuel poverty in the countries where we are operating – particularly where the government and civil society do not provide enough support. We carry out appropriate activities

in the regions where innogy has operations with residential customers. For more information on this ▶ see [innogy Sustainability Report 2016](#) in Aspect: Access – management approach, page 97.



## G4-EC8 Significant indirect impacts, including the extent of impacts



We promote volunteering by our employees under the umbrella of the group-wide ► [Corporate Volunteering Programme](#) known as Companius (including "Aktiv-vor-Ort" – Active on Site). Targeted formats help us to allocate employees to a volunteering role appropriate to them. In 2016, more than 1,750 employees dedicated their time to providing assistance on around 1,000 projects. The amount contributed to these projects totalled some € 1.8 million during the period under review.

Over recent years, the number of volunteering team projects in the TeamAktiv Companius Programme has steadily increased. In 2016, more than 1,060 employees once again made a commitment in 106 team projects. In addition, the scheme AZUBI@WORK meets Companius combines the development of expertise and skills of apprentices at RWE with volunteering engagement.

For information on promoting education and on Companius projects in the area of providing aid for refugees ► see G4-SO1, page 63.

## ASPECT: PROCUREMENT PRACTICES – MANAGEMENT APPROACH



### Challenges

Stakeholders are challenging RWE to use their purchasing policy to exert influence on their suppliers. Sustainability in the supply chain is increasingly becoming a precondition for participating in tenders made to industrial customers and is being included in public procurement. However, there are virtually no binding international standards for environmental protection, human rights, occupational safety and combatting corruption.

Key elements of our value chain are the procurement of hard coal and natural gas and biomass, as well as trading in combustion fuels. Raw materials are traded as standardised products with defined quality attributes on international wholesale markets. These markets are the most important source of procurement, and raw materials traded here often change ownership several times after they have been first offered for sale by the producers. Generally, it is only possible for us to identify the immediate upstream owner, while the precise geographical origin of the raw material is not known. There are therefore only direct supplier relationships to a limited extent between RWE and the producers. Even though environmental and social compatibility play an important role for us in production, this in turn means that we have virtually no opportunities at this point to exert any direct pressure on production conditions.

The procurement volume for energy sources in 2016 was around € 7.6 billion. Alongside fossil energy sources, RWE will again be refocusing on biomass as a combustion fuel in future. One such fuel relates to wood pellets for use in dedicated biomass power stations. RWE also used biomass for

co-firing plants. Environmental and socially ethical extraction and production methods also have to be guaranteed in this area in order to establish biomass as a sustainable alternative to fossil fuels. Appropriate rules and regulations are enshrined in the relevant national legislation. In the Netherlands, these conditions are defined in the Biomass Pact which RWE and other energy producers concluded with a group of non-governmental organisations.

Furthermore, we procure goods, services and plant components for the operation, maintenance, new-build and decommissioning of our plants. Around 26,000 suppliers are registered in our supplier portfolio for procurement of these resources. Some 380 of these suppliers are of particular strategic importance. We are in regular and close contact with all these specific suppliers. The purchasing volume for goods, services and plant components for the RWE Group (including innogy) was about € 6.1 billion in 2016. Here, too, our stakeholders expect environmental, health and safety, and energy efficiency aspects to play a role in procurement as a matter of principle.

### Organisation, management and performance measurement Monitoring of trading partners in wholesale markets

In cooperation with our suppliers, we intend to comply with and promote international environmental and social standards. This is an obligation defined by our ► [Code of Conduct](#) and our principles of conduct. Before we enter into any business relationships with our suppliers, we review all potential trading partners. The review takes place in a standardised and multistage process. We use international databases and information systems in order to see whether there is any





potential misconduct. Since 2014, we have also had access to the information garnered in the ► [Bettercoal Initiative](#). All our trading partners are checked in this way. The number of our licensed trading partners varies and is generally more than 1,000.

#### Promotion of standards in the hard-coal supply chain

Collaborations with other energy companies are absolutely essential. These allow us to exert more pressure in order to meet the requirements for sustainable production and transport conditions in view of the fact that direct delivery relationships are usually lacking. In 2012, we therefore joined forces with other large purchasers of hard coal to launch the Bettercoal Initiative. Bettercoal uses a central database to provide its member companies with the results of audits and the outcomes of self-assessments by the coal producers. A binding improvement process based on the shortfalls identified follows each audit and self-assessment. The names of the producers which have undergone a self-assessment or an on-site audit are regularly listed on the Bettercoal website – provided that the mines agree to publication. In June 2016, Bettercoal published its second annual report. At the end of 2016, the Bettercoal database included comprehensive self-assessments of 26 mines, the results of six on-site audits and a renewed audit incorporated in the agreed improvement process. This provides information on the key potential supply countries for Europe.

#### Hard coal by supply countries in %

	2016	2015
Germany	19.0	13.5
United Kingdom	15.7	16.3
Colombia	16.8	19.8
Poland	0.8	3.4
Russia	31.0	25.1
South Africa	3.9	8.2
USA	11.2	9.8
Other	1.6	3.8

The aim of Bettercoal is to bring about improvements in all the important production countries and leverage coal production at an acceptable environmental and social standard across the world.

Representatives of RWE additionally meet up with representatives of coal producers independently of concrete supply relationships in order to initiate improvements and to offer assistance. For example, in May 2016, we worked together

with trade union officials from FNV, one of the biggest Dutch trade unions, and came together with representatives of the coal producers, Colombian unions and government representatives. In November, we participated in a comparable visit to South Africa.

A grievance mechanism was set up in the Netherlands to deal with incidents in the coal supply chain. The partner for this is the National Liaison Office of the OECD in The Hague. No grievances were filed there in the years 2015 and 2016.

#### Procurement of certified biomass

Certificates guarantee compliance with sustainability aspects along the entire supply chain for the wood pellets imported by us. We use the new industrial standard of the ► [Sustainable Biomass Partnership \(SBP\)](#). RWE has been involved in the SBP Initiative since it was established. So far, the United Kingdom and Denmark have acknowledged the SBP Standard as being compliant with the national sustainability criteria. At all levels of the supply chain, we also use certificates provided by the ► [Forest Stewardship Council \(FSC\)](#) and the ► [Programme for the Endorsement of Forest Certification \(PEFC\)](#). All the biomass supplied by our trading house RWE Supply & Trading is provided with certificates of this nature. The pellets are certified in accordance with differing standards, but in each case they are produced in compliance with at least one standard.

RWE has collaborated with other energy suppliers, pellet suppliers and certification organisations in working out a practical test initiated by the Dutch Sustainability Protocol for Biomass. The protocol was developed by the Dutch government together with energy companies and non-governmental organisations. It has proved robust in testing and is scheduled to become law in 2017.

#### Code of Conduct as a constituent element of all contractual relations

When procuring goods, services and plant components through Group Procurement, all suppliers of RWE must take account of the relevant international environmental, social and compliance standards. Where necessary they should also consider other detailed requirements. We therefore include information about how our suppliers comply with sustainability requirements in our purchasing decisions. The ten principles of the ► [UN Global Compact \(UNGC\)](#), our ► [Code of Conduct](#) and other detailed guidelines form the basis for these requirements.





We can make our Code of Conduct and the principles of the UNGC a constituent element of individual contracts when we have direct relationships with suppliers. This enables us to communicate a clearly defined set of expectations to our suppliers and service providers.

We use an initial appraisal of potential suppliers based on a self-assessment to gather information on matters including environmental protection, occupational safety and compliance.

We are in regular and close communication with strategic suppliers. Across the Group, our supplier management is a key building block for these contacts within the strategic

procurement process and the same holds true for innogy. This management encompasses supplier selection, evaluation, classification and development. We always take account of the perspective of the suppliers.

When any problems occur in the course of a business relationship, we address the matter with our suppliers and work together with them to achieve improvements jointly. We routinely monitor the proportion of the purchase volume in which the requirements of our Code of Conduct are a constituent element of the contractual relationship. During the year under review, the level of coverage was 99.7%.

#### G4-EC9 Proportion of spending on local supplies at significant locations of operation

Most of our procurement is carried out with suppliers at our main business locations or in the relevant countries and regions. Approximately 95% of procurement is carried out by Group Procurement in the relevant regions. All capital expenditure projects and procurement procedures are offered in tender documents with appropriately neutral for-

mulations. The tenders are then placed in the international marketplace. The value in use analysis undergone by our suppliers focuses particularly on criteria of sustainability, occupational safety, energy efficiency and environmental standards.

#### ASPECT: AVAILABILITY AND RELIABILITY – MANAGEMENT APPROACH



##### Challenges

Supply with electricity is one of the most important enablers for the smooth-running operation of our economy. We want to guarantee our customers a secure and affordable supply of electricity and gas at all times. We make a key contribution to this functional requirement with our power plants. The more the feed-in supply from renewable energy sources into the electricity grid fluctuates, the more important this contribution becomes. The expansion and integration of renewable energies and decentralised generating units involve continually increasing demands for the performance of distribution grids and for conventional power plants. Our power plants help to compensate for the fluctuations in the system and provide the physical equilibrium at all times between feed-in and consumption necessary for stable electricity supply. RWE publishes comprehensive and timely data on power generation in its power plant portfolio at ► [www.rwetransparent.com](http://www.rwetransparent.com) and at ► [www.eex-transparency.com](http://www.eex-transparency.com).



##### Organisation, management and performance measurement

###### Ensuring security of supply

Conventional power plants are still necessary to provide a secure and reliable electricity supply in spite of the further expansion of renewable energies. The volatile feed-in from wind and solar plants means that gaps in supply could regularly occur without these conventional sources of electricity. The conventional RWE power plants are ideally suited to this function and therefore make a significant contribution to security of supply. Even in the exceptionally rare case of a blackout, we have power plant capacities which are capable of supporting the reinstatement of the grid systems – for example in lignite with so-called supply islands from power plants and opencast mines or with power plants which have their own energy supply for start-up. In 2016, the relevant fuels for secure operation of our power stations were available at all times.

In 2016, German lawmakers passed an act to limit the period of security standby and subsequent shutdown of a total of eight lignite-fired power station units with a combined out-



put of 2.7 GW. The aim is for the power plants to be gradually taken out of the market and then be available in each case for a period of four years to provide security for the electricity supply. The operators of the lignite-fired power station units scheduled for decommissioning are to contribute through security standby to closing the identified gap in the German greenhouse gas reduction targets for 2020 with an additional reduction of 12.5 million mt CO<sub>2</sub> net. RWE Generation is participating with five units amounting to a total of approximately 1.5 GW generating output.

These include two units each at Frimmersdorf (1 October 2017) and Niederaußem (1 October 2018), and one unit at Neurath (1 October 2019). The maintenance of the power-plant units on standby for a period of four years will be

remunerated. The negotiations on the level of the remuneration are currently being conducted with the Federal Network Agency.

#### Ensuring energy distribution

Integration of renewable energies requires newly sized energy distribution grids and more dynamic load management. innogy has defined its target for achieving this as continuing to maintain grid outage times at a low level in spite of higher technical requirements. We use the number of minutes of power outages that occur for each customer and year as the key performance indicator in the area of security of supply. For information on the System Average Interruption Duration Index (SAIDI) ► see EU29 in the innogy Sustainability Report 2016, page 98.



### EU10 Planned capacity against projected electricity demand over the long term



The development of conventional generating capacity present on the grid at ► RWE Generation depends on the competitive situation in the wholesale market and on decisions by lawmakers. In addition to the gradual shutdown of our German nuclear power plants in accordance with the resolution on exit from nuclear power by the Federal Government and security standby for lignite-fired power stations, we have announced the shutdown of the hard-coal unit at the Gersteinwerk power plant on economic grounds. The two hard-coal units at the Voerde power plant are to be shut down at the end of the first quarter of 2017.

We are continuing to pursue the option of the new-build project for the lignite-fired power station "Optimised Unit Plus" (BoAplus) at the Niederaußem power plant site. However, for this new-build unit we would shut down old power

plant units with a greater capacity when the new unit started up so that capacity would fall overall. ► See Aspect: Efficiency of the Power Plant Portfolio and Distribution Grid – management approach, page 37. We have just introduced the licensing procedures required for protection under pollution laws. Nevertheless, we would not currently take a favourable construction decision under the present economic framework conditions.

The long-term development of demand for conventional generation and secured power-plant output depends on a number of factors including the expansion of renewable energies and their volatile feed-in, as well as the expansion of grids, batteries and load management. We do not have any significant influence on their expansion and use.

## ASPECT: DEMAND-SIDE MANAGEMENT – MANAGEMENT APPROACH

### Challenges

Since 2014, the reduction of existing obstacles to the exploitation of additional potential for flexibility on the demand side in the electricity market has been under continual discussion at European and national level. The intelligent networking of consumers to achieve this aim is becoming increasingly important in this debate. The need for flexibility on the demand side increases with the rising volatility of generation in the marketplace. This is particularly the case in the context of expanding renewable energies. These flexibil-

ities need to be intelligently networked and controlled. This process is described as the demand response. A prerequisite for this is identifying consumers in the market who are prepared to control their consumption flexibly in response to a price signal. In order to achieve this control, they need to structure their energy consumption accordingly, for example by proactively switching off, throttling back or switching on their production machines. We are able to give our customers technical support for this control. The appropriate volumes of energy are then provided on the market to meet

demand or they are taken out of the market if there is excess supply. When prices are high on the balancing energy market, it may be worthwhile for our customers to market their flexibilities. Demand response therefore helps to optimise the electricity costs and performance requirement of the customer. The market for flexibility is a key subject area for RWE. There is potential for growth here, particularly with industrial customers.

#### Organisation, management and performance measurement Marketing of flexibilities

Our trading segment has a broad product range which can leverage potential flexibilities with industrial and commercial customers in the context of the energy transition. This range includes:

- the optimisation of energy procurement by means of high-quality forecasts, and therefore reduction of costs for compensation energy
- the optimisation of booked power and grid usage fees through load and generation management
- the deployment of emergency power units for grid stabilisation.

Our trading segment offers our industrial customers and distributors price-signal supported load management. This means that a time shift in consumption loads to more favourable market-price phases enables costs for sourcing electricity to be reduced. The model is ideal in particular for companies using consumers with flexible time and power capability in their production processes which can be shifted

within a day or a week. Initial experiences demonstrate a substantial potential for optimisation which we leverage within the scope of value-sharing models.

Our ► [Flex2Market Model](#) is ideal for companies which have production flexibilities that they would like to make optimum use of over the short term. For this purpose, we market these flexibilities on the Intra-Day Market or as standard energy in the secondary and minute reserve market.

► [RWE Supply & Trading](#) also offers an electronic trading platform and automatic trading mechanisms. These are intended for industrial customers and distributors who want to procure part of their energy requirement on the exchange with precise requirements for the day or hour. Furthermore, as a service for our customers, ► [RWE Supply & Trading](#) takes over direct marketing of power generation from renewable energies that are subsidised under the Renewables Energies Act (EEG).

innogy also offers its customers demand-response products. For these ► [see the innogy Sustainability Report 2016](#) in Aspect: Demand-side Management – management approach, page 45. Furthermore, innogy offers products that help retail and business customers to make energy savings. These include energy saving advice, electricity and heat storage devices for households, and service packages for the management of photovoltaic systems and wind turbines. For more information on this ► [see the innogy Sustainability Report 2016](#) in Aspect: Energy – management approach, page 50 and Aspect: Products and Services – management approach, page 64. The corresponding service package is naturally also available to our industrial customers.

## ASPECT: RESEARCH AND DEVELOPMENT – MANAGEMENT APPROACH

### Challenges

RWE is continuously driving forward innovations so that the Group is able to contribute to shaping the energy system of the future. We want to be involved in shaping the transformation to a more climate-friendly electricity supply. Our objective is also to assist in continuing to meet the need for energy reliably, without any outages and at affordable prices. The only effective approach to realising our ambition is generating a continuous stream of innovations that address the challenges of our core business and are directed towards achieving the best possible solutions for the energy system of the future.

### Organisation, management and performance measurement Continuous research and development

For this purpose, the technology and plant concepts that are currently mainly directed towards advanced and sustainable application are developed further in different research and development programmes. Here we draw on the competences of our employees and on the expertise offered by our partners at universities, research institutions and industry. A top priority in this area is also promoting the ideas of our employees to achieve this ambition. Our research and development projects are engaged in a wide range of research fields and we are continually registering new patents. In 2016, 380 employees worked full-time or part-time on around 240 R&D projects and filed applications for patents on 61 inventions. RWE also invests in a group-wide network

of experts who analyse existing fields of technology on a continuous basis, and identify and evaluate new developments.



Details on research and development at innogy are provided in the ► [innogy Sustainability Report 2016](#) in Aspect: Research and Development – management approach, page 46.

### Enhancing the flexibility and efficiency of conventional power plants

Climate protection and operation of conventional hard-coal and gas-fired power stations are not two fundamentally contradictory concepts. Ambitious expansion of renewable energies can only be achieved on the basis of a flexible, fossil-fired power plant portfolio which secures supply at all times and under all weather conditions. This is especially the case in Germany, given the existing legislation on exiting from nuclear energy. In order to further increase the flexibility of our power plants, we are running a number of research projects to test new materials and procedures for identification and forecasting of material behaviours under changing loads. This will enable us to facilitate even more frequent and faster load changes, more frequent and faster start-ups and shut-downs, and a lower minimum load than today.

Furthermore, we see emission reduction and protection of resources as an ongoing challenge directed towards making our plants even more climate friendly. Examples of this are approaches for efficiency enhancement and advanced development of flue-gas desulphurisation, development of measures for reducing mercury emissions, and the advancement of techniques for capture and use of CO<sub>2</sub>. At our Innovation Centre in Niederaußem, we are piloting one of the most efficient CO<sub>2</sub> scrubbers in the world and cooperating with the Jülich Research Centre on developing opportunities to make use of CO<sub>2</sub>.

### Facilitating use of lignite as a material

The utilisation capacity of the lignite-fired power stations will decrease over the medium term as renewable energies expand. This offers the opportunity of using lignite, Germany's most abundant domestic natural resource by volume, for the production of energy sources or basic chemicals. Lignite is ideal for so-called material use because it contains carbon and hydrogen. This means it can be used for the production of starting materials for the production of plastics, paints, adhesives, fuels and numerous other chemical products.

## ASPECT: PLANT DECOMMISSIONING – MANAGEMENT APPROACH

### Challenges

The European Union is striving to achieve a 40% reduction in the emission of greenhouse gases by 2030 compared with the baseline year of 1990. Germany has already made a commitment to this target for 2020. The European Emissions Trading Scheme is the key tool for achieving this objective. Other instruments include measures adopted at national level that exert an impact on our fossil-fired power station portfolio. An exit from coal is one of the measures being debated in the Netherlands. However, the Economics Ministry does not currently see any need for a premature decommissioning of hard-coal power stations. This assessment could change if the evaluation of CO<sub>2</sub> minimum targets for 2020 indicates that additional measures appear to be necessary. The future approach therefore continues to remain open. Conversely, the United Kingdom has already defined an exit from hard-coal power generation by 2025. The only issue still to be decided is the tool to be deployed.

The decision on so-called security standby has already been taken in Germany. By 2019, 2.7 GW of lignite-fired power

stations in Germany will be transferred to this operating mode. The plan is for these power plants not to be used for a period of four years unless there is a supply bottleneck. Furthermore, a decline in the amount of electricity generated from hard coal was announced in connection with the Climate Protection Plan 2050. However, this statement was given without the trajectory being anchored in any concrete measures and no dates were specified, ► see [Aspect: Availability and Reliability – management approach](#), page 32.

Germany has also taken a decision to bring the use of nuclear power for energy production to an end by 2022 following the serious nuclear accident at the Fukushima-Daiichi power plant in the Japanese region of Sendai.

### Organisation, management and performance measurement Decommissioning of power plants

Our actions are complying with political developments. We are removing older power plants from the grid, shutting them down and ensuring professional decommissioning in conformity with national standards.

The service life of the nuclear power stations is defined in the Nuclear Power Act (Atomgesetz, AtG). The age of the RWE nuclear power stations means that they will be decommissioned gradually by year-end 2022. The individual power plants impacted are Gundremmingen Unit B (31 December 2017), Gundremmingen Unit C (31 December 2021) and the Emsland nuclear power station (31 December 2022). In addition, initial applications have already been submitted for shut-down and decommissioning of the nuclear power stations Biblis A and B, which were already taken out of operation in 2011. We are expecting to receive the approval in spring of 2017. In parallel, we started to set up a storage facility to accommodate the low and medium-grade radioactive waste from operation and decommissioning in October 2016.

We have also submitted an initial application for decommissioning parts of the Gundremmingen B reactor and we are expecting approval for this application at the end of 2017. The Mülheim-Kärlich nuclear power plant stopped operating in 1988. Modifications in the operation of the plant have been ongoing as the decommissioning process continues and additional parts of the primary circuit have been decommissioned. The approval for demolishing the cooling tower has been in place since February 2017. The demolition work is likely to start in May. We keep stakeholders informed at all the sites through a special transparency initiative. This provides information about the individual milestones during the current procedure.

We have also taken coal-fired power stations out of operation. In Germany, the Westfalen C and D plants were shut down in 2015. As a result of the national Dutch Energy Agreement, five coal-fired power stations were shut down on 31 December 2015, including the Amer 8 operated by RWE. The Tilbury and Didcot A plants and the Fawley and Littlebrook oil-fired plants have also been removed from the grid in the United Kingdom and decommissioning has commenced. This means that we are complying with the requirements of the European Large Combustion Plant Directive.

After bringing the four-year security standby to an end, we will finally shut down five lignite-fired power plant units in Germany, ► see [Aspect: Availability and Reliability – management approach, page 32](#). As a result, the last two lignite-fired units operated at the Frimmersdorf location are being decommissioned. Against this background, a planning consultation has already been launched there. This involves the surrounding local authorities and the Rhine District of

Neuss. The consultation is addressing the future opportunities for usage of the areas. Ultimately, it will involve developing sustainable and structurally effective post-utilisation facilities for the Frimmersdorf power-plant location.

#### Setting provisions aside

RWE AG is committed to its obligations in the framework for decommissioning nuclear energy. We have set aside provisions for these requirements, which are extremely conservative, even on an international comparison. They include significant provision against the risks of cost increases.

The operators of the nuclear power stations pay for all the costs of decommissioning. They have a statutory obligation to set aside an appropriate level of provisions for decommissioning. We have also recognised an appropriate level of provisions for the decommissioning process in the ► [Annual Report 2016 of RWE AG](#), page 134 to 136. They are formed during the operation of the plants and they are valued appropriately in a conservative approach. The provisions comprise the costs for all stages of the post-operational phase and decommissioning, through disposal of fuel rods and radioactive waste from operation, to final storage and complete dismantling. They are updated annually on the basis of current contracts, expert opinions and statements by internal and external experts. These provisions are audited by an independent auditor. The appropriateness of the level of nuclear energy provisions was also confirmed in the context of the stress test expert report by Warth & Klein Grant Thornton. On the basis of previous experience, the costs for the post-operational phase and decommissioning of a nuclear power station are between € 500 million and €1 billion. This final figure depends on the size, age and operating hours of the plants.

From our perspective, the division of responsibility between company and state defined by lawmakers is transparent. The legislation essentially follows the recommendations which the commission appointed by the German Federal Government submitted for the review of financing the exit from nuclear energy (KFK) at the end of April 2016. The review indicates that the Federal Government should pay for the processing and financing of the intermediate and final storage of radioactive waste. The responsibility for the shut-down and decommissioning of plants, and packaging the radioactive waste remains with the company. The functions transferred to the Federal Government will be financed from a fund which is provided by the power plant operators. The



legislation stipulates that the companies must pay a basic amount totalling € 17.4 billion. If they pay a supplement amounting to 35.47%, they can gain indemnity from the liability risks arising from any increases in costs. This yields a total amount of € 23.6 billion for the companies. We estimate that the share to be paid by RWE for the basic amount and the risk surcharge amounts to a total of € 6.8 billion. A major factor for the utilities is that the Federal Government has also granted them contractual protection of legitimate expectation extending beyond the legislation in relation to future changes in the law.

RWE also accepts responsibility in full for complying with future mining obligations arising from our opencast operations. RWE has formed mining-related provisions for the purpose of ensuring rehabilitation of sites. This includes recultivation and measures relating to the water management. The provisions in mining are a so-called rolling system in significant areas. The recultivation and precautionary measures for the water management are largely carried out during current operations so that they continually draw on

a rolling programme of provisions for this purpose. At the same time, new provisions are formed each year to take account of the continual advance of extraction operations. Ultimately, although the expenditure to be paid by the opencast mining industry will extend over a period of decades and significantly beyond the discontinuation of opencast mining itself, they are limited by time.

The provisions for decommissioning our opencast sites have been recognised in the ► [Annual Report 2016 of RWE AG](#), page 136. Existing contracts and licensing documents are used to determine the expected costs underlying the provisions. Comprehensive empirical values from the past are also available. At the planning stage of all mining operations, the responsible regional state authorities are already intensively involved. The issues being addressed include those relating to geology or water management. The mining authorities have a rolling programme of reviews in accordance with statutory regulations in order to assess whether there is a need to provide financial security in addition to the provisions available.



## ASPECT: SYSTEM EFFICIENCY (POWER PLANT PORTFOLIO AND DISTRIBUTION) – MANAGEMENT APPROACH



### Challenges

In order to meet regulatory, economic and environmental requirements, we are continually increasing the efficiency of our conventional plants. The European climate protection targets can only be achieved with higher levels of energy efficiency. As producers of electricity and heat, we are able to make a particular contribution to this by making our power plants more efficient. This allows us to reduce CO<sub>2</sub> emissions per unit of electricity or heat produced. At the same time, we are reducing the consumption of resources. Increasing efficiency is also a key issue in the distribution grid. For more information on this ► [see the innogy Sustainability Report 2016](#) in Aspect: Efficiency of the Power Plant and Distribution Grid – management approach, page 47.



### Organisation, management and performance measurement

#### Increasing the efficiency of conventional power plants

We are driving energy efficiency forward in our power plant portfolio and in other company activities. This makes sense in business terms and environmentally. After all, higher lev-

els of efficiency in energy use enable us to reduce our combustion fuel costs and cut our CO<sub>2</sub> emissions for each converted unit of energy. This enables us to bring down our expenditure on CO<sub>2</sub> certificates as well.

We will achieve a higher level of efficiency in the production of electricity mainly by continuously modernising our conventional power plant portfolio. We are thereby keeping open the option of building the new “Optimised Unit Plus” (BoAplus) lignite-fired power station at the Niederaußem site. This would have an efficiency of more than 45% and substitute legacy plants with more capacities overall and significantly lower efficiency, ► [see EU10](#), page 33. As a result, the CO<sub>2</sub> emissions would be reduced by 3 million metric tons of CO<sub>2</sub> each year by comparison with the legacy plants. In future, we will achieve more efficiency increases through a number of measures including enhanced replacement of hard coal by biomass, ► [see Aspect: Emissions – management approach](#), page 43 and by shutting down older plants. In addition, there is the option of further use of potential

derived from combined heat and power in our plants and the use of heat derived from electricity to cover own requirements.

Already since 2008, we have been monitoring the overall efficiency of energy use from our conventional plants. On the consumer side of the plant, this includes the primary energy use for power generation and the purchase of electricity from outside sources for own use by the plants. The

production side balances this with generated energy, and steam and heat products for our customers. As a result, continuous monitoring using our advanced operating management systems enables us to implement rapid countermeasures as necessary and maximally high energy efficiency of the primary energy sources used in all operating statuses of the plants. Furthermore, analysis of the data yields valuable findings for research and development requirements.

### EU11 Average generation efficiency of thermal plants by energy source and by regulatory regime

Efficiency of energy use <sup>1</sup> in %	2016	2015
<b>Germany</b>		
Lignite	36.6	36.3
Hard coal	38.1	38.4
Gas	62.7	66.7
Waste	44.0	46.7
<b>United Kingdom</b>		
Hard coal	37.0	37.4
Gas	55.9	55.9
<b>Netherlands</b>		
Hard coal	45.4	44.8
Gas	64.0	66.5

<sup>1</sup> Not including power stations in Hungary and Turkey.

At 41.5% we have succeeded in increasing the average efficiency of our energy use compared with 2015 (40.2%). Current market conditions can exert a positive and negative influence here on the mode of operation and hence the efficiency of the power plant portfolio. A renewed increase in

the use of gas-fired power stations exerted a positive impact during the year under review, while lower heat production and increased partial load operation exerted a negative impact.

### EU12 Transmission and distribution losses as a percentage of total energy



German operators of distribution grids have losses across all voltage levels between approximately 2.0% and 4.5%. For example ► [Westnetz](#) has published details relating to 2015.

# ENVIRONMENTAL PERFORMANCE INDICATORS

## ASPECT: ENERGY – MANAGEMENT APPROACH



### Challenges

The European Efficiency Directive has been implemented in the national law of our important markets. This legislation obliges all large companies either to carry out an energy audit, or introduce an Energy Management System in conformity with ISO 50001 or an Environmental Management System in compliance with EMAS. There are comparable legislative requirements in other European countries.

We implement economic measures related to environmental protection and energy efficiency which exceed compliance with statutory requirements and legislation governing the issue of licences. These measures are derived by adopting an ethical and responsible approach to the environment, and cover the use of energy in our office buildings, vehicle fleets, opencast mines, power plants and refinement facilities. Careful use of energy also makes economic sense.

### Organisation, management and performance measurement

#### Group-wide coverage for environmental management system

The structural requirements for the management of occupational health and safety, environment, energy and other issues are largely similar. We are therefore dealing with them in an integrated management system for reasons of synergy.

All RWE companies are committed in accordance with their guidelines to setting up an appropriate Environmental Management System. This needs to comply with the requirements of the international ISO 14001 standard. Annual audits ensure compliance with this obligation. In this context, we also strengthen the energy and environmental awareness of our employees through training sessions and by providing other information, as well as direct dialogue. This approach requires a continuous improvement process as a key target of our environmental corporate policy. We identify, evaluate and roll out measures systematically in order to improve the energy-based performance and protection of the environment. The percentage coverage by our

Environmental Management System gives us a key performance indicator. The coverage level of environmental management in relation to the Group amounted to 100% in 2016. 89% of this was certified externally.

#### Group-wide coverage of energy efficiency audits or management systems

We have defined a goal of rolling out group-wide energy efficiency audits or management systems in a timely approach. In 2007, the Conventional Power Generation Division had already established an Environmental Management System in conformity with ISO 14001 with the aim of bringing about a sustainable improvement in energy efficiency and environmental protection, and reducing the use and consumption of energy at the German operational facilities. In 2013, the Energy Management System was integrated in conformity with ISO 50001. The two systems have so far been successfully recertified. This process was last carried out in 2016. The level of coverage with certified Energy Management Systems amounted to 69% for the RWE Group.

In 2015, all RWE companies with more than 250 employees were audited for energy efficiency by an external service provider. We have therefore promptly complied with the regulations implemented under German legislation. These rules are defined in the Energy Efficiency Directive of the European Union. The Eemshaven hard-coal power station located in the Netherlands constitutes an exception. The audit there took place in 2016 because commercial operation was only started up in 2015. We obtained a special licence for this. In Hungary, the ELMŰ-ÉMÁSZ Group was the first energy company to receive a certificate in compliance with ISO 50001. In Germany, compliance with the statutory regulations resulting from the management system of conventional power generation has been successfully tested by the Federal Office for Economic Affairs and Export Control (Bundesamt für Wirtschaft und Ausfuhrkontrolle, BAFA) in three random samples without any objections.



## G4-EN3 Energy consumption within the organisation



	Unit	2016	2015
Primary energy consumption <sup>1</sup>	million GJ	1,478	1,467
Energy consumption of the sites	TWh	8.2	7.7
Energy consumption of the grids	TWh	8.6	8.5

<sup>1</sup> Fossil fuels used, not including biomass.

## ASPECT: WATER – MANAGEMENT APPROACH



### Challenges

The water supply in Germany is one of the best in the world. However, we believe that as an industrial operation with a requirement for water at our plants we have an obligation to take a responsible approach to water. Our operations affect water consumption and the use of water when it is withdrawn from the rivers, surface waters and groundwater. Naturally, there are also impacts when we discharge wastewater into these waters. We comply with the statutory regulations for these activities. Investors are in fact increasingly placing this demand on us and other companies.

### Organisation, management and performance measurement

A top priority for RWE is ensuring that our use of water exerts minimum impact on natural resources when we supply our thermal power plants with cooling water. Dewatering in our opencast sites is an operational necessity and therefore unavoidable. We attempt to make these interventions in a maximally environmentally friendly way.

### Establishing environmental protection in business processes

► See Aspect: Emissions – management approach, page 43.

### Group-wide coverage for environmental management

► See Aspect: Energy – management approach, page 39.

### Compliance with approval regulations

► See Aspect: Emissions – management approach, page 43.

### Minimising risks associated with water

The Executive Board has appointed specialist coordinators for a wide range of environmental topic areas in order to provide specialist support for the local Water Protection Officers and to coordinate their activities. They also advise the divisional managers. In addition, these coordinators

cover the protection of rivers and surface waters. A record is kept of the interfaces of RWE activities with water that exert or can exert an impact on rivers and surface waters. The type of impact on the water is also determined. This relates primarily to water withdrawal or discharge of water including the use of water in our power plants. We record the impacts of environmental aspects for rivers and surface waters on the basis of existing licences, limits and expert reports, and the operating results of the previous year. The relevance of the results is evaluated by the internal specialist departments and a group of experts taken from government agencies, associations and experts. Analysis of the environmental impacts in relation to the potential level of damage and frequency or probability of occurrence facilitates transparent presentation of the evaluation. We assess measures already introduced for minimising risks and avoiding accidents on this basis. If this action is not adequate, other measures are developed and introduced.

### Protection of rivers and surface waters

We want to contribute to preserving water as a habitat and to maintaining the biotopes dependent on it. Our objective is to avoid negative consequences of our interventions in surface waters and ecosystems or – where this is not possible – to minimise such impacts as far as possible. We mitigate unavoidable negative consequences to the maximum extent feasible. We also provide the best possible protection against adverse impacts for aquatic habitats and other ecosystems linked with such habitats. This objective is assisted by discharging water back into the ground and into surface waters in a structured process. Furthermore, we avoid environmental impacts owing to the use of methods such as recirculation, intensification of usage for pumped water from opencast mines, the use of collected rainwater and the reuse of process water.



## G4-EN8 Total water withdrawal by source



	Unit	2016	2015
<b>Water</b>			
Cooling water consumption net <sup>1</sup>	million m <sup>3</sup>	264.5	293.7
Water consumption net	million m <sup>3</sup>	267.7	297.3
<b>Water withdrawal</b>			
Groundwater	million m <sup>3</sup>	623	598
Surface water	million m <sup>3</sup>	1,447	2,141
Seawater/brackish water	million m <sup>3</sup>	4,170	4,248
Drinking water	million m <sup>3</sup>	3.2	3.5
Other sources	million m <sup>3</sup>	31.0	30.0
Total water withdrawal	million m <sup>3</sup>	6,270	7,016

1 Difference between power plant water withdrawals and returns to rivers and other surface waters; excluding power plants with sea cooling.

Treatment of ash with water and scrubbing coal with water is not carried out at RWE.

## ASPECT: BIODIVERSITY – MANAGEMENT APPROACH

**Challenges**

Protecting diversity and preserving habitats is an important mission for us. Our activities create direct and indirect interventions in ecosystems. Wherever feasible we avoid or minimise these impacts. As far as possible, we take appropriate nature conservation measures to mitigate unavoidable or irreversible negative consequences. This has impacts on our opencast mines, the maintenance of our transmission lines and the construction and operation of plants for generating renewable energies. For more information on biodiversity in the areas of Renewables and Grid & Infrastructure ► [see the innogy Sustainability Report 2016](#) in Aspect: Biodiversity – management approach, page 52.

**Organisation, management and performance measurement  
Protecting biodiversity**

Compliance with regulations governing biodiversity is also a prerequisite for meeting the licensing regulations for our business. The regulations governing biodiversity are defined in a number of sources including the special operational plans for species protection approved by the mining authorities. We meet these regulations using internal controlling systems and exceed the requirements with more extensive measures. Since 2015, RWE has had a Biodiversity Policy. This guideline establishes the approach of RWE to the protection and promotion of biodiversity as the company car-

ries out its business activities. Biodiversity is also an area covered by environmental management, ► [see Aspect: Energy – management approach, page 39](#). Our measures are very diverse within this framework. We protect species diversity strategically if natural habitats are disturbed by our activities. The same approach continues as we reinstate substitute habitats or facilitate the repopulation of existing habitats. We also promote biodiversity by rehabilitating mining sites to make them suitable for reuse. We install fish ladders at our run-of-river power plants and use technical measures to protect the aquatic animal world at offshore wind farms. These measures contribute to the preservation of species in these habitats.

**Reinstating habitats**

We compensate the use of land for our opencast mining by recultivating the extraction sites. This approach enables us to return rehabilitated areas of land to agriculture and other uses while also creating space for nature conservation where we can strategically foster biological diversity. The objective of recultivation is to reinstate the development potential of the landscape while taking account of the typical conditions of the surrounding environment. Reforestation is a key building block for this. RWE has established a reputation with its approach on recultivation: A diverse landscape made up of forest, extensive lakes, ponds and wetland biotopes came

into being at the former extraction sites in the Rhineland lignite mining areas. They offer new habitats to numerous endangered animal and plant species.

One example of our recultivation measures is provided by the region around the Hambach opencast mining area. The flora and fauna habitat of Steinheide/Lörsfelder Busch/Dickbusch subject to special protection is located in the immediate vicinity of the Hambach opencast mine. The objective of the recultivation after lignite opencast mining has finished is to preserve areas of forest and to manage them in accordance with a natural approach. Deforestation of the Hambach forest for the planned development of the Hambach open-

cast mine is regrettably unavoidable, and it is not possible to eliminate removal of the forest. However, after opencast lignite mining ceases on the land, we will reinstate the forest with appropriate recultivation measures. Furthermore, a total of 1,500 hectares of species protection measures will be implemented outside the opencast mine for the species living in the wood.

We also safeguard the habitat for plants and animals in the Elsbach Valley and we have additionally transformed the Elsbach Valley into a popular leisure amenity. This now has a length of over two kilometres and today, animal and plant species under threat have a new home there.

#### G4-EN11 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas

Nature conservation areas are designated on the basis of the German Federal Nature Conservation Act (BNatSchG) and they are the responsibility of various authorities. In the administrative district of Cologne, these areas are managed by the district government as a higher nature conservation authority provided that the areas have not already been designated as the responsibility of the regional districts or municipal city authorities. RWE and its subsidiary companies are owners or leaseholders of parcels of land throughout Germany. The actual number of these parcels of land and the number of designated conservation areas around our locations is undergoing continuous change across Germany. For example, conservation areas are currently located alongside the operating area of our Hambach opencast mine.

They cover an area of some 1,620 hectares, ► see Aspect: Biodiversity – management approach, page 41. These are distributed over approximately 66 ha of nature conservation area, approximately 1,554 ha of landscape conservation area and some 0.56 ha of protected landscape elements. The largest contiguous land area is the recultivated Sophienhöhe Forest covering an area of 1,194 ha. This is located on the overburden dump of the Hambach opencast mine.

Continuous updating for all our parcels of land would take a disproportionately high input of resources. Furthermore, it is by no means certain that the digital data required from the authorities for such an updating process would be sufficiently up to date to provide an accurate determination.

#### G4-EN12 Description of significant impacts of activities, products and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas



The operation of nuclear and conventional power stations and plants for generating electricity from renewable energies and for the production of lignite inevitably result in our impacting on natural ecosystems. Harmful substances are released during the generation of electricity and heat at our power plants or the operation of our opencast mines, and they could lead to negative impacts on the environment and biodiversity. We are therefore committed to maintaining the purity of air and water and to conserving natural ecosystems.

We compensate the use of land for our opencast mining activities by recultivating the extraction sites. For recultivation of opencast mining areas ► see Aspect: Biodiversity – management approach, page 41. The expansion of the grid and the building and operation of plants for generating renewable energies also exert impacts on biodiversity. For more information on this ► see the innogy Sustainability Report 2016 in Aspect: Biodiversity – management approach, page 52.



### EU13 Biodiversity of habitats protected or restored

In 2016, five landscape conservation areas located in the Rhine-Erft district were designated under the legislation. They cover the recultivated areas of the former Bergheim, Fortuna and Frimmersdorf opencast mines. These areas were placed under protection in order to preserve, develop and reinstate the efficiency and function of the balance of nature, including protection of biotopes and habitats of certain species of wild animals and plants. The evaluation criteria included diversity, characteristic features and beauty, as well as the special significance of the cultural history of the landscape and its particular significance as a recreational amenity. This conservation success is also due to the quality of our recultivation.

The new conservation areas cover an area of around 3,398 ha. The age of the designated areas of opencast mine mean that we are not aware of any listings as conservation areas originating from before the period of opencast mining activities. The renaturalised post-mining landscape of today is in fact structurally more diverse than was the case before its use as a mining site. Alongside the quality of our recultivation, this diversity also contributed to designation of these landscapes as conservation areas.

## ASPECT: EMISSIONS – MANAGEMENT APPROACH



### Challenges

RWE is an energy utility with a high proportion of fossil combustion fuels in power generation. Climate protection and the consequent reduction of greenhouse gas emissions therefore remain extremely important areas. The aim is to establish a more sustainable alignment for our business activities. This is especially true for the Conventional Power Generation Division. The political debates and resolutions at global, national and regional level demonstrate the extent to which this topic defines the supervisory and social regulatory framework for RWE. In December 2015, the Paris Climate Agreement COP21 was adopted. This agreement committed all the signatory countries to jointly limiting the global rise in temperature to a level significantly below 2 degrees celsius compared with the pre-industrial level. The European Union is striving to reduce the emission of greenhouse gases by 40% compared with the baseline year of 1990 by 2030. Germany has already established this target for 2020. This is a significant challenge because the exit from nuclear energy needs to take place by the beginning of the 2020s. Investors also challenge us on the topic of climate protection exemplified by the keyword decarbonisation. Demands are increasingly being placed on us to realign our business model in the direction of lower CO<sub>2</sub> emissions.

The political and regulatory framework conditions are currently undergoing change in the countries where we operate fossil-fired power stations. Issues relating to the future of

coal-fired generation are being discussed in Germany, in the United Kingdom and in the Netherlands, ► see Aspect: Plant Decommissioning – management approach, page 35.

Developments in energy markets are also exerting an additional influence on our CO<sub>2</sub> emissions. Power plants supply their power generation at the costs they incur. The individual demand at any time determines which power plants are used. Power plants with high generating costs are correspondingly deployed less frequently. The commodity prices of gas and hard coal therefore also exert an influence on the deployment of power stations. Power plant operators are not permitted to withhold their generating capacities from the market. Conditions in the marketplace have therefore meant that our gas-fired power stations were particularly well utilised in the United Kingdom and Germany this year compared with 2015 on account of their specific CO<sub>2</sub> emissions. However, utilisation of their capacity continued to remain significantly behind the utilisation of our lignite-fired and hard-coal power stations. For more information on the economic framework conditions ► see the Annual Report 2016 of RWE AG, page 26 to 31.

Furthermore, carbon capture and usage or storage are other options for reducing greenhouse gas emissions. Alongside profitability, a prerequisite for rolling out projects involving carbon capture and storage (CCS) would be an appropriate legal framework and creation of acceptance for this technol-



ogy in the public domain. However, the existing statutory framework conditions and the lack of acceptance mean that implementation of CCS projects in Germany is currently not possible.

Apart from CO<sub>2</sub> emissions from electricity and heat production in conventional generating units also include sulphur dioxide (SO<sub>2</sub>), nitrogen oxide (NO<sub>x</sub>) and dust.



CO<sub>2</sub> emissions derived from the upstream and downstream value chain and noise emissions are a top priority for innogy. For more information on this ► [see the innogy Sustainability Report 2016](#) in the Aspect: Emissions – management approach, page 55.

#### **Organisation, management and performance measurement** Establishment of environmental protection in business processes

A responsible approach to natural resources and promotion of the use of environmental technologies is one of the principles governing conduct at RWE. This is recorded in the Code of Conduct. The provisions of the Code of Conduct were applicable for the entire RWE Group in 2016.

#### **Group-wide coverage for environmental management system**

► See Aspect: Energy – management approach, page 39.

#### **Compliance with planning approval regulations**

Our key performance indicator in the area of environmental protection is compliance with licensing regulations when constructing and operating our plants and facilities. We ensure compliance through regular checks at local level. Our objective is to achieve operation of our power plants and other facilities in compliance with licensing regulations. We achieved this goal in 2016.

#### **Reduction of financial risks**

Financial risks associated with emissions trading are reflected in our risk management. We reduce these risks by concluding appropriate hedging transactions. At the same time, as we sell a specific amount of electricity in the futures market, we purchase the corresponding amounts of combustion fuel required and any necessary emission certificates in order to hedge our operations and minimise risk.

#### **Reduction of our own CO<sub>2</sub> emissions**

We use the CO<sub>2</sub> emissions from plants subject to the European Emissions Trading Scheme (EU ETS) and the total emissions based on the Greenhouse Gas Protocol (GHG) as an indicator for CO<sub>2</sub>. We also report generating plants there in compliance with GHG if they are not included under the EU ETS because of their geographical location or their size. The same applies to CO<sub>2</sub> emissions from biogenic fuels, and plants which are not used for power generation. In order to reduce the specific CO<sub>2</sub> emissions, we carry out checks and take appropriate measures in order to improve the efficiency of our conventional power plants. Furthermore, we have modernised our power plant portfolio with highly efficient plants placing particular emphasis on gas-fired installations. However, the use of these plants needs to be aligned with the current conditions in the marketplace.

The operation of our lignite-fired power plants and the associated CO<sub>2</sub> emissions are limited by restrictions on the production of lignite. At the beginning of July, the government of North Rhine-Westphalia reaffirmed its key decision on the future of lignite production at the Garzweiler II open-cast mine. The state government confirmed that the facility is also required for the generation of energy after 2030. It is estimated that the coal reserves at Garzweiler II approved under planning regulations will be reduced by one third. However, the current extraction capacities for the Hambach and Inden opencast mines were also confirmed as being necessary from the economic perspective of the energy industry.

By 2020 compared with the present day, we will have reduced our emissions produced in the generation of electricity from lignite by around 15% as a result of so-called security standby. Between 2020 and 2030, additional options for the reduction of CO<sub>2</sub> will be available. One such option is the potential increase in efficiency through construction of an "Optimised Unit Plus" (BoAplus) with the current level of efficiency and decommissioning of equivalent capacity of other, older power plant units. As additional renewable energies come on stream, there may be a further reduction in the capacity utilisation of lignite-fired power plant units. This could enable emissions to be reduced by around a further 5% to 15% by 2030.

The closure of the Inden opencast mine and the associated shutdown of the Weisweiler power plant will reduce CO<sub>2</sub> emissions by a further 20%. We will therefore achieve total CO<sub>2</sub> reduction of approximately 40% to 50% as a result of the generation of electricity from lignite by around 2030. After this, the generation of electricity from lignite will continue to decline. The reduction will result from the further expansion of renewable energies until around the middle of the century, when the Garzweiler and Hambach opencast mines will be closed. Until then only the highly efficient BoA plants with optimised technology will be operated. This plan is in harmony with the national and European climate protection targets by 2050.

Apart from lignite, other shutdowns are also being planned or implemented. The plants Westfalen C, Tilbury, Didcot A and Amer 8 have already been shut down and we anticipate further CO<sub>2</sub> reductions in our power plant portfolio. This will come about through the shutdown of our Gersteinwerk hard-coal power station, which we announced at the beginning of 2019, and the Voerde A/B hard-coal power station in the first quarter of 2017.

Another factor in the equation is that we are partly replacing hard coal for firing our power plants with biomass. The Amer 9 power plant in the Netherlands will achieve specific emissions at the level of a combined-cycle gas turbine power station. On the basis of the second tender round, RWE will continue to receive SDE+ funding in future from the Dutch programme for promoting renewable energies and other financial support for the co-combustion of biomass at the Amer 9 and Eemshaven sites. Starting in 2020, this will enable us to increase the proportion of biomass at the Amer 9 power plant by as much as 80%. We are able to co-incinerate up to 15% biomass at Eemshaven. RWE is therefore able to make an important contribution to the modernisation of the

energy system in the Netherlands. During the year under review, we used 3.0 million metric tons of biomass (3.2 million metric tons in 2015) at our plants. The market conditions were such that we also brought more gas-fired power stations on stream, ► see Aspect: Economic Performance – management approach, page 26.

Even though carbon capture and storage is currently not yet accepted in Germany, we are continuing to engage in research into the necessary technologies. We are using our CO<sub>2</sub> scrubbing facility in the Coal Innovation Centre at the Niederaußem power plant to work on making carbon capture even more efficient for generating electricity from fossil fuels and biomass. At the same time we are also researching into how the captured carbon can be used. For many years, RWE has been committed to working on joint projects with industry and research institutes. The objective is to return the CO<sub>2</sub> to the materials cycle as a raw material.

innogy is driving forward climate-friendly power generation with the expansion of renewable energies. For more information on this ► see the innogy Sustainability Report 2016 in the Aspect: Emissions – management approach, page 55.



#### Reduction of mercury, sulphur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>) and dust particles

These emissions in our plants are below the statutory limits with the assistance of primary and secondary emission reduction measures such as firing technology, removal of dust and desulphurisation. Despite the fact that some limits have become more stringent during the period under review, no incidents, hazard-related events or exceeding of relevant limits occurred at any of our sites under emission pollution laws that needed to be followed up as a result of breaches of regulations. For more information on this ► see G4-EN21, page 46.

### G4-EN15 Direct greenhouse gas emissions (Scope 1)



	Unit	2016	2015
CO <sub>2</sub> emissions in compliance with EU ETS	million mt	148.3 <sup>1</sup>	150.8 <sup>2</sup>
CO <sub>2</sub> emissions Scope 1 (in compliance with GHG Protocol) <sup>3</sup>	million mt	154.0	152.3

1 Including power plants not owned by RWE that we can deploy at our discretion on the basis of long-term agreements. In 2016, these plants emitted 7.1 million mt of CO<sub>2</sub> (previous year: 6.9 million mt).

2 Including generation of the Lynemouth hard-coal power station in the United Kingdom. This was sold at the beginning of 2016 in the Trading/Gas Midstream segment.

3 EU ETS generation plus the emissions from plants which are not subject to EU ETS.

#### G4-EN16 Energy indirect greenhouse gas (GHG) emissions (Scope 2)



	Unit	2016	2015
CO <sub>2</sub> emissions Scope 2 <sup>1</sup>	million mt	1.3	1.3

<sup>1</sup> Scope 2: indirect CO<sub>2</sub> emissions from the transmission and distribution of electricity purchased from third parties outside the Group in our own grids.

#### G4-EN17 Other indirect greenhouse gas (GHG) emissions (Scope 3)



	Unit	2016	2015
CO <sub>2</sub> emissions Scope 3 <sup>1</sup>	million mt	86.5	93.9

<sup>1</sup> Scope 3: indirect CO<sub>2</sub> emissions that do not fall under Scope 1 and Scope 2, produced through the generation of electricity procured from third parties, the transmission and distribution of electricity in third-party electricity grids, the production of used combustion fuels, as well as the combustion of gas sold to customers.

#### G4-EN18 Greenhouse gas (GHG) emissions intensity



	Unit	2016	2015
Specific CO <sub>2</sub> emissions EU ETS	mt/MWh	0.686	0.708
Specific CO <sub>2</sub> emissions Scope 1	mt/MWh	0.713	0.715

#### G4-EN19 Reduction of greenhouse gas (GHG) emissions



► See reduction of our in-house CO<sub>2</sub> emissions in Aspect: Emissions – management approach, page 44.

#### G4-EN20 Emissions of ozone-depleting substances (ODS)

Negligible amounts of ozone-depleting substances, which primarily relate to chlorinated hydrocarbons, are used in

coreprocesses at RWE so that there is no separate recording process for them.

#### G4-EN21 NO<sub>x</sub>, SO<sub>x</sub> and other significant air emissions



Absolute emissions	Unit	2016	2015
NO <sub>x</sub> emissions	thousand mt	100.7	115.9
SO <sub>2</sub> emissions	thousand mt	38.9	53.7
Particulate matter emissions	mt	2,680	3,580

  

Specific emissions in g/kWh	2016	2015
NO <sub>x</sub> emissions	0.47	0.54
SO <sub>2</sub> emissions	0.18	0.25
Particulate matter emissions	0.012	0.017

Apart from our research activities into capturing CO<sub>2</sub> emissions on a pilot scale, we are working on advanced developments to reduce the emission of pollutants that are released during the production of electricity and generation of heat at our power plants. This is achieved by installing modern burner technologies and optimised separation processes in our power plant portfolio. One example of this is mercury, where the advanced technologies used today for flue-gas scrubbing already remove up to 90% of this harmful substance when pure coal is used for combustion. At the Coal Innovation Centre in the Rhineland lignite mining area, we are currently working on further improved procedures for capturing mercury. One approach is to add furnace coke to the flue gas. Since the 1980s, we have been using flue-gas desulphurisation systems to capture SO<sub>2</sub> from the flue gas. This process involves the SO<sub>2</sub> being scrubbed out with the assistance of a limestone solution. The FGDplus concept developed by the Coal Innovation Centre at the Niederaußem site has enabled us to further optimise the chemical processes in desulphurisation and reduce our own in-house requirement for electricity by comparison with conventional flue-gas desulphurisation systems. After the technology was initially tested on an industrial scale at the flue-gas train of unit G in Niederaußem, it is now being successfully introduced in the two flue-gas trains of Unit H.

#### Reduction of air pollutants: dust and noise

Legislation requires opencast mines to be structured and operated so that harmful environmental impacts are avoided if this is possible with the current level of technology. If environmental impacts are unavoidable, they should be kept to a minimum using the latest technology available. We are able to fully comply with these obligations. These environmental impacts connected with the operation of opencast mines are primarily dust and noise pollution. We adopt suitable measures to reduce these emissions in a case by case approach that takes into account the operational conditions and local circumstances. Noise emissions are reduced by the use of low-noise machinery, equipment and installations, encapsulating drive units, establishing facilities behind protective ramparts and walls, and putting planting schemes in place across sound propagation pathways. We take a number of measures to reduce dust emissions (dust precipitation) including treatment of open surfaces to prevent the removal of dust. The action here includes covering with materials that will not be blown away, spraying large areas with water and other methods of binding dust to the surface. The individual methods are always carried out in consultation with the supervisory authorities. Furthermore, operations monitoring stations at opencast mines are available 24/7 for any citizens who may have issues, so that short-term remedies can also be implemented if there is an incident of acute noise pollution.

## ASPECT: EFFLUENTS AND WASTE – MANAGEMENT APPROACH



### Challenges

As an energy generator we do not simply consume raw materials. A responsible approach to resources includes waste management. This enables us to comply with the licensing regulations. Wastewater and waste are avoided as far as possible. Unavoidable waste is disposed of in accordance with the statutory regulations. We ensure that all safety regulations are complied with and relevant precautions are taken.

### Organisation, management and performance measurement Ensuring sustainable waste disposal

Comprehensive waste management ensures that the waste generated is transferred in accordance with the regulations to reuse, recycling, recovery or disposal. Measures are taken in order to meet these requirements, for example waste is collected separately in suitable containers as far as possible and handed over to a specialist disposal company.

The requirements defined in waste legislation have to be taken into account for the disposal of the waste generated in the course of our operations. Owing to the varying composition of waste and the resulting potential for hazard, waste is classified into two categories: hazardous and non-hazardous waste. We also distinguish between recovery and disposal. Waste subsequently undergoes further appropriate treatment. During the project phase, new-build and maintenance of plants, an internal system records and analyses the potential harm caused by waste disposal. Appropriate protective measures are also defined. Disposal information systems are used for organising disposal services. These information systems guarantee compliance with all the applicable statutory and contractual conditions in the disposal of the waste generated.



We treat residual materials and waste from our nuclear power plants which occur while they are being operated as well as when the power plants are decommissioned. Treatment and disposal is carried out in accordance with the statutory regulations. Only a small part of the entire mass of the nuclear plants ever comes into contact with radioactive materials when they are operational. The greatest proportion of this material is then cleaned with the assistance of decontamination measures so that it can be released by the government authorities and then returned to the normal materials cycle. The remaining residue – only around 3% of the total mass of a nuclear power station – is destined for disposal in a final repository for radioactive waste. This material primarily includes components near the core of the reactor. Until the material has been consigned under statutory regulations to a final repository operated by the government, these waste materials and spent fuel rods will in future be kept at an intermediate storage facility under the responsibility of the German Federal Government.

Power plant residues are produced at our lignite-fired power plants in the form of ash and FGD gypsum. The ash is largely eliminated in residue deposits of RWE Power AG defined in accordance with approved plans. Most of the gypsum produced from the flue-gas desulphurisation (FGD) system is recovered. Ash and gypsum from the hard-coal power stations is mainly forwarded for material recovery. A small amount is disposed of.

#### G4-EN22 Total water discharge by quality and destination

The pollutant concentrations for wastewater discharged from operational facilities are limited by the licensing authorities with specification of monitoring values. These values are defined in the relevant permits under water legislation. The monitoring values are checked by in-house moni-

#### Avoid waste

The principle of avoidance, recovery and disposal provides the platform for our waste management. Our top priority is avoidance of waste. This conserves resources and protects our employees and the environment. All organisational units are therefore continually reviewing the possibility of avoidance for the waste that is produced within their area of responsibility. This already happens in the course of the planning and procurement process.

We continuously reduce the quantity of waste as much as possible. One of the ways we do this is by optimising our plants. Nevertheless, a distinction is drawn for the waste actually incurred between reuse, recycling and other uses of waste, for example recovery of energy. Disposal is only permissible if recovery is not technically possible or is not commensurate with commercial requirements.

#### Process wastewater

Our internal wastewater treatment facilities and their regular monitoring ensure the prevention of potential contaminants. We keep records in compliance with prescribed limits. This process enables us to avoid negative impacts for the natural environment and health.

toring systems and in the course of regular in-house surveys and also in independent monitoring exercises carried out by government agencies. The permissible monitoring values ensure that a good ecological status and a good environmental potential can be achieved for the surface waters.

#### G4-EN23 Total weight of waste by type and disposal method

The reprocessing of irradiated nuclear fuel has not been permitted in Germany since 1 July 2005. The Federal States in Germany are responsible for final disposal of radioactive waste.

Power plant residues from our hard-coal power stations dominate the generation of waste. Out of a total of 8,201 mt, 25.7% of ash from hard-coal power stations is reused in applications such as road and track construction. 100% of





the ash from the lignite-fired power stations is eliminated in power-plant residue deposits of RWE Power AG defined in accordance with approved plans. The process of flue-gas desulphurisation of our hard-coal power stations generates

gypsum produced from the flue-gas desulphurisation system. Most of this gypsum is passed on for recovery. Other waste is also produced in the course of our operations. This waste is forwarded for reuse, recycling, recovery or disposal.

Waste	Unit	2016	2015
Ash	thousand mt	8,201	8,495
Useable ash <sup>1</sup>	thousand mt	1,567	1,632
Gypsum	thousand mt	2,042	2,172
Useable gypsum	thousand mt	1,105	1,259
Nuclear waste from power stations	thousand mt	267.3	325.1
Spent fuel elements	thousand mt	267.1	67.5
Total waste (not including residual materials)	thousand mt	8,015	8,253
of which hazardous waste	thousand mt	144	137
of which non-hazardous waste	thousand mt	7,871	8,116

<sup>1</sup> On the basis of authority regulations, ash used to fill opencast mining sites can no longer be declared as recovery from 2010.

#### G4-EN24 Total number and volume of significant spills

During the reporting period, no significant spills of harmful substances were recorded in the regular internal survey for RWE.

### ASPECT: PRODUCTS AND SERVICES – MANAGEMENT APPROACH

#### Challenges

Our customers demand that we provide support for them with innovative technologies and services for the reduction of their environmental impacts. This aspect is particularly important for major industrial customers of our

► [RWE Supply & Trading](#) segment and for innogy.

#### Organisation, management and performance measurement Supporting customers in saving energy

RWE Supply & Trading offers its industrial customers a portfolio of service packages, ► see [Marketing of Flexibilities](#) in [Aspect: Demand-side Management – management approach](#), page 34.

The portfolio of innogy for commercial customers comprises energy controlling, combined heat and power (CHP) and other advice packages. For more information on this ► see [the innogy Sustainability Report 2016](#) in [Aspect: Products and Services – management approach](#), page 64. innogy offers retail customers products and services designed to assist them in saving energy. For more information on this ► see [the innogy Sustainability Report 2016](#) in [Aspect: Energy – management approach](#), page 50.

#### G4-EN27 Extent of impact mitigation of environmental impacts of products and services

When bringing down our own CO<sub>2</sub> emissions in the generation of electricity, we simultaneously contribute to reduction of the CO<sub>2</sub> footprint of our electricity customers, for more information on this ► see [Aspect: Emissions – management approach](#), page 43.

## ASPEKT: COMPLIANCE – MANAGEMENTANSATZ

### Challenges

Acting in accordance with the law and rules and procedures is an integral part of our corporate culture at RWE. Any breaches mean that the company can suffer major and serious reputational damage. RWE therefore bases all its activities and business decisions on established internal rules for compliance. Appropriate compliance requirements are also factored in when making decisions about entering into business relationships with suppliers or business partners. Many activities in environmental protection extend beyond the obligations arising from laws or licences for the operation of opencast mines and power plants.

### Organisation, management and performance measurement

**Establishing environmental protection in business processes**  
A responsible approach to natural resources and promotion of the use of environmental technologies is one of the principles governing conduct at RWE and this principle is enshrined in the Code of Conduct.

The provisions of the ► [Code of Conduct](#) were applicable for the entire RWE Group in 2016.

### Group-wide coverage for environmental management

► See Aspect: Energy – management approach, page 39.



## G4-EN29 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations

During the year under review, no significant monetary and non-monetary sanctions were reported in a regular internal survey.

## ASPECT: OVERVIEW – MANAGEMENT APPROACH

### Challenges

We are committed to protecting the environment in a wide variety of ways. We present the costs incurred transparently. This complies with the expectations of our stakeholders.

### Organisation, management and performance measurement

#### Expenditure on environmental protection

Our activities for environmental protection incur various costs that differ according to category. We provide a breakdown of these costs based on the areas of activity, ► see G4-EN31, page 50.

## G4-EN31 Total environmental protection expenditures and investments by type



Expenditure on environmental protection in € million	2016	2015
Air pollution control	217	228
Nature conservation and protection of the landscape	164	71
Water protection	176	168
Waste disposal	317	273
Noise abatement	7	9.5
Polluted sites, soil contamination	2	8
Climate protection	1,060	1,246
<b>Total</b>	<b>1,944</b>	<b>2,002</b>

## ASPECT: SUPPLIER ENVIRONMENTAL ASSESSMENT – MANAGEMENT APPROACH

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► See Aspect: Procurement Practices – management approach, page 30.

### G4-EN32 Percentage of new suppliers that were screened using environmental criteria



The principles of the United Nations Global Compact are a constituent element of contractual relationships for all new and existing direct suppliers. Furthermore, the suitability of suppliers is evaluated during the course of pre-qualification on the basis of the hazard potential within a procurement

process. In such cases, compliance with the defined criteria can be reviewed during the course of supplier appraisals and used for future tender processes in the framework of the internal appraisal system.

### G4-EN33 Significant actual and potential negative environmental impacts in the supply chain and actions taken



We can only report on the number of suppliers for goods, services and plant components audited for environmental aspects and on the audits carried out in conjunction with ► [Bettercoal](#), ► see Aspect: Procurement Practices – management approach, page 30.

During the year under review, 184 suppliers (2015: 285) were surveyed about environmental protection. We regularly audit all our suppliers for conformity with potential compliance risks. An exceptional situation arises when procurement is carried out in the wholesale markets. Here, an appraisal is not possible due to an absence of direct supplier relationships.



## ASPECT: ENVIRONMENTAL GRIEVANCE MECHANISMS – MANAGEMENT APPROACH

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► See G4-58, page 24.

### G4-EN34 Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms

In the context of restructuring the Group, we are currently modifying our processes. We will provide appropriate details for the year 2017.

# SOCIAL PERFORMANCE INDICATORS

## LABOUR PRACTICES AND DECENT WORK

### ASPECT: EMPLOYMENT – MANAGEMENT APPROACH

#### Challenges

The RWE Group has carried out a historic reorganisation of the company with the realignment of the Group and the spin-off of innogy SE. That exerts substantial impacts on employees.

The growing business pressure being exerted on the RWE Group and the changes occurring in the energy market also present us with challenges which necessitate a cultural change at our company. We have therefore launched an array of different programmes in order to make this transformation a tangible reality. We are joining forces with our employees to structure our working culture. This is intended to ensure that we remain competitive and attractive.

#### Organisation, management and performance measurement

##### Socially acceptable and responsible restructuring

Our iSWITCH GmbH has already been established in the Group. This platform promotes and supports many colleagues in relaunching their careers with an internal group-wide job market. Secondments of employees from the iSWITCH Force enable us to cover temporary personnel bottlenecks. This unit was established so that internal resources could be used instead of external agency staff on a temporary basis. iSWITCH also offers targeted career development and helps staff to achieve further qualifications. It also assists them in taking advantage of short-term (project) activities and accompanying staff on observations in different divisions of the Group. The framework conditions are defined in collective bargaining agreements. The offer from iSWITCH is open to colleagues at RWE AG and innogy SE.

A number of tools are available to measure the success of the internal job market including the number of internal and external applicants for each job. We also record the through-

put times within iSWITCH GmbH, the financial result and utilisation of capacity. After a survey was carried out of the registered candidates and applicants, a large number of measures were implemented in relation to many aspects of the handling and management of applications in order to further improve the package on offer.

##### Establishment of new conceptual and working practices

Our objective is to establish new mindsets and new ways of working within the Group. The programme “New Way of Working” (NWoW) has been designed to achieve this. We are defining new standards for our working practices and promoting the skills of employees. A common working culture is also being developed in the three areas of Operating Excellence, Universal Process Management and Leadership and Alignment. Our intention is to use these and other measures to enhance customer satisfaction and improve the financial results. Currently some 55 NWoW experts are working in 8 new projects to continue establishing the concept in RWE AG. Around 5,000 employees are being trained in the new ways of working. We measure the success of our NWoW projects particularly by analysing leadership quality and employee and customer satisfaction.

##### Defining objectives through the Code of Conduct and RWE Social Charter

Our [Code of Conduct](#) and the [RWE Social Charter](#) were jointly adopted by the European Works Council and the Executive Board in 2010. They define standards for the relationship with our employees and for dealings between the employees themselves. The Code of Conduct and Social Charter are applicable for all employees and they cover the entire Group.



### G4-LA1 Total number and rates of new employee hires and employee turnover by age group, gender and region

		2016	2015
Fluctuation rate	%	10.1	11.2
External hirings	FTE	3,062	2,896

We do not provide further differentiation in the case of data on turnover and new appointments because the benefit is not commensurate with the expenditure involved. We regu-

larly report on the age structure and the breakdown of employees by gender.

### EU17 Days worked by contractor and subcontractor employees

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RWE only uses a small proportion of employees from subcontractors to carry out operational functions on a permanent basis. We use them for service and service packages, and for construction and assembly work. It is not possible for us to report on the “number of days worked by employees of subcontractors” because these data are not available.

These data will also not be recorded in the future because they are outside the standard records used for regular reporting and are not relevant to us for tax purposes. The benefit obtained from an additional survey would also be disproportionate to the expenditure.

### EU18 Percentage of contractor and subcontractor employees that have undergone relevant health and safety training

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All employees from subcontractors who work on the construction sites of RWE are trained.

## ASPECT: LABOUR/MANAGEMENT RELATIONS – MANAGEMENT APPROACH

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### Challenges

We want to adopt a responsible approach to essential restructuring measures and implement a socially ethical plan. We are continually in discussions with the employee representative bodies in the Group and with the unions. In Germany, the Works Constitution Act (Betriebsverfassungsgesetz, BetrVG) covers the situation at RWE. We base our actions on this legislation.

### Organisation, management and performance measurement Cooperation beyond the statutory regulations in an atmosphere of trust

The Works Constitution Act (Betriebsverfassungsgesetz, BetrVG) regulates the comprehensive information, consultation and co-determination rights of the Works Council. It states that the Executive Management and the Works Council should cooperate together in an atmosphere of trust.

RWE has gone beyond these statutory regulations and in 2010 defined its commitment to open and trusting cooperation in the ► [RWE Social Charter](#) adopted by the European Works Council and the Executive Board. This charter sets out opportunities for participation in processes of change for employee and union representative bodies. Apart from the Group Works Council and the European Works Council, there are other forms of employee representation across the Group, at company level and at operational level. Specific interest groups, such as spokesperson committees, representative bodies for people with disabilities, and youth and apprentice representations are also included. The framework of reorganising the Group also encompassed the settlement of interests dated 13 May 2016. This agreement established that job cuts would not be made on the basis of operational conditions.



### G4-LA4 Minimum notice periods regarding operational changes, including whether these are specified in collective agreements

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We comply with all information disclosure obligations and include employee representatives at an early stage.

## ASPECT: OCCUPATIONAL HEALTH AND SAFETY – MANAGEMENT APPROACH

**Challenges**

Our employees and the employees of our partner companies often carry out their assignments at workplaces that are subject to special requirements for occupational health and safety. In particular, these include activities in the area of opencast mining, in technical areas at our power plants, and at transmission lines or wind turbines. As an employer, we take our responsibilities very seriously and minimise the risks of accidents and health hazards. Alongside retaining the physical health of our employees, we also have a duty to look after the mental health of our staff. We believe that this is a particularly important task for us in times of change within the company. This is a situation beset by uncertainties for everyone.

**Organisation, management and performance measurement**

Our objective is for every employee to be healthy and to remain so. We are committed to using all the available opportunities to aid the recovery of ill employees as quickly as possible. We treat employees of subcontractors in the same way as our own colleagues. Health Management at RWE adopts a holistic approach and is managed from the Centre of Expertise (CoE Health).

**Organisation of health protection**

The responsibility for managing health protection is with the Company Medical Officer (Head of CoE Health). The Company Medical Officer is appointed by the Executive Board. Detailed organisation of health protection has been defined within the framework of the Workplace Safety Management System. Health protection is part of the integrated management system of RWE Generation because the employees of the CoE Health are part of the organisation of RWE Generation and they have their employment contracts with the company. The CoE Health manages issues relating to health protection at RWE. It also develops programmes and initiates their implementation. The areas of expertise embedded in the CoE Health are organised in four key functions – industrial medicine, emergency medicine, occupational healthcare management and an occupational social counselling service. In 2016, occupational healthcare management at RWE was awarded the Corporate Health Award in the Medical Provision Category.

The key performance indicators relevant for health protection are summarised with cause and effect indicators. The key causal indicator is provided by the health ratio, which reflects the days of absence on account of illness, accidents

and rest cures in relation to the scheduled working hours. On the other hand, the sickness rate is the key effect indicator. It records the days of absence due to illness, not including accidents and without rest cures in relation to the scheduled working hours.

**Organisation of occupational safety**

RWE has defined the target of ensuring that all the Group companies have certifiable management systems for occupational safety. 70% are currently certified. The Executive Board safeguards implementation of legal requirements for occupational safety and for health protection. It further ensures compliance with the regulations. The Executive Board defines appropriate targets and uniform standards in order to support a continuous improvement of processes. The structural and workflow organisation of occupational safety is ensured by accredited management systems and is based on inclusion of international standards and regulations.

**Continuous improvement of occupational health and safety**

The occupational safety management systems cover all the relevant management and business functions including the definition of targets, structures and processes, rules and tools relevant to occupational safety and health protection. The objective is to make the best possible contribution to achieving the corporate goals. The corresponding processes related to occupational safety and health protection are systematically analysed and continuously improved using the Plan Do Check Act cycle. The integrated approach is applied for all relevant activities that extend across management systems. These include management reviews, audits, analyses and event notifications.

In 2016, the established Working Group on Subcontractor Management engaged with new development fields for occupational health and safety of subcontractors in order to progress national standards. The Working Group drew on international H&S expertise. The safety standards were expanded to all countries where RWE has operations. The objective is to treat the employees of subcontractors in the same way as RWE's own employees. The LTIF rate therefore also takes account of the number of subcontractor accidents, ► see G4-LA6, page 55.

In order to achieve the targets defined for illness-related absence over the medium term, health protection is focused on the basic measures of Good Management, Healthy Working, Stress Competence, Physical Exercise and Nutrition. It

also includes structures and processes of occupational healthcare management. One of the measures developed has been a modular package for resilience. We want to use this package to promote the ability of our employees to overcome crises. The aim is to transform them into the motivators for development by drawing on personal and socially mediated competences. We apply a number of measures including the Work Ability Index (WAI) in order to obtain a more extensive record of employees' performance and their ability to carry out their work. This framework provides them with effective support. The approach is based on the subjective assessments of our employees and indicates the extent to which employees see themselves as being in a position to carry out their work at the present time and in the future. By the end of 2015, a total of some 22,600 questionnaires had been completed.

In 2015, the Health and Safety Culture project was launched with the aim of developing the culture of health and safety. The objective of the project is to develop the culture further in the direction of a collaborative, coaching-oriented management style. In 2016, more than 658 managers attended a cultural development workshop where they learnt to apply the tools relevant to health and workplace safety. The managers received a tool box to provide them with support. It contained a summary of all the management elements. When the tools are applied, employees can be coached to exercise and strengthen their independent responsibility.

The tools we use include the Health & Safety Index which helps to determine the status and the level of maturity of the company in relation to its health and safety culture. This forms an important starting position for ongoing cultural development.

#### G4-LA6 Types of injury, occupational diseases, lost days and absenteeism, and total number of work-related fatalities, by region and gender



The key performance indicator we use for occupational safety is the number of accidents with the loss of at least one day of work for every one million hours worked (Lost Time Incident Frequency, LTIF). Colleagues at subcontractors are

included in this indicator. In the reporting year 2016, we succeeded in maintaining the number of occupational accidents at a uniformly good level and achieved an LTIF of 2.1 (2015: 2.2). We intend to reduce this level to 1.8 by 2018.

Accidents and days of absence in 2016 by segment <sup>1</sup>	Total per 1,000 FTE <sup>2,3</sup>	Number of occupational accidents <sup>2</sup>	Number of Commuting accidents <sup>4</sup>	Number of Days of absence <sup>4</sup>
Conventional Power Generation	3.8	112	41	2,913
Trading/Gas Midstream	0	0	0	0
Renewables	6.4	17	1	39
Grid and Retail Germany	4.93	146	97	3,638
Retail Netherlands/Belgium	0	0	0	0
Retail United Kingdom	2.26	18	2	281
Grid & Retail Central Eastern and South Eastern Europe, Turkey	2.4	35	15	2,027
Other	2.62	15	20	1,528
<b>RWE Group</b>	<b>3.5</b>	<b>343</b>	<b>176</b>	<b>10,426</b>

<sup>1</sup> A number of interdisciplinary functions were not yet allocated to a segment on 31 December 2016 (e.g. RWE AG, consulting, gastronomy) and they were therefore included under "Other" for the reporting year 2016. An integrated presentation will be available for the reporting year 2017.

<sup>2</sup> Including employees and subcontractors.

<sup>3</sup> FTE = Full Time Equivalent.

<sup>4</sup> Only own employees.

Reporting in accordance with this controlling model is carried out on the basis of operational controlling of occupational health and safety in the operating segments. We do not report by regions. Reporting is implemented analogous to operational controlling in lines. The special hazard and

stress requirements are therefore taken account of within the segments and international comparability is ensured. Data on the type of injuries, the injury rate, the absentee rate (Lost Day Rate, LDR) and work-related fatalities are surveyed in anonymised form for reasons associated with data

protection regulations. These data cannot therefore be reported by gender. Reporting on occupational diseases and the absentee rate is also not possible for the same reason.

Unfortunately, we have to report a total of seven fatal occupational accidents in the business year 2016. At the end of February, four subcontractor employees suffered fatal accidents at the demolition site of Didcot A when the boiler house collapsed during the course of demolition work. Because the stability of the remaining building structures could not be guaranteed, the bodies of three out of the

four fatalities could only be recovered six months later following intensive clearing-up operations. In the middle of June 2016, one fatal accident occurred in the Grid & Infrastructure Division when an employee of a subcontractor died during forestry work. At the end of August 2016, one employee was caught in a wheel loader at the Hambach opencast mine. At the end of December 2016, an employee of a subcontractor working at the Mülheim-Kärlich plant was struck by a building component in the controlling area and succumbed to head injuries. Analysis teams were immediately deployed to clarify the causes of the accidents.

#### G4-LA7 Workers with high incidence or high risk of diseases related to their occupation

Activities of our employees and our subcontractor employees in the area of our power plants and opencast mining facilities are frequently associated with special requirements for occupational health and safety. However, we believe that all hazards can be avoided by taking preventive action and

implementing appropriate protective and safety measures. We organise training sessions and events in our regions in order to focus attention on health protection and occupational safety.

#### ASPECT: TRAINING AND EDUCATION – MANAGEMENT APPROACH

##### Challenges

We will only be able to continue mastering the future challenges presented in the energy business by having professional and dedicated employees and managers. Our aim is therefore to continue recruiting talented young people to work at RWE, promoting our employees, supporting them in their individual development, and furthering their careers on the basis of their individual strengths. We believe that it is important to be perceived as an attractive employer. We continue to give our employees advanced training so that they are always familiar with the latest technical developments.

##### Organisation, management and performance measurement Recruitment of new employees

We are an important economic factor in the regions where we have operations. So as to ensure that we continue to reinforce this perception of an attractive employer in potential employees, we are proactive in engaging with them. We inform them about the activities and the opportunities for employment at RWE. We use a range of different tools to make contact with prospective employees including our

► [Online Career Portal](#) and our Applicant Academy where we advise graduates, school students and people with career experience. The aim is to help them make a start

on the career ladder in the world of work, or give them advice on changing jobs. We focus our on-site activities on selected universities in Germany and abroad, as well as offering personal interviews.

Women continue to be less inclined than men to take up a technical career. We are therefore especially committed to motivating young women to explore technical careers at an early stage. One example is our engagement with the nationwide Girls' Days, which have involved more than 400 participants over many years. These events give school girls an opportunity to find out about careers in technical and IT areas by attending workshops and work experience sessions. We also offer the opportunity to identify the right career route at Career Orientation Days.

##### Promotion of training

The RWE Group has a long track record of vocational training. We focus primarily on the dual vocational training system in Germany. This involves theoretical instruction being given at vocational colleges alongside on-the-job training in the company. Overall, we offer training at more than 50 locations for in excess of 30 apprenticeship vocations in craft, engineering and commercial occupations, and other areas where we





enable young people to undergo a high-quality vocational training. We offer training that extends beyond our own specific needs. We also offer twin-track degree courses with practical, in-service training integrated as part of the package. In addition to carrying out training on its own behalf, RWE also supports external companies with activities for collaborative training ventures, for example by making training capacities available in our training workshops and by carrying out training for small companies.

Every year, more than 600 young people start their training in the RWE Group. This means that they are part of 2,258 apprentices in the Group. 94% of these trainees work at companies in Germany. If you compare the number of German apprentices with the full-time jobs in Germany, the apprentice ratio of the RWE Group was 6.1% in Germany in 2016. The collective bargaining agreement for training in the years 2015 and 2016 defines a fixed number of places for new apprentices, appointments for an unlimited period of time and four-year contracts. The regulations relating to

new places for apprentices were also filled in 2016 and the agreed minimum numbers of unlimited appointments and four-year contracts were significantly exceeded. We regard that as an index for the quality of our training.

#### Career training and development

We offer a range of training sessions and courses for developing personal skills and for strengthening personal competences. Support is also provided for acquiring knowledge and skills which lead to further personal development within the Group. We help managers to enable their employees to take advantage of opportunities on a daily basis – opportunities to try out new things, implement projects and collaborate with different people so that they can learn from each other. We are committed to a culture of lifelong learning and to facilitating the best possible development of the current and future skills of our employees. Our approach to basic and advanced training has been defined in our Learning and Development Guideline.

### G4-LA10 Programmes for skills management and lifelong learning that support continued employability of employees and assist them in managing career endings

Our employees have access to a broad spectrum of development opportunities. These range from basic IT skills, project management and English language courses, through specialist topics such as occupational safety and compliance, to management training sessions and performance management. The HR portal of RWE offers attendance training

courses, web-based learning, videos, e-books, games and much more. Certificates are issued for training courses in specific areas. By the end of 2016, 58,000 training courses had been booked through the HR portal. The quality of the training courses was assessed with an average score of 4.2 points (on a scale of 0 (lowest score) to 5 (highest score)).

## ASPECT: DIVERSITY AND EQUAL OPPORTUNITY – MANAGEMENT APPROACH



### Challenges

Deep-seated changes like demographic change, skills shortages, migration, changes in values and the individualisation of life concepts mean that our society is becoming more and more diverse. Our objective is to use the diversity of our workforce at RWE as an opportunity for cultural change. An open and respectful culture appreciates diversity and this is advantageous for our company and for our employees.

We are a company operating on the international stage where employees from different cultural backgrounds work together. Our stakeholder groups and customers have an international profile. This is why good cooperation and intercultural communication are important for the success of our company.

As a technological company, increasing the proportion of women in the company continues to be a challenge. Furthermore, the demographic change is also an important issue for us. Society is getting older and this entails challenges in the world of work.

### Organisation, management and performance measurement Establishment of Diversity Management in the organisation

Our commitment to diversity in the company culture is enshrined in our Social Charter. We make it clear in the charter that we reject any form of discrimination and we require a working environment free of prejudice. Our diversity management plays a key role here.

We interpret diversity management as a long-term management function in order to deploy the right competences at the correct place in the company. The different personalities and capabilities of each individual are a central focus and they are regarded as an opportunity to learn from each other. This gives every employee the opportunity to fully exploit their potential, irrespective of their age, their gender, their origin, but also independently of their beliefs, disability and their sexual orientation.

We engage with age structures and age-appropriate employment in the company, analyse the requirements of different generations and cooperation in mixed-age working teams. We also offer packages for knowledge transfer and workshops.

RWE provides strategic support for refugees in obtaining vocational qualifications with internships and our programme "I can do this!" ("Ich pack' das!"). They are prepared to take on a vocational training with this entry qualification. Our goal is to be able to mediate training for the participants over the long term. In 2016, we enabled refugees to have a total of 93 internship places, 30 observation places, 15 introduction training qualifications and two apprenticeship places. In three of the cases, a short-term employment was possible. For information on further engagement with refugees, see ► G4-SO1, page 63.

Our Diversity Week is held at the headquarters in Essen and in many other locations in Germany and abroad. It has demonstrated just how diverse RWE already is. The week also highlights how the activities in the various subsidiary companies contribute to promoting a culture of inclusivity.

#### Appointing more women to management positions

We provide women with strategic support for entering our company structure and climbing up the career ladder. Our objective is to achieve a greater proportion of women in management positions. With this in mind, we have successfully continued our Executive Mentoring Programme for women and our training directed towards preparation for taking up membership of supervisory boards.

Women's netWork at RWE and innogy brings more than 350 women at 14 locations together. Group-wide communication on the latest challenges in the energy industry is promoted at annual conferences and working groups and motivation is provided to enable women to develop their individual career paths. We will continue to support them with more initiatives. This also includes the MINT Women initiative that brings

together women in our company who have taken scientific and engineering degrees. The programme strengthens the profile of women in professions where they remain under-represented. It offers them a knowledge exchange platform and assists them with career development through networking activities. More than 110 women from different hierarchical levels within the Group take part in the initiative. A Mentoring Programme is currently being developed for women in MINT professions.

The proportion of women in management positions was 14% for RWE AG without innogy at the end of 2016. It was around 16% for innogy. The percentage was 25% for the first management level below the Executive Board of RWE AG. The ongoing restructuring process means that we will only be able to quantify the proportion for the second management level in the coming year. We are currently also working on appropriate targets for the same reason.

The number of women on the 20-strong Supervisory Board of RWE AG is currently 6, of which 3 are drawn from the employee side. This means that the statutory regulations have been implemented. During the year under review, no women were present on the Executive Board of RWE AG, ► see G4-38, page 21.

#### Promotion of inclusiveness

In March 2014, the Executive Board of RWE AG adopted the RWE Inclusiveness Action Plan for the German Group companies and resolved to roll it out. RWE uses this plan specifically to promote the inclusion of people with disabilities in all activities of the company. The agreed targets will continue to be implemented in the companies of RWE. Their sustainable impact is demonstrated in the constant employment rate for people with disabilities, in the package of internship places for young people with disabilities and the sustainable, barrier-free establishment of workplaces for people whose ability to take part in the workplace is compromised. Our community and social responsibility towards people with disabilities is defined across Europe through the Social Charter and the Charter of Diversity. This commitment is also implemented in a practical way by campaigns to raise awareness and strategic measures in personnel development, training, employment, health measures and appropriate workplace design and a barrier-free approach. Employee representatives also play a role in structuring and monitoring the implementation of inclusion here. The ratio of employees with disabilities at RWE in Germany was 6.2% in 2016. These means that we have complied with the statutory quota of 5.0%.

### Combining career and family

Combining career and family is a top priority at RWE and the company promotes getting the work-life balance right within the framework of the individual national circumstances and the specific opportunities available in the Group companies. Framework conditions like mobile working and flexible working hours including management positions, and up to 24 months of unpaid special leave all contribute to making it easier to combine career and family. There are additional packages for (prospective) parents including the Lumiland daycare nurseries located close to the company's premises. Employees can now use nursery places in Essen, Dortmund and Cologne. Parent and child offices are also available

and a central mediation centre for childminders, nannies, emergency mothers and au pairs is also available – even in situations when private childcare is suddenly not available at short notice.

The spectrum of services is not simply restricted to childcare support. It also includes services for the care of relatives. For example, employees can get advice from an online portal about subjects like patient instructions and long-term care insurance, or they can also obtain expert advice at on-site events. We also provide support for our employees in selecting care services or organising support in the home.

### G4-LA12 Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity

A survey of data on minorities is subject to the individual national regulatory standards. Differentiation on the basis of gender and age is not therefore possible. For disclosures on the composition of the Executive Board and the Supervisory

Board see the ► [Annual Report 2016 of RWE AG](#), page 182 to 186 and the ► [RWE website](#). The career profiles of the Members of the Executive Board and the Supervisory Board can also be found here.



Gender distribution for the RWE Group	Unit	2016	2015
Share of women in the company	%	27.2	26.8
Share of men in the company	%	72.8	73.2
Share of women in executive positions	%	14.0 <sup>1</sup>	15.2

<sup>1</sup> Includes the top four management levels. From 2016, includes RWE AG, RWE Generation and RWE Supply & Trading; excluding innogy.

Age structure for the RWE Group	Unit	2016	2015
Share <20 years	%	1.9	1.9
Share 20–24 years	%	5.1	5.4
Share 25–29 years	%	8.5	8.8
Share 30–34 years	%	10.8	10.8
Share 35–39 years	%	10.7	10.5
Share 40–44 years	%	11.3	11.6
Share 45–49 years	%	14.8	15.5
Share 50–54 years	%	18.3	18.3
Share 55–59 years	%	14.4	13.7
Share ≥ 60 years	%	4.3	3.5

## ASPECT: EQUAL REMUNERATION FOR WOMEN AND MEN – MANAGEMENT APPROACH

### Challenges

Equal pay for women and men is still by no means a matter of course. In future, the statutory framework will require more equality of pay for women and men. This is because companies with a workforce bigger than 200 employees will have to implement an individual legal right for employees to receive information about unequal pay. Companies with 500 or more employees will be required to introduce procedures designed to achieve equal remuneration and to report on this. Businesses which are covered by a collective agreement are to be exempt from the right to individual information. In these businesses, employees should exercise their right to information through the works councils. This means that lawmakers are meeting demands coming from society. RWE welcomes this development and naturally also treats women and men in the same way on all matters including the issue of remuneration.

### Organisation, management and performance measurement

#### Equal remuneration for women and men

Men and women at RWE are paid the same for equivalent activities. The compensation is based on the typical activities allocated to the remuneration groups. Gender is not mentioned at all in our compensation guidelines and is irrelevant for remuneration. The amount of pay is therefore dependent on qualifications, the activity being carried out and the experience of the employees.

The employee representatives ensure that equal treatment is maintained in the sphere of pay as in all other areas. The assignment to a tariff or salary group is linked to the job profile and is not dependent on gender.

### G4-LA13 Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation

RWE pays women the same salary as men when they are in equivalent positions. The salary is calculated exclusively on the basis of qualification.

The employee representative bodies also monitor equal treatment here.

## ASPECT: SUPPLIER ASSESSMENT FOR LABOUR PRACTICES – MANAGEMENT APPROACH

► See Aspect: Procurement Practices – management approach, page 30.

### G4-LA14 Percentage of new suppliers that were screened using labour practices criteria



The principles of the ► [United Nations Global Compact](#) are a constituent element of contractual relationships. Additionally, the suitability of suppliers is evaluated during the course of pre-qualification on the basis of the hazard potential. In such cases, compliance with the defined criteria can be reviewed in supplier appraisals and used for future tender processes in

the framework of the internal appraisal system. During the pre-qualification phase, around 1,000 suppliers were assessed for their suitability in regard to occupational safety for procurement procedures involving a hazard potential, ► see Aspect: Procurement Practices – management approach, page 30.

#### G4-LA15 Significant actual and potential impacts for labour practices in the supply chain and actions taken

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We can only report on the number of audited suppliers for goods, services and plant components. The audits carried out in the context of ► [Bettercoal](#) can also be reported, ► see Aspect: Procurement Practices – management approach, page 30. During the year under review 89 suppliers were audited on the subject of labour practices. We

regularly carry out audits of all suppliers to ensure conformity with potential compliance risks, ► see Aspect: Procurement Practices – management approach, page 30. When procurement is carried out in the wholesale markets, an appraisal is not possible due to an absence of direct supplier relationships.

#### ASPECT: LABOUR PRACTICES GRIEVANCE MECHANISMS – MANAGEMENT APPROACH

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► See G4-58, page 24.

#### G4-LA16 Number of grievances about labour practices filed, addressed, and resolved through formal grievance mechanisms

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In the context of restructuring the Group, we are currently modifying our processes. We will provide appropriate details for the year 2017.

## HUMAN RIGHTS

### ASPECT: SUPPLIER ASSESSMENT FOR HUMAN RIGHTS – MANAGEMENT APPROACH

#### Challenges

► See Aspect: Procurement Practices – management approach, page 30.



National action plans are in place internationally for business and human rights or such plans are being prepared. The aim is to implement the ► [UN Guiding Principles on Business and Human Rights](#) by the United Nations. In December 2016, a “National Action Plan for Business and Human Rights” was adopted in the German Federal Cabinet. This states that German companies with production facili-

ties abroad and along their supply chain should comply with human rights. The ► [Modern Slavery Act](#) in the United Kingdom requires large companies to disclose their commitment to preventing modern slave labour being used by their suppliers. This legislation has been on the statute book since March 2015.



#### Organisation, management and performance measurement

► See Aspect: Procurement Practices – management approach, page 30.

### G4-HR10 Prozentsatz G4-HR10 Percentage of new suppliers that were screened using human rights criteria

Depending on the concrete product or the concrete service and the country of production or service provision, a top priority for RWE is compliance with appropriate working conditions and respectful relations with the surrounding community. The Global Compact should be observed in business relationships with suppliers and it should also be communicated to other entities as far as possible.

We can only report on the number of suppliers for goods, services and plant components audited for human rights and on the audits carried out in conjunction with ► [Better-coal](#), ► see Aspect: Procurement Practices – management approach, page 30. In the year under review, all suppliers were reviewed in relation to the topic of human rights. We regularly audit all our suppliers for compliance with potential compliance risks. When procurement is carried out in wholesale markets, appraisal is not possible due to an absence of direct supplier relationships, ► see Aspect: Procurement Practices – management approach, page 30.



### G4-HR11 Significant actual and potential negative human rights impacts in the supply chain and actions taken

► See Promotion of standards in the hard-coal supply chain in Aspect: Procurement Practices – management approach, page 31.

### ASPECT: LOCAL COMMUNITIES – MANAGEMENT APPROACH

► See G4-58, page 24.

### G4-HR12 Number of grievances about human rights impacts filed, addressed and resolved through formal grievance mechanisms

In the context of restructuring the Group, we are currently modifying our processes relating to data acquisition. We will provide appropriate details for the year 2017.

# SOCIETY

## ASPECT: LOCAL COMMUNITIES – MANAGEMENT APPROACH

### Challenges

Wherever we have operations, our actions exert an impact on local communities. Our power plants and opencast mines offer jobs and therefore support the structure of the individual regions. In some places, this has already been happening for a long time. We take over very large areas of land on a temporary basis for our opencast mines. They change the profile of the landscape. Employee, supplier and customer traffic also exerts an impact on the neighbourhood. In some cases, these operations may necessitate resettlements of individual villages or parts of local settlements.

We want to operate in a socially ethical way at our operating locations and be perceived in a positive light. With this in mind, we enter into dialogue with neighbouring residents

and other groups which are impacted by our business operations or whose activities exert an impact on the business activities of RWE. Wherever we have operations, we want to cooperate with the local communities where we are located.

### Organisation, management and performance measurement Dialogue with neighbouring residents and other stakeholders impacted

We engage in a lot of different stakeholder dialogues to communicate information and to involve neighbouring residents and other groups who are affected by our business activities. This is primarily related to our opencast mines and our power plants. For more information on integrating our stakeholders ► see G4-26 and G4-27, page 17.

## G4-SO1 Percentage of operations with implemented local community engagement, impact assessments and development programmes

At all our major locations, we exchange views with the people living in the region. We regularly analyse the needs of communities and the impacts on the environment within the framework of the licensing procedure in Environmental and Social Impact Assessments. A detailed disclosure of the results is not practicable owing to the large number of licensing procedures.

► **Companius** cooperates with its long-standing collaboration partners to develop volunteering projects in order to deliver aid to refugees. Employees throughout the entire

Group, from apprentices to the executive management, take part in team and individual projects to help refugees. In 2016, a total of 239 members of staff gave a helping hand.

Our aim with the programme ► **3malE** Education with Energy, is to motivate young people for topics related to energy and engineering. We also discuss the energy supply of the future with them. In 2016, 600 experiment kits were loaned to 75 schools and 70 nurseries, 14,000 teaching packs were sent to teachers, and 60 members of staff went into schools as energy ambassadors.

## G4-SO2 Operations with significant actual or potential negative impacts on local communities

The operation of opencast mines is unavoidably associated with interventions in the landscape and with the resettlement of local communities. RWE is very much aware of the impacts of these interventions for the region.

The important issues associated with resettlement are not simply about fair compensation for the material assets of the people being resettled. Intangible assets like tradition, community and a sense of belonging also play a key role. So that these needs can be met as far as possible, RWE has been committed for decades to the offer of community resettlement with the aim of finding solutions that are ethical and socially compatible. The people being resettled are

involved on many levels in the process from the planning stage to implementation. They receive comprehensive support through the relevant government agencies, local authorities, and most importantly from our company. Their requirements also play a central role within the framework of the required licensing procedure. They are involved in selecting the location of the resettlement site and they play a key role in designing the new village. This ensures that the majority of the people being resettled always play a role in the resettlement of the community. Vibrant new settlements can be created in accordance with the ideas of the citizens. They can be provided with appropriate infrastructure where



community life can be continued with familiar social structures and similar cultural life. Successful resettlements are not possible in the absence of social compatibility.

Extraction of lignite inevitably leads to a temporary impact on the landscape. However, a key attribute for lignite open-cast mining in the Rhineland is that reinstatement of the original use is a constituent element of the operating process. Recultivation is therefore part of open-cast operations throughout the entire lifecycle. It takes account of the environmental requirements and the leisure and recreational

needs of the local community. Today, forested areas more than 80 years old can be found in recultivated former open-cast mining districts, for example in Ville. Moreover, water meadows have recently been created along with areas of fertile agricultural land. A prerequisite for this activity is a careful approach to the valuable loess topsoil that defines the region. Rare animals quickly colonise the reinstated, contiguous landscapes within a very short space of time. Reports from specialist advisors indicate that the recultivated mining areas have an environmental value at least equivalent to that of the original landscapes.

#### EU22 Number of people physically or economically displaced and compensation, broken down by type of project

The resettlements necessary in the Rhineland lignite mining area used to extract lignite using open-cast processes are carried out in accordance with the proven concept of joint resettlement, ► see G4-SO2, page 63. The village community is resettled together over a specified period so that the social structures and cultural life can be preserved. The process of compensation ensures that owners from the previous

locality are able to build a comparative equivalent property within the new locality. Since the 1940s, more than 40,000 residents have been resettled in a socially acceptable way. So far, 35 new and vibrant localities have been created in this process. In 2016, around 60 properties were acquired in five localities alongside additional agricultural and other parcels of land.

### ASPECT: DISASTER/EMERGENCY PLANNING AND RESPONSE – MANAGEMENT APPROACH

#### Challenges

As the biggest power producer in Germany, RWE provides a service in the form of electricity. If power were not available, a modern industrial and service society would not be conceivable in its present form. We are therefore a constituent element of the basic services known as critical infrastructure. This includes “organisations, institutions and facilities with important consequences for the governmental apparatus. If an electricity outage occurs or supply bottlenecks impact negatively over an extended period of time, public security would be subject to substantial disruption or dramatic consequences would be entailed,” according to the government’s definition. We are aware of our macroeconomic responsibility to society as a whole. Security management is therefore a central management function at RWE. A major incident can lead to complete supply outages, pose a threat to health and life in power plants and the surrounding area. Such an incident can also constitute a threat to the economic future of the company. This means that it is necessary to adopt appropriate planning measures and implement relevant training programmes in order to cater for a broad spectrum of potential incidents – including incidents with a low probability of occurrence but entailing substantial impacts. Prevention of incidents like this is the primary goal.

#### Organisation, management and performance measurement

##### Avoiding crises and preparing prevention plans

Group Security reports directly to the Executive Board of RWE AG. As part of its governance function, RWE defines group-wide regulations for security. Business Continuity Management (BCM) and crisis management are a constituent element of this governance. An integrated approach also entails establishment of governance for information security and IT security governance within Group Security.

Integrated crisis organisation has been established for meeting the challenge of crisis situations. The organisation comprises central and local crisis staffs that introduce countermeasures depending on the individual incident. These crisis staffs are supported by crisis management plans. Starting with the Executive Board, exercises are carried out by the crisis staffs to deal with different scenarios. These exercises are intended to train members of staff and to review the approaches used. In 2016, the focus of the exercises was on cyber security.

Processes critical for our business are identified in Business Impact Analyses and appropriate measures are taken. BCM plans are developed on the basis of these analyses. They



minimise the impacts of outages and provide effective reinstatement. These BCM plants are reviewed for their effectiveness every year.

**Strengthening cooperation with government authorities**  
Reporting pathways to the government agencies involved are defined in legislation for an operator of critical infrastructure. However, the commitment of the Group extends beyond these statutory requirements. RWE is a member of the German Cyber Security Council (Cyber-Sicherheitsrat Deutschland e.V.), the Allianz for Cyber Security (Allianz für Cybersicherheit) of the Federal Ministry for Security in Infor-

mation Technology (BSI) and UP KRITIS of the BSI. The latter is the initiative for cooperation between business and the state to protect critical infrastructures in Germany. On the international scene, RWE is one of the few German groups which is a member of the National Cyber Forensics & Training Alliance (NCFTA) in the USA. We work together with government agencies to make preparations for the scenarios entailed in an emergency. Exercises simulating emergencies are carried out at local level and these generally take place in cooperation with the authorities operating on the ground there, for example the police and fire service.

## ASPECT: ANTI-CORRUPTION – MANAGEMENT APPROACH



### Challenges

Compliance with the law and legislation is a duty and part of the corporate culture at RWE. Any breaches of the law mean that the company can suffer major and serious reputational damage. RWE therefore bases all its activities and business decisions on established internal [rules for compliance](#). The company does not tolerate any corruption or other breaches of the regulations. Compliance requirements are also factored in when making decisions about entering into business relationships with suppliers or business partners. The energy industry is a sector defined by regulatory decisions, continuous change and projects with high order volumes. This also impacts to a greater or lesser extent on the value chain of RWE. RWE AG has therefore implemented comprehensive systems for avoidance of corruption within the framework of compliance management. For information on innogy [see the innogy Sustainability Report 2016](#) in Aspect: Anti-corruption, page 87.

### Organisation, management and performance measurement

Prevention of corruption is a particularly important topic for the Compliance Management System. Our prevention strategy relies on raising the awareness of our employees and managers within the company.

Monitoring of compliance management systems at RWE AG, RWE Generation SE and RWE Supply & Trading GmbH in order to prevent corruption is carried out by the Chief Compliance Officer of RWE AG. innogy SE also has a Compliance Management System and has its own Chief Compliance Officer. The compliance officers inside and outside Germany ensure uniform implementation of compliance principles for prevention of corruption at RWE AG, RWE Generation SE and RWE Supply & Trading GmbH.

The [RWE Code of Conduct](#) forms the platform for our interpretation of compliance. The code prohibits any form of corruption and it is binding on all our employees. The Code of Conduct is given concrete form by other Group guidelines. Organisational regulations such as the double-checking (four-eyes) principle, separation of functions, authorisation concept and licensing regulations provide support for compliance with the guidelines.

The Chief Compliance Officer regularly reports to the Executive Board of RWE AG and to the Audit Committee on issues relevant to compliance.

For performance measurement [see G4-SO3 and G4-SO4](#), page 66.

## G4-SO3 Total number and percentage of operations assessed for risks related to corruption and the significant risks identified

The identification and assessment of compliance risks takes place in a two-stage process. This process was launched in 2012 with the central determination of the risk profiles for the Group companies. A second step focused on working out detailed corruption risk scenarios. These were discussed

and developed within the framework of risk workshops in the individual Group companies. The compliance officers carried out this detailed analysis across the Group and in 2016 the results generated from the Group perspective were aggregated centrally.

We do not explicitly report on the established risks, since these values are subject to specific confidentiality con-

straints. They are confidential as it is business-relevant information.

#### G4-SO4 Communication and training on anti-corruption policies and procedures



Internal media within the Group inform our employees about behaviour that conforms with compliance guidelines and also highlight potential risks if compliance is breached. Members of the workforce are able to take part in a wide range of training offerings through a web-based training programme and at attendance events. Participation is obligatory and calibrated according to the risk of corruption associated with the relevant activity. The Executive Board is also integrated in this training concept. We have developed our training concept further taking risk aspects into account and

we started a new training cycle in 2016. This year we were able to deliver training at face-to-face events in this cycle to around 4,900 employees in Germany and around 320 employees in other regions where RWE operates.

We do not explicitly report data broken down into employee category since these values are subject to specific confidentiality constraints. They are confidential as it is business-relevant information.

#### ASPECT: PUBLIC POLICY – MANAGEMENT APPROACH



##### Challenges

RWE is an operator of power plants with potentially serious impacts on the environment and the community. We also operate a critical infrastructure and we are a major company with significant economic importance. This entails a duty to ensure compliance with standards under statutory legislation. We also have an obligation to participate in dialogue at the political and community levels. Communication with our stakeholders provides us with helpful ideas for aligning our entrepreneurial activities. Particularly at the present time when the company is undergoing change, it is important to discuss expectations and assessments for the future of the energy supply with external stakeholders. At the same time, dialogue gives us the opportunity to provide better communication of corporate decisions and the underlying motives. We have an obligation to provide answers for our stakeholders and we want to be a partner in the discussion on an equal level. This enables us to meet the expectations placed on us by society, ► see G4-24 to G4-27, page 17.

##### Organisation, management and performance measurement Objectives for transparency in political dialogue

Our conduct in relation to politicians is clearly regulated in the Code of Conduct. We state there that dialogue with representatives of government institutions and political parties is indispensable as far as we are concerned. In these contexts, we want to avoid giving the appearance of exerting undue influence. We have therefore made a commitment to neutrality in relation to political parties and we do not make

any donations to political organisations, or organisations and foundations which are closely related to political parties.

Since 2010, we have been entered in the Transparency Register of the European Union. We publish a number of disclosures there including the costs for our liaison office in Brussels which amounted to € 2 million during the period under review. We would welcome establishment of a Transparency Register in Berlin based on the Brussels model. We have already disclosed voluntarily information about our budget, the number of employees and other information to organisations such as Lobby Control. We have a public profile through our liaison offices in Brussels and Berlin, not least through information events such as the RWE Talks.

##### Engaging in dialogue and keeping up a conversation

In 2016, the main themes in discussions with politicians in Germany and at EU level related to the energy transition, national and international climate protection policy, the future of coal and further development of energy markets. This dialogue was supplemented by the debate about the recommendation by the “Commission for Reviewing the Finance of Exit from Nuclear Energy” (KFK). We also contributed our specialist knowledge in the area of IT security. In the Netherlands, we engaged in discussions about the policy of human rights in the hard-coal supply chain, implementation of the national energy agreement and the role of co-incineration of biomass as a contribution to the Dutch CO<sub>2</sub> reduction strategy, ► see G4-24 to G4-27, page 17.

### Supporting initiatives

As a major energy utility we support political initiatives at federal level. At present, RWE Group Security currently provides the spokesperson for the energy sector in UP KRITIS – a national initiative between the state and business to protect critical infrastructure in Germany – run by the Federal Ministry for Security in Information Technology (BSI).

The Initiative Future Association (Initiative Zukunft) intends to use the Long Night of Industry (Lange Nacht der Industrie) to raise awareness within the local population about the importance of an industrial location for the future of the region. This is why RWE also participated in the venture by opening up its operational sites and allowing citizens to experience industrial production at first hand.

Furthermore, we also participate in the Innovation Forum Energy Transition If.E (Innovationsforum Energiewende If.E) run by the IG BCE – union for the mining, chemicals and energy industry. The delegates use this forum to work out the economic, technical and regulatory contributions for restructuring the energy supply in Germany. In 2016, If.E held a large innovation conference and a works council conference with our support. Large-scale advertisements were also placed in national newspapers which highlighted the need for more extensive expansion of storage facilities and grids as a necessary cornerstone of the energy transition. We supported this campaign with whole-page advertisements in our neighbourhood magazines. These are circulated to households in the Rhineland lignite mining area and in the districts surrounding nuclear power stations.

### G4-SO6 Total value of political contributions by country and recipient/beneficiary



RWE has made a commitment to neutrality in relation to political parties and we do not make any donations to political organisations, or organisations or foundations which are closely related to political parties.

## ASPECT: ANTI-COMPETITIVE BEHAVIOUR – MANAGEMENT APPROACH

### Challenges

It is important for our company to be perceived as trustworthy and transparent. We earn this trust through fair conduct. RWE also keeps within the law and complies with legislation in competitive situations. Our efforts are directed towards ensuring that all our business activities are in accordance with the conditions of fair competition at all times. We also observe anti-trust regulations and statutory requirements for unbundling. Our operations are based on these rules. In this way, we therefore meet our responsibility as a major player in the economy.

### Organisation, management and performance measurement

In order to prevent anti-trust, anti-competitive behaviour, we raise the awareness of all employees and management to

this issue at attendance events. Our employees receive training sessions on the requirements for conforming with behaviour in accordance with competition legislation. The Executive Board is integrated in this training concept. We implement neutral grid operation and this ensures billing and legal separation of grid usage from power generation, trade and supply so that we comply with the unbundling regulations. Group Auditing carries out preventive audits in the Group companies with the aim of checking implementation of our regulations on anti-competitive behaviour. We take any reports of potential breaches very seriously, we investigate them and we take any measures necessary where appropriate.

### G4-SO7 Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices, and their outcomes

In 2016, RWE AG was subject to a proceeding in connection with the running down of a joint-venture power plant, which was brought to a conclusion without any sanctions in 2016.

For information on the proceeding against companies in the innogy Group ► see G4-SO7 in the innogy Sustainability Report 2016, page 91.



## ASPECT: COMPLIANCE – MANAGEMENT APPROACH

### Challenges

Integrity, honesty, acting in accordance with the law and respect for our fellow human beings and the environment form the basis of our entrepreneurial activity. We are subject to laws, regulations and comparable rules and procedures. These underlying conditions and the ► [RWE Code of Conduct](#) form the framework for our operations. Any breaches entail significant financial and reputational risks for RWE. Individual employees may also be personally liable. A top priority for our employees and subcontractors is that their conduct and actions should be in accordance with the law and ethical principles. We have defined the principles for conduct in the binding RWE Code of Conduct.



### Organisation, management and performance measurement

The principles of general compliance and the ► [Compliance Management System](#) are defined by the Chief Compliance Officer of RWE AG for RWE AG, RWE Generation SE and RWE Supply & Trading GmbH. An independent Chief Compliance Officer has been appointed for innogy SE. This officer is responsible for the Compliance Management System at innogy SE. The Compliance Management System set up to combat any corruption at RWE AG and audited in accordance with the IDW 980 Standard was adopted without amendments by innogy SE and is being continued there. For more information on the Compliance Management System of innogy ► [see the innogy Sustainability Report 2016](#) in Aspect: Compliance – management approach, page 91.



The Chief Compliance Officer of RWE AG is supported in complying with his functions and responsibilities at the level of RWE AG by Compliance Managers and at the local level by the Compliance Officers of the individual RWE companies. In terms of the content, the focus of activity is on prevention of corruption. Alongside this function, measures for export control compliance and prevention of money laundering are developed further and implemented.

The compliance function at RWE AG has taken on a coordinating and consolidating role for other compliance areas

defined for RWE such as competition and anti-trust law, company and capital market law, employment law and environmental protection, occupational health and safety, and data protection. The Chief Compliance Officer of RWE AG bundles these compliance areas within integrated compliance reporting to the Executive Board and the Audit Committee of RWE AG. However, responsibility for operational content always remains with the functions bearing individual responsibility for areas such as legal affairs, employment law and Group data protection. The RWE Legal Department for RWE AG, RWE Generation SE and RWE Supply & Trading GmbH therefore provides legal advice on company law and investment administration, and on joint ventures, M&A transactions and project finance. The Legal Department is also responsible for basic issues relating to energy law, merger monitoring, competition and trademark law, procurement, property and IT legislation. All the experts in employment law from the affiliated national companies are in turn bundled in the RWE Group within the employment law function. It is responsible for issues under personal and collective legislation. This function also organises the engagement of external consultants for all the companies relating to issues of employment law and any associated matters.

In order to bundle competence and enhance efficiency, the Group Data Protection Officer also acts as a company Data Protection Officer for the German RWE companies. The Data Protection Officer is supported by a team of data protection specialists who in turn independently look after data protection in the individual companies. Protection of personal data is extremely important to RWE. Our objective is to protect personal data against misuse and thereby sustainably reinforce the trust of employees and customers over the long term. Group Data Protection develops and maintains the Data Protection Management System and ensures uniform interpretation of data protection at RWE. It also provides appropriate management for data protection events. The Group Data Protection Officer reports regularly on data protection issues to the Executive Board.

### G4-S08 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations

Our group-wide survey on the prevention of corruption revealed that no fines were incurred in this area.

## ASPECT: SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY – MANAGEMENT APPROACH

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► See Aspect: Procurement Practices – management approach, page 30.

### G4-SO9 Percentage of new suppliers that were screened using criteria for impacts on society



We can only report on the number of audited suppliers for goods, services and plant components who were screened with respect to their impacts on society. The audits carried out in the context of ► [Bettercoal](#) can also be reported,

► see Aspect: Procurement Practices – management

approach, page 30. During the business year 2016, 250 suppliers (2015: 285) were screened on the subject of their impacts on society. We regularly carry out audits of all suppliers to monitor exposure to potential compliance risks.

### G4-SO10 Significant actual and potential negative impacts on society in the supply chain and actions taken

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The RWE Purchasing Department does not maintain any business relationships with suppliers if there is information in the public domain indicating that they breach the principles underlying the Global Compact. RWE is committed to implementation of the Global Compact.

Information “in the public domain” relates to all generally accessible sources from which information can be obtained. Press reports containing merely the suspicion of a breach are not sufficient in this case. Rather, we rely on legally

admissible or officially confirmed facts. Furthermore, we use published negative lists (World Bank Listing of Ineligible Firms and Non-Responsible Vendors) drawn up by the World Bank based in Washington/USA. When suppliers are in contention for being included on the list of RWE’s suppliers, the background check is carried out by the relevant purchaser before any orders are awarded. In the case of existing suppliers, the review is performed centrally in the vendor accounts section.

## ASPECT: GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY – MANAGEMENT APPROACH

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► See G4-58, page 24.

### G4-SO11 Number of grievances about impacts on society filed, addressed and resolved through formal grievance mechanisms

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In the context of restructuring the Group, we are currently modifying our processes. We will provide appropriate details for the year 2017.

# PRODUCT RESPONSIBILITY

## ASPECT: PRODUCT AND SERVICE LABELLING – MANAGEMENT APPROACH

### Challenges

More than 23 million customers trust us to supply them with electricity, gas and heat at any time. A comprehensive and varied spectrum of statutory regulations governs labelling of these products. Such regimes are in force in the various countries in which we supply customers. Particularly detailed regulations on the labelling of electricity are on the statute book in Germany. Additionally, our customers are increasingly interested in being informed about the composition of our electricity supplies.

### Organisation, management and performance measurement Transparent product labelling

All electricity bills issued by RWE and innogy throughout Europe include disclosures on the energy mix, the CO<sub>2</sub> emis-

sions and radioactive waste in accordance with EU Directive 2003/54/EC and in accordance with Article 42 of the German Energy Industry Act (Energiewirtschaftsgesetz, EnWG). Furthermore, the data are also published on the Internet pages of ► [RWE Supply & Trading](#), for ► [innogy corporate customers](#) and for ► [innogy residential customers](#). Our intention here is not simply to implement the statutory regulations but also to consistently apply the ► [guidelines](#) published by the German Association of Energy and Water Industries (BDEW). These are regarded as the industry gold standard. All our customers are therefore provided with comprehensive and transparent information about the energy mix of the relevant product and the associated environmental impacts.



## G4-PR3 Type of product and service information required by the organisation's procedures for product and service information and labelling, and percentage of significant product and service categories subject to such information requirements

Electricity labelling is an instrument for increasing market transparency in the electricity market. Pursuant to the requirements of the German Energy Industry Act (Energiewirtschaftsgesetz), all suppliers of electricity to consumers must provide their customers with information on the energy mix underlying

the individual products and on the CO<sub>2</sub> emissions and nuclear wastes that arise in the generation process. All electricity and gas bills of RWE and innogy are in accordance with the statutory labelling requirements.

## G4-PR5 Results of surveys measuring customer satisfaction

We want our customers to remain loyal, to be interested in new products and to recommend our company to other people. Our stated objective is to be accepted by them as a service provider and supplier, and also as a partner who can work with them to create individual solutions. Our usual high level of product quality, fast and streamlined processes, and competitive prices continue to remain our top priorities in this relationship.

The Commodity Solutions section at RWE Supply & Trading has set up a regular customer survey process within this framework and it uses a Customer Satisfaction Index for management.

innogy also regularly measures customer loyalty and customer satisfaction. For information on this ► [see the innogy Sustainability Report 2016](#) in Aspect: Product and Service Labelling – management approach, page 93.



# APPENDIX

# ASSURANCE REPORT

## Independent Practitioner's Limited Assurance Report

### To RWE AG, Essen

PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft has performed a limited assurance engagement on the German version of the Corporate Responsibility Report and issued an independent assurance report, authoritative in German language, which has been translated as follows:

We have been engaged to perform a limited assurance engagement on the sustainability information marked with  in the Corporate Responsibility Report of RWE AG (hereafter the "Company") for the period 1 January 2016 to 31 December 2016 (hereafter the "Corporate Responsibility Report").

### Management's Responsibility

The Company's Management is responsible for the preparation and presentation of the Corporate Responsibility Report in accordance with the criteria as set out in the G4 Sustainability Reporting Guidelines of the Global Reporting Initiative (GRI) (hereafter the "GRI-Criteria") and for the selection of the information to be assessed.

This responsibility includes the selection and application of appropriate methods to prepare the Corporate Responsibility Report as well as the use of assumptions and estimates for individual sustainability disclosures which are reasonable in the circumstances. Furthermore, the responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Corporate Responsibility Report, which is free of material misstatements due to intentional or unintentional errors.

### Audit Firm's Independence and Quality Control

We have complied with the German professional provisions regarding independence as well as other ethical requirements.

The audit firm applies the national legal requirements and professional standards – in particular the Professional Code for German Public Auditors and German Chartered Auditors ("Berufssatzung für Wirtschaftsprüfer und vereidigte Buchprüfer": "BS WP/vBP") as well as the Institut der Wirtschaftsprüfer ("Institute of Public Auditors in Germany; IDW"):

Requirements to quality control for audit firms ("Entwurf eines IdW Qualitätssicherungsstandards 1 „Anforderungen an die Qualitätssicherung in der Wirtschaftsprüferpraxis" (IdW EQS 1)") – and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Practitioner's Responsibility

Our responsibility is to express an opinion on the sustainability information marked with  in the Corporate Responsibility Report based on our work performed.

Within the scope of our engagement we did not perform an audit on external sources of information or expert opinions, referred to in the Corporate Responsibility Report, as well as references to other chapters, indicators, and the annual report, if they are not separately marked as reviewed.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance whether any matters have come to our attention that cause us to believe that the sustainability information marked with  in the Corporate Responsibility Report has not been prepared, in all material respects, in accordance with the GRI-Criteria.

In a limited assurance engagement the evidence-gathering procedures are more limited than for a reasonable assurance engagement and therefore significantly less assurance is obtained than in a reasonable assurance engagement. The procedures selected depend on the practitioner's judgement. This includes the assessment of the risks of material misstatements of the sustainability information marked with  in the Corporate Responsibility Report with regard to the GRI-Criteria.



Within the scope of our work we performed amongst others the following procedures:

- Obtaining an understanding of the structure of the sustainability organization and of the stakeholder engagement
- Inquiries of personnel involved in the preparation of the Corporate Responsibility Report regarding the preparation process, the underlying internal control system and selected sustainability information
- Analytical procedures on selected sustainability information of the Corporate Responsibility Report
- Comparison of selected sustainability information with corresponding data in respective evidence documents
- Assessment of the presentation of selected sustainability information in the Corporate Responsibility Report regarding the sustainability performance

#### Conclusion

Based on our limited assurance engagement, nothing has come to our attention that causes us to believe that the sustainability information marked with  in the Corporate Responsibility Report of the Company for the period 1 January 2016 to 31 December 2016 has not been prepared, in all material respects, in accordance with the GRI-Criteria.

#### Emphasis of Matter – Recommendations

Without qualifying our conclusion above, we make the following recommendations for the further development of the Company's sustainability management and sustainability reporting:

- Further development and formalization of innogy-specific reporting processes and the respective internal control system as well as increasing implementation of automated system interfaces and controls

#### Restriction on Use and Distribution

We issue this report on the basis of the engagement agreed with the Company. The review has been performed for purposes of the Company and is solely intended to inform the Company about the results of the review. The report is not intended for any third parties to base any (financial) decision thereon. We do not assume any responsibility towards third parties.

Essen, 24 March 2017

**PricewaterhouseCoopers GmbH  
Wirtschaftsprüfungsgesellschaft**

Michael Conrad  
Wirtschaftsprüfer  
(German Public Auditor)

ppa. Juliane v. Clausbruch

## IMPORTANT SUSTAINABILITY INDICATORS



Indicators	Unit	2016	2015
<b>Environment<sup>1</sup></b>			
Specific NO <sub>x</sub> emissions	g/kWh	0.47	0.54
Specific SO <sub>2</sub> emissions	g/kWh	0.18	0.25
Specific particulate matter emissions	g/kWh	0.012	0.017
Ash	thousand mt	8,201	8,495
Gypsum	thousand mt	2,042	2,172
Primary energy consumption	million GJ	1,478	1,467
Water consumption <sup>2</sup>	m <sup>3</sup> /MWh	1.62	1.39
CO <sub>2</sub> emissions EU ETS <sup>3</sup>	million mt	148.3	150.8
CO <sub>2</sub> emissions Scope 1 <sup>4</sup>	million mt	154.0	152.3
CO <sub>2</sub> emissions Scope 2 <sup>5</sup>	million mt	1.3	1.3
CO <sub>2</sub> emissions Scope 3 <sup>6</sup>	million mt	86.5	93.9
Specific CO <sub>2</sub> emissions EU ETS	mt/MWh	0.686	0.708
Specific CO <sub>2</sub> emissions Scope 1	mt/MWh	0.713	0.715
Capital expenditure of the Renewables Division	€ million	242 <sup>7</sup>	418
Share of the Group's power generation accounted for by renewable energies	%	5.1	5.3
R&D costs <sup>8</sup>	€ million	165	101
<b>Society</b>			
Workforce <sup>9</sup>	FTE	58,652	59,762
Fluctuation rate	%	10.1	11.2
Training days per employee (Germany)		3.8	3.8
Health ratio	%	95.1	95.1
Work-related and commuting accidents	LTI <sub>F</sub> <sup>10</sup>	2.1	2.2
Fatal work-related accidents <sup>11</sup>		7	4
<b>Governance</b>			
Share of women in the company	%	27.2	26.8
Share of women in executive positions <sup>12</sup>	%	14.0	15.2
Share of the RWE Group's revenue earned in countries with a high or very high risk of corruption <sup>13</sup>	%	10.2	10.5

1 All plants are included where RWE is the operator of the plant.

2 Difference between the water consumption of the power plants and returns to rivers and other surface waters up to 2015, excluding power plants with seawater cooling, including cooling-tower losses.

3 Plants which fall under the scope of the European Emissions Trading Scheme (EU ETS) including power plants which are not owned by RWE that we can deploy at our discretion on the basis of long-term agreements.

4 Scope 1: EU ETS amounts plus the emissions from plants which do not fall under the scope of EU ETS.

5 Scope 2: indirect CO<sub>2</sub> emissions from the transmission and distribution of electricity purchased from third parties in our own grids.

6 Scope 3: indirect CO<sub>2</sub> emissions that do not fall under scope 1 and scope 2, produced through the generation of electricity procured from third parties, the transmission and distribution of electricity in third-party networks, the production of used combustion fuels, as well as the consumption of gas sold to customers.

7 In accordance with the innogy Sustainability Report 2016, page 4.

8 In accordance with the RWE Annual Report 2016 of RWE AG, page 23.

9 Converted to full-time positions.

10 Lost Time Incident Frequency (sum of all accidents resulting in at least one day of absence for every 1 million hours worked); Figures for 2012 incl. reports known to us from third-party companies (subcontractors).

11 Including employees of partner companies (subcontractors).

12 Encompasses the top four management levels; from 2016, only RWE AG, RWE Generation, RWE S&T.

13 Countries rated lower than 60 on a scale of 0 to 100 in the Corruption Perceptions Index by the anti-corruption organisation Transparency International (TI), with 100 corresponding to the lowest risk of corruption.

## UN GLOBAL COMPACT PROGRESS REPORT 2016

RWE supports the United Nations Global Compact and wants to make a contribution with the worldwide implementation of its ten principles. These have been adopted word for word in the RWE Code of Conduct. The following chart identifies

the guidelines, programmes and management systems which we have also introduced with our sphere of influence. The table also highlights the measures that have been taken during the period under review and the specific results obtained.

Principle	Systems	Measures	Results
<b>Principle 1:</b> Support of human rights	Social Charter and minimum standards for restructuring operations carried out for the European companies in the RWE Group, covering 99.7% of the workforce.  ILO core standards are defined for the Social Charter  Supplier management (p. 30 ff.)	Restructuring with social compensation by working together with employee representatives and unions (p. 53)  Assessment and audit of suppliers (p. 30 ff., 51, 60 ff., 69)  Co-founder of Bettercoal, auditing of coal mines, application of information for "Counterparty Risk Assessment" (p. 30 f.)	Compliance with principles 1–5 assured through national legislation in Europe, cooperation with the unions, and RWE's own principles which apply to all employees of the company  Pay and social benefits above the national average  26 comprehensive self-assessments and the results of 6 on-site audits available through Bettercoal (p. 31)
<b>Principle 2:</b> Elimination of human rights violations			
<b>Principle 3:</b> Ensuring freedom of association			
<b>Principle 4:</b> Abolition of all forms of forced labour			
<b>Principle 5:</b> Abolition of child labour			
<b>Principle 6:</b> Elimination of discrimination	Diversity management (p. 57 f.) Group-wide women's network (p. 58)	Diversity Week demonstrated activities to promote an culture of inclusivity (p. 58)  MINT Women Initiative (p. 58)	Percentage of women in management positions increased to 14% (p. 58)  Percentage of people with severe disabilities with 6.2% in Germany virtually constant
<b>Principle 7:</b> Precautionary environmental protection	Environmental management (p. 39) Strategy for reducing the CO <sub>2</sub> emission factor (p. 37, 44 f.)  Financial risks of CO <sub>2</sub> emissions are presented in risk management (p. 28, 44)	Annual audit for setting up environmental management systems in conformity with ISO 14001 (p. 39)  Adoption of a group-wide Biodiversity Guideline since 2015 (p. 41)	Coverage level of environmental management in relation to the Group: 100%, 89% of this was certified externally (p. 39)  Level of coverage with certified Energy Management Systems: 69% (p. 39)  Reduction in specific CO <sub>2</sub> emissions by more than 3% (p. 46)  Reduction in specific emissions of the air pollutants NO <sub>x</sub> by more than 12% and SO <sub>2</sub> by more than 28% (p. 46)
<b>Principle 8:</b> Initiatives to promote greater environmental responsibility		Consultancy and services for intelligent use of energy with residential and commercial customers (p. 34)  Initiative for energy education 3maE (p. 29, 63)	Product range for marketing of flexibilities (p. 34)  Energy education packages for children and teenagers (p. 63)
<b>Principle 9:</b> Development and diffusion of environmental friendly technologies	Strategy to reduce the CO <sub>2</sub> emission factor (p. 37, 44 f.)  Financial risks of CO <sub>2</sub> emissions are presented in risk management (p. 28, 44)  Research and Development (p. 34 f.)	Research on use of lignite as a material (p. 35)  Research on enhancing the flexibility and efficiency of conventional power plants (p. 35)	Modernisation of the power plant portfolio (p. 37, 44 f.)
<b>Principle 10:</b> Anti-corruption measures	RWE Code of Conduct and Group guidelines for prevention of corruption and organisation regulations (p. 65, 68)  Audited Compliance Management System for anti-corruption in accordance with the IDW Audit Standard promulgated by the Institute of German Public Auditors (p. 68)	Drawing up detailed corruption risk scenarios with other consolidated companies (p. 65)  Training of the workforce with an Intranet-based training programme and on-site training (p. 66)	Compliance training sessions for around 4.900 employees in Germany and around 320 employees in other regions where RWE operates, in on-site events (p. 66)

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