

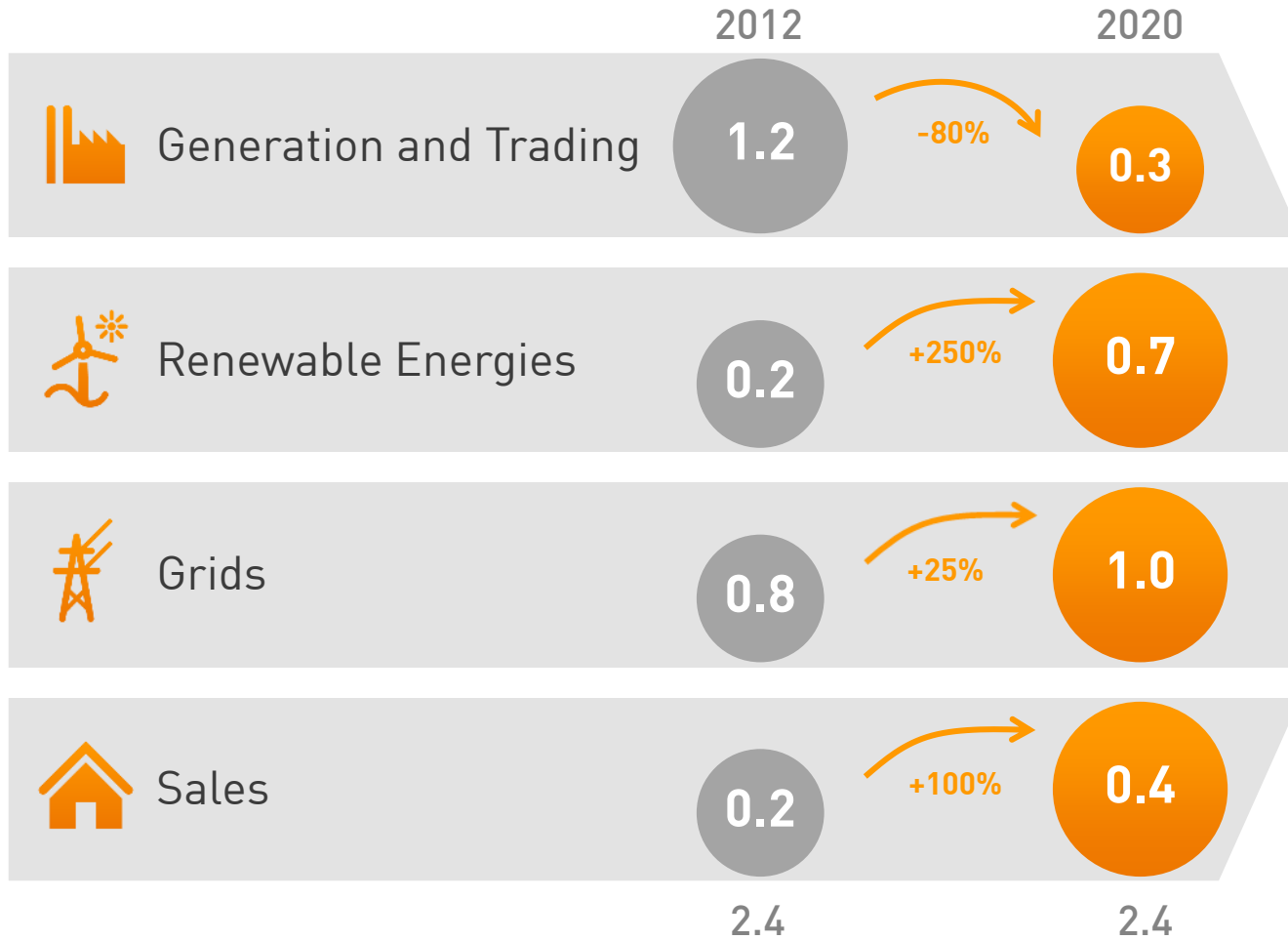
# Investor Update 2018 >

April 2018





# EnBW continues to rigorously implement its 2020 strategy



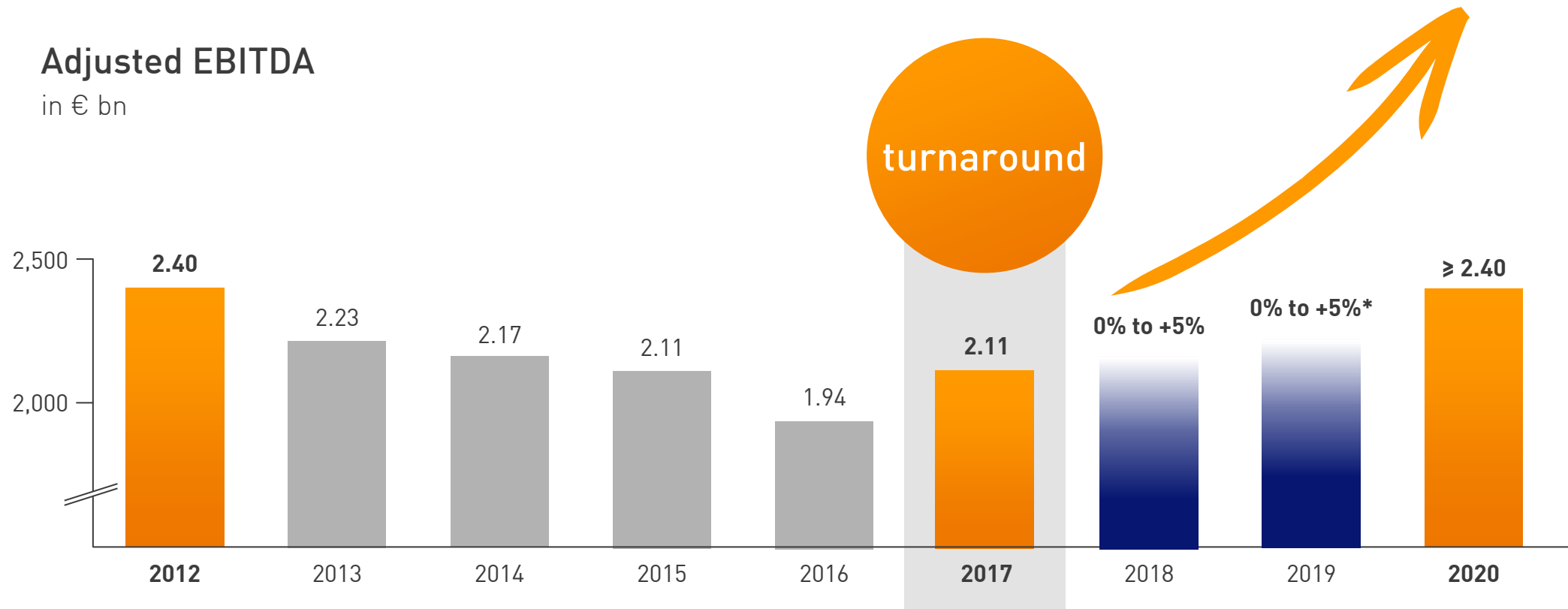
In Adjusted EBITDA in € bn



# Earnings turnaround in 2017 is a key milestone in ongoing transformation

## Adjusted EBITDA

in € bn



\* Referred to forecast 2018

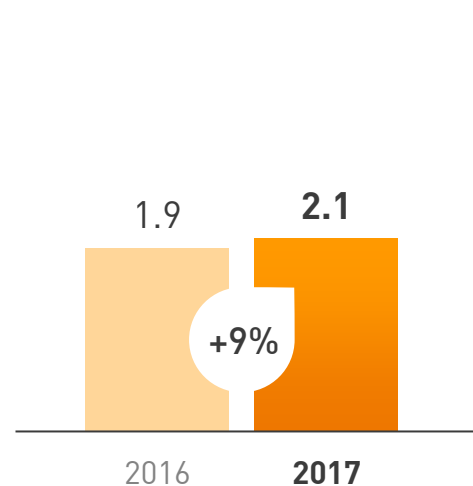
- > Operating performance
- > Efficiency measures
- > Financial discipline



# Strategic profit drivers remain in place



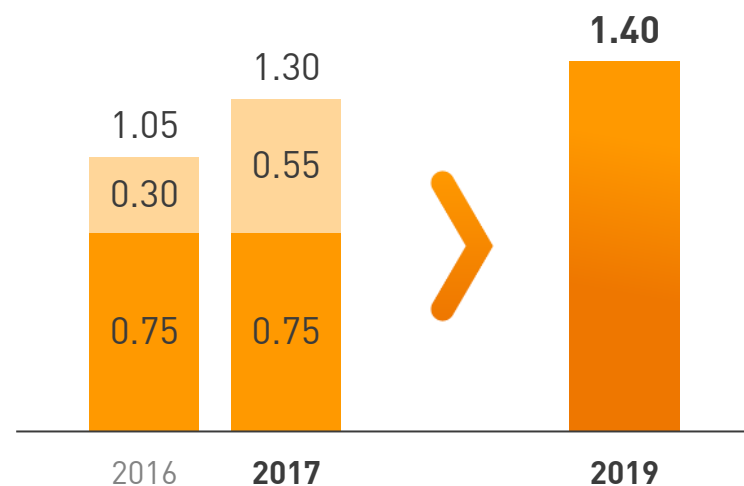
Operating performance increased in all segments



Adjusted EBITA  
in € bn



Accelerated ramp up of efficiency measures

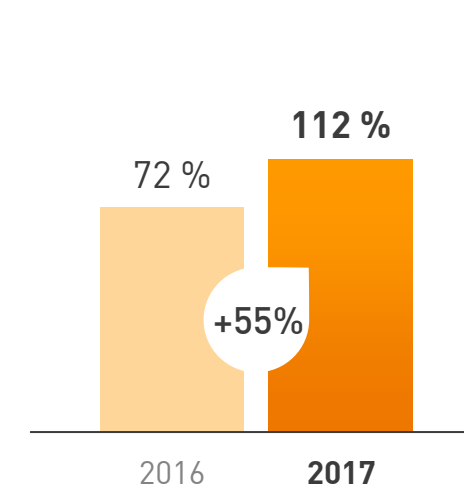


in € bn

additional  
FOKUS



Financial strength improved



Internal financing capability  
Retained Cash Flow minus  
Net investments >0

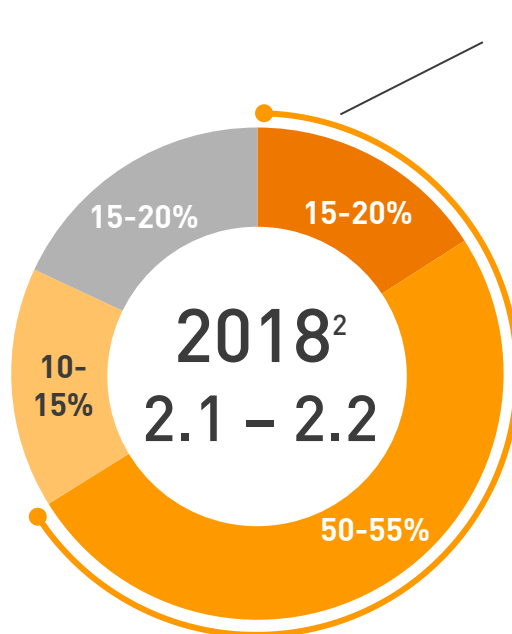
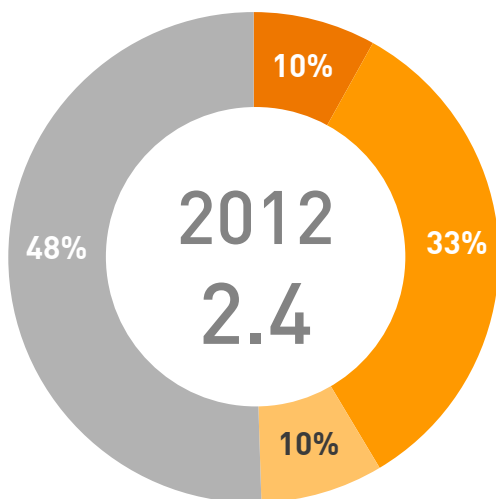


# Portfolio transition shows substantial progress

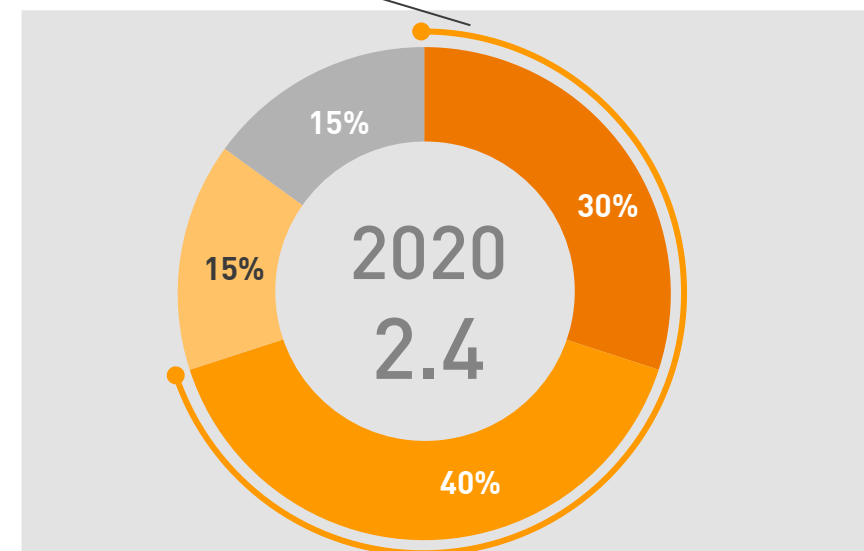


## Adjusted EBITDA<sup>1</sup>

in € bn



Share of low-risk earnings



### Realistic earnings target 2020

- > Expansion of onshore wind from 540 MW to 1,000 MW
- > In 2019 commissioning of 609 MW offshore wind farms Hohe See and Albatros
- > Continuous investments in distribution and transmission grids
- > Efficiency measures of € 1.4 bn will be achieved in 2019 already

Renewable Energies   Grids   Sales   Generation & Trading

<sup>1</sup> Divergence from 100% possible due to rounding effects

<sup>2</sup> Forecast

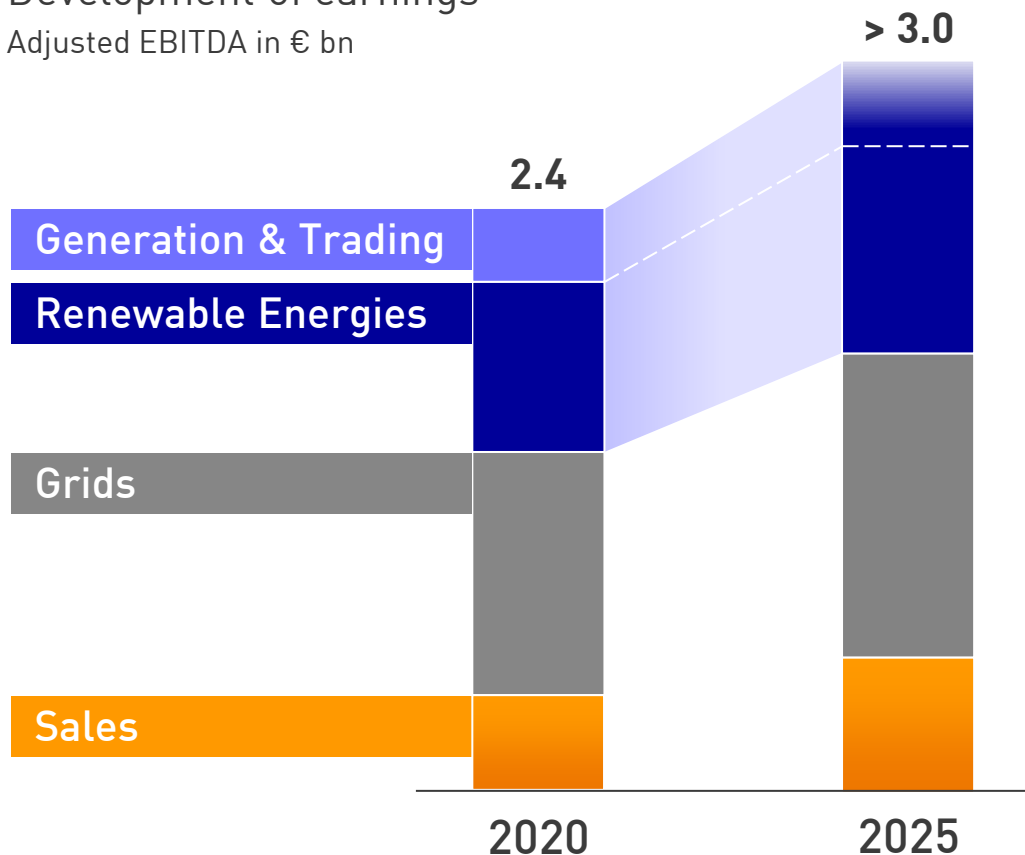


# Growth targets beyond 2020 have already been defined



## Development of earnings

Adjusted EBITDA in € bn



1

### Sustainable power infrastructure

- > Expansion of onshore and offshore wind to > 3,500 MW by 2025
- > Selective international business activities
- > CO<sub>2</sub>-reduced generation (e.g. midstream gas, fuel switch)

2

### System-critical infrastructure

- > Expansion of the distribution and electricity transmission grid
- > Growth of network-related services
- > New areas of system-critical infrastructure (e.g. public security)

3

### Intelligent infrastructure for the customer

- > Cost reduction and digitization of B2C sales as well as transformation to customer infrastructure business
- > New infrastructure-related business areas beyond energy (e.g. mobility infrastructure)

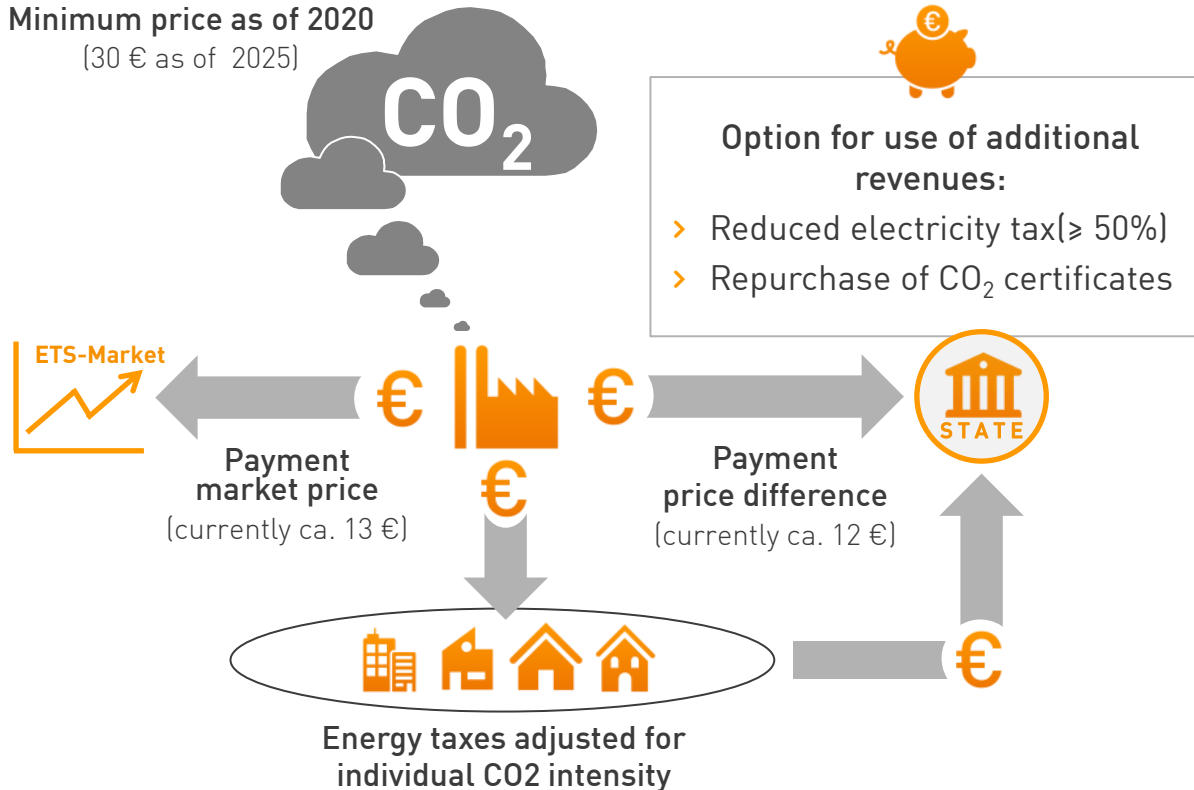


# Focusing on sustainability EnBW supports a CO<sub>2</sub> reduced generation



## EnBW's position on CO<sub>2</sub> minimum price

Specification of 25 €  
Minimum price as of 2020  
(30 € as of 2025)



## Sustainability at EnBW



Focus on selected ESG fields of action

Climate protection focusing on expansion of renewable energies

Reduction of CO<sub>2</sub> intensity of own generation



Integrated Performance Management

Expanded focus on ESG factors

Strengthened sustainability by defining short-, medium and longterm targets

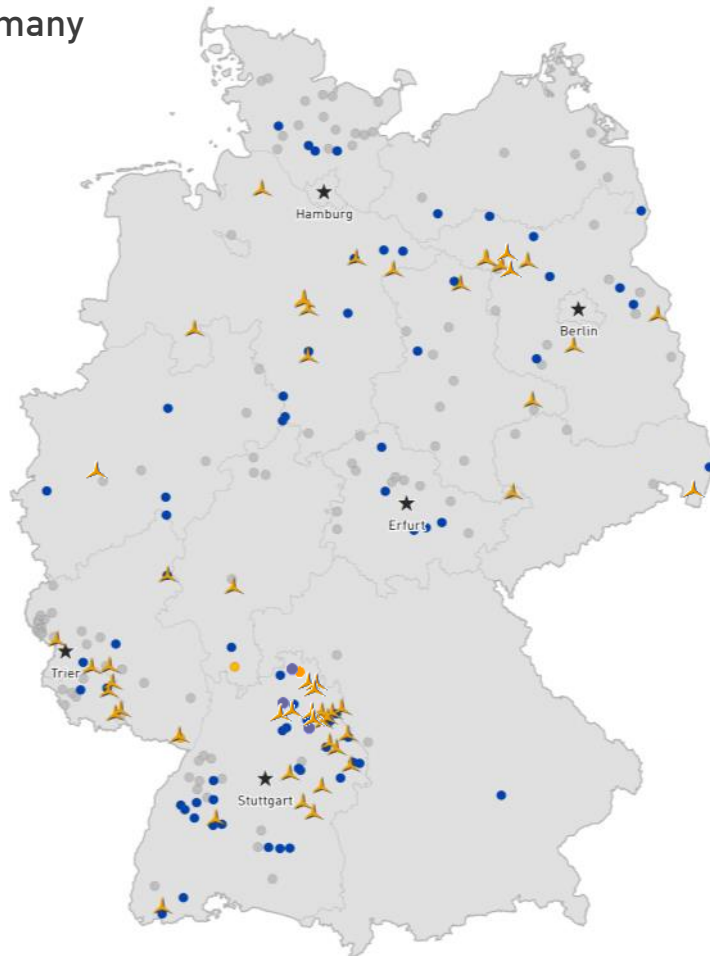


# Onshore wind target of 1,000 MW until 2020 remains unchanged

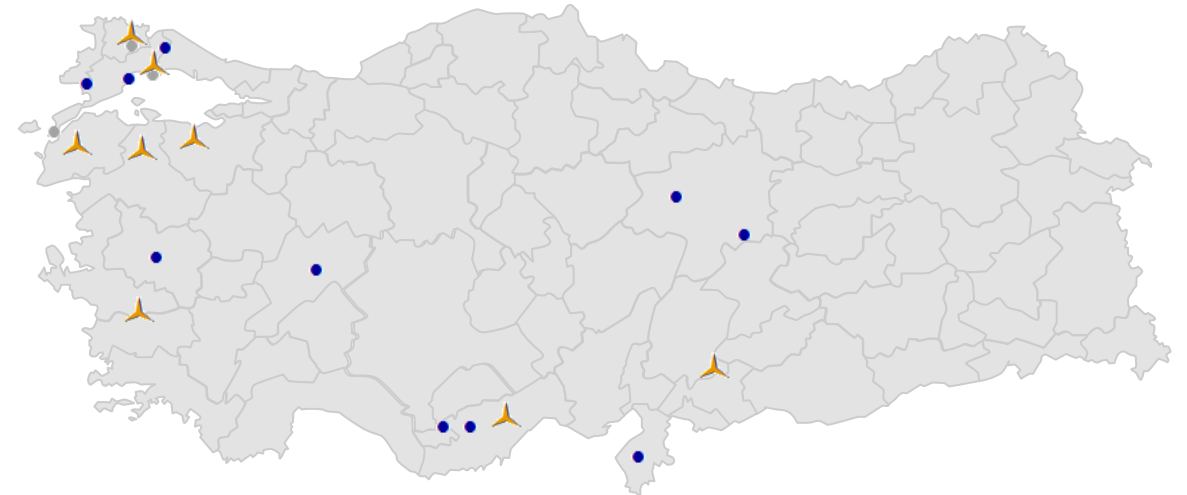


## Distribution of the 2017 pipeline and portfolio

### Germany



### Turkey



- ★ Office of EnBW
- Project development<sup>2</sup>
- Project under construction
- ▲ Installed wind farms<sup>3</sup>

as of 31 December 2017

<sup>1</sup> Negotiations for land contracts (low proportion make it to project development); <sup>2</sup> At least land contracts concluded (large proportion are realised); <sup>3</sup> Wind parks in operation with EnBW majority shareholding





# Wind offshore step 1: European portfolio continues to grow significantly



Installed capacity 2015: 336 MW  
Under construction: 609 MW  
Secured pipeline: 900 MW

2011

> Baltic 1: **48.3 MW**

2015

> Baltic 2: **288 MW**

Planned for 2019

> EnBW Hohe See: 497 MW

> EnBW Albatros: 112 MW

Planned for 2025

> EnBW He Dreiht: **~900 MW**

In operation Under construction Development stage

1

The Hohe See and Albatros offshore projects are making a major contribution to achieving the targets in our EnBW 2025 strategy

2

High competitiveness enables the successful acquisition of new offshore wind projects, while excellence and experience ensure they are delivered on budget

3

Offshore wind will be a significant pillar of our strategy even after 2020. Therefore, we will selectively participate in European auctions and monitor global developments



## Wind offshore step 2: EnBW goes international



Formosa 3 – three project sites with a total capacity of approx. 2,000 MW, acquisition of 37.5% stake

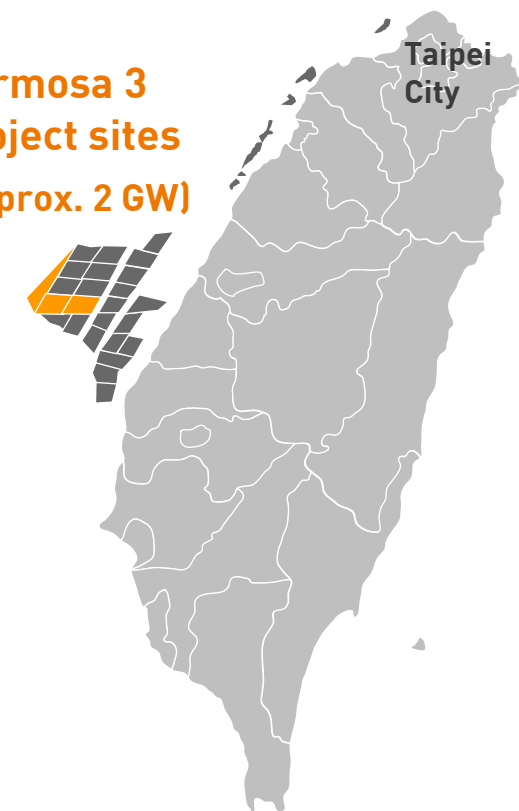
Joint venture contains the strengths of EnBW, Macquarie Capital and Swancor

Fixed 20-year PPA with a feed-in tariff higher than European benchmarks

Favourable sites with good wind energy potential and lower water depth

Next steps: EU merger control clearance, secure grid capacity, start tendering process

**Formosa 3  
project sites  
(approx. 2 GW)**



**Potential offshore wind farms Taiwan**

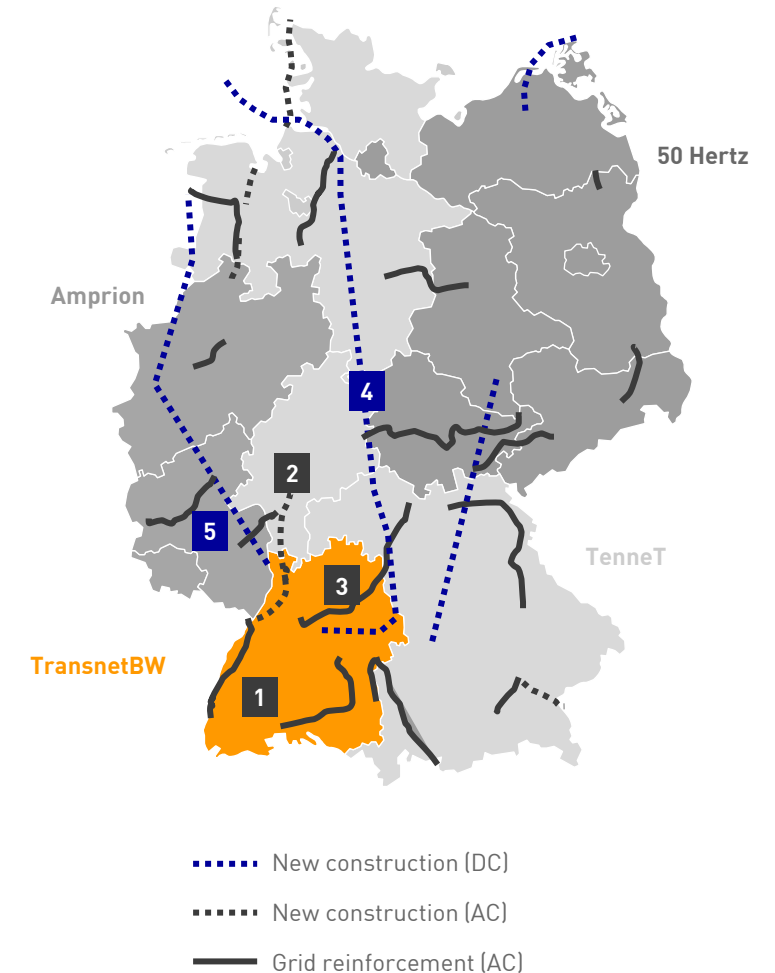


# Expansion of transmission grid mainly affects strategy beyond 2020

## Expansion of the EnBW transmission grid

	Grid section	Scheduled completion
<b>AC grid reinforcement</b>		
<b>1</b> for river Rhein area in Baden	121 km	2021
<b>2</b> for north Baden-Wuerttemberg	156 km	2022
<b>3</b> for north east Baden-Wuerttemberg	158 / plus 56 km	2022 / 2030
<b>DC expansion</b>		
<b>4</b> in corridor C "SuedLink" 4 GW	700 km <sup>1</sup>	2025
<b>5</b> in corridor A "Ultranet" 2 GW EnBW contribution: converter, power lines Baden- Wuerttemberg	40 km	2021

Investment up to 2025: around € 5 bn



Source: BNetzA, EnBW, 2. draft NEP 2030 May 2017

<sup>1</sup> In cooperation with TenneT



# Sales: e-mobility and digitalisation are on top of the agenda — EnBW

## E-Mobility

### Expansion

- › 120 locations equipped with charging stations
- › EnBW's charging card valid at more than 8,000 charging point in DACH countries

### Targets 2018

- › 200 new DC locations
- › Market coverage of 75% in D-A-CH countries

## Digitalisation

### Expansion

- › Smart Metering Systems, e.g. transparency of generation and consumption
- › Cloud platform for utilities, e.g. billing services and energy sector backend
- › Special digital infrastructure offers for local authorities broadband, security and smart services



# Key financial indicators reflect prudent financial policies



## Securing Profitability

### Portfolio Transformation

Grids and Renewables with ~70 %  
Adj. EBITDA contribution by 2020

**Adj. EBITDA Target 2020 € 2.4 bn**

**Adj. EBITDA Target 2025 > € 3.0 bn**

## High Level of Financial Discipline

### Internal Financing Capability

Retained Cash Flow minus  
Net Investments >0

### Coverage of pension and nuclear provisions

Asset Liability Management Model  
Cap on Operating Cash Flow of € 300 m p.a.

## Increasing Group Value

### ROCE > WACC

8.5 - 11.0

### Access to Capital Markets

Solid Investment Grade  
Ratings

### Sustainable Dividend Level

Payout Ratio of 40 %-60 %  
(medium-term target)

## Solid credit quality



Long-term rating: Baa1  
Outlook: stable



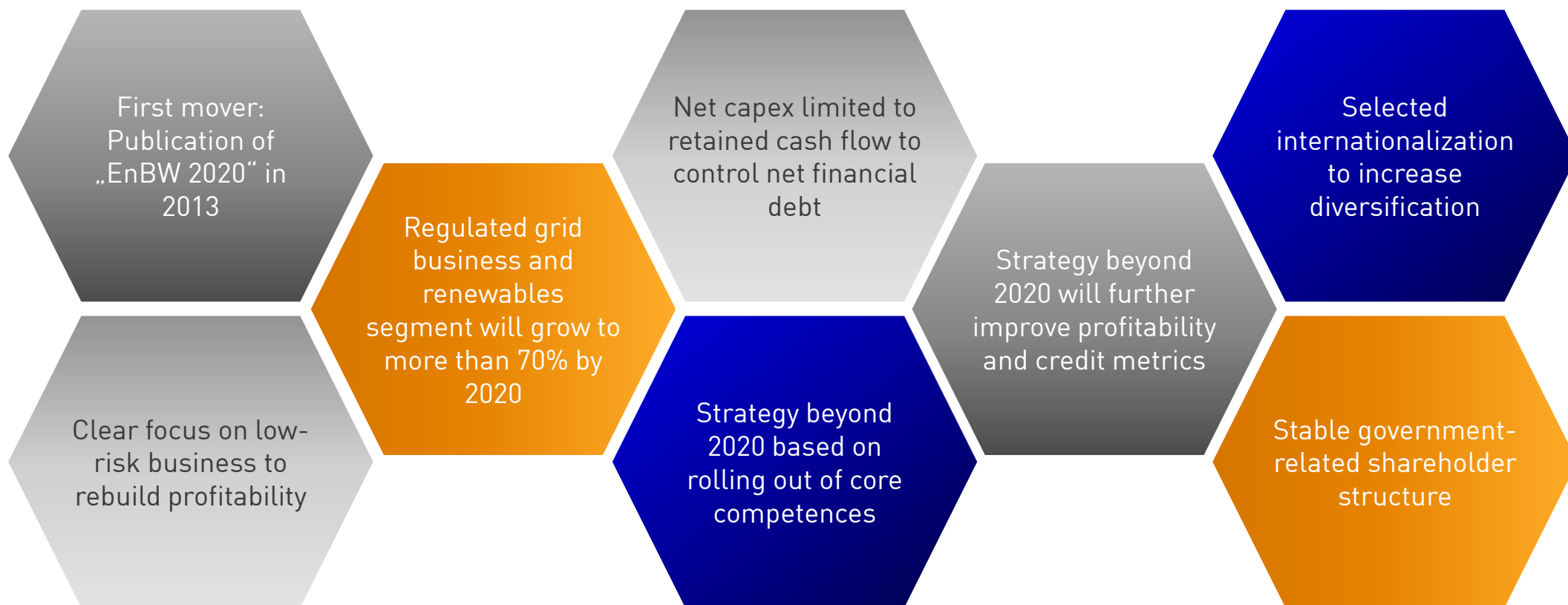
Long-term rating: A-  
Outlook: stable



Long-term rating: A-  
Outlook: stable



## EnBW is a strong business case



# Questions & Answers >



- › EnBW at a glance
- › Political & regulatory environment
- › German electricity market
- › Figures FY 2017
- › Generation portfolio
- › Sustainability
- › VNG
- › Financial profile
- › Rating
- › Dividend
- › Shareholder structure
- › Calendar 2018
- › IR contact





# EnBW at a glance<sup>1</sup>



## One of the largest German utilities

- > 5.5 million customers
- > 13 GW generation portfolio
- > Stable shareholder structure
- > 21,000 employees
- > Strong roots in Baden-Wuerttemberg

## Balanced risk-return profile

- > Focus on renewables and grids
- > ~65 % EBITDA contribution from low-risk business
- > Solid investment grade ratings
- > Active in selected foreign markets

## Key financial figures

- > Revenue: € 22 bn
- > Adj. EBITDA: € 2.1 bn
- > Group net profit/loss: € 2.1 bn

## Fully integrated utility in Germany



## 4 Business Segments



<sup>1</sup> Figures 2017



# Political & regulatory environment: Overview



## EU 2020-Goals

- 20 % GHG emissions
- 20 % RE of final energy consumption
- 20 % Energy savings

## EU 2030-Goals

- 40 % GHG emissions
- 27 % RE of final energy consumption
- 27 % Energy savings (probably increased to 30 %)

## German Climate & Energy Policy Goals

- 40 % GHG emissions until 2020
- 20 % primary energy consumption until 2020

### Conventional generation

- Goal** Shut-down of last NPP until end of 2022
- > Responsibility for financing of phase-out split between operators and government
- Goal** Establishing milestones regarding the fossil-fuel phase-out and the potential pricing of CO<sub>2</sub> during the current legislative period

### Renewables

- Goal** **2025: 40–45 % RE**  
**2035: 55–60 % RE** in electricity production<sup>1</sup>
- > Reform of remuneration system towards tenders
- > First auction for wind offshore in April 2017, EnBW bit successful
- > Debate on tariff system and costs of power ongoing. Changes to charges expected

### Reform of the tax and allocation system

- Goal** Potential reform of financing system of the Renewable Energies Act (EEG)
- Goal** Potential reform of the network tariffs and electricity tax regulation

### Grid expansion

- Goal** Remove bottleneck of energy transition (i.e. slowing grid expansion)
- > Underground cabling is given priority over overhead powerlines
- > System of grid charges to be amended in next legislative period

<sup>1</sup> Coalition agreement: 65% until 2030



# Political & regulatory environment: Fundamental changes

## Generation and Trading

- › Sustained trend towards renewable energies<sup>1</sup>:
  - > 120 GW by 2020
  - > 160 GW by 2030
- › Time of profitable operation of conventional power plants in steady decline
- › Increasing generation from gas power plants due to coal-to-gas fuel switching
- › Political discussion of coal exit; roadmap of coal exit in progress (results end of 2018)
- › Increasing volatility of prices and volumes

## Power and Gas Grids

- › Volatile electricity generation detrimental to grid stability
- › Investments of around € 70 bn in expanding the grid through to 2030
- › Conventional power stations increasingly in back-up role
- › Accelerating expansion of smart grids

## Customers

- › Downturn demand for electricity and gas due to energy efficiency and rising demand by electric vehicles and residential heating sector<sup>1</sup> in the future
- › Renewables for the most part in the hands of non-PSCs<sup>2</sup>
- › Consumers playing an increasingly active role with PV and Battery Systems
- › Number of energy co-operatives has increased strongly since 2008

- › **Technological developments:** more diversity, modularity and granularity in the energy system
- › **New market participants:** more competition and fragmentation of the value chain
- › **Regulatory framework conditions:** undergoing constant change, rising complexity

**Business models of large utilities are changing; accelerating development of renewable energies and grids as well as new services for customers**

<sup>1</sup> Depending on regulatory policies

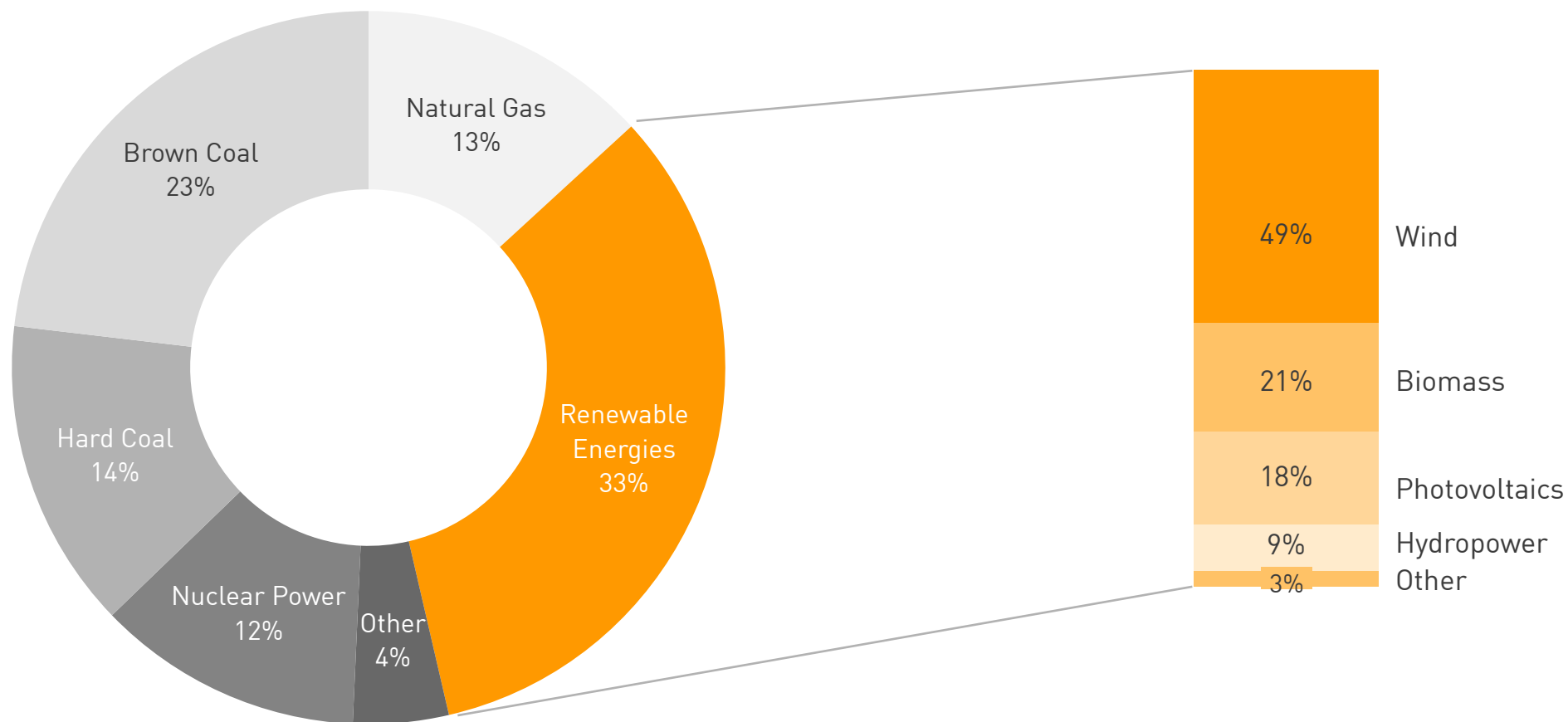
<sup>2</sup> Power supply companies



# German electricity market: Generation capacity



## Gross electricity generation according to energy source 2017 in Germany



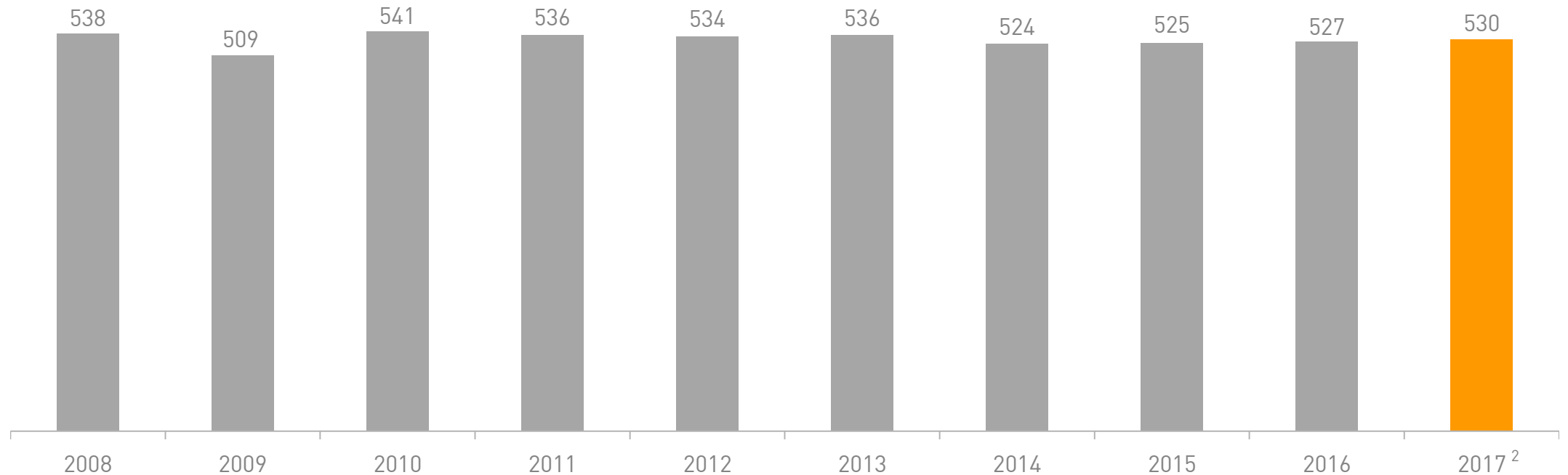


# German electricity market: Electricity consumption



## Electricity consumption in Germany

in TWh<sup>1</sup>



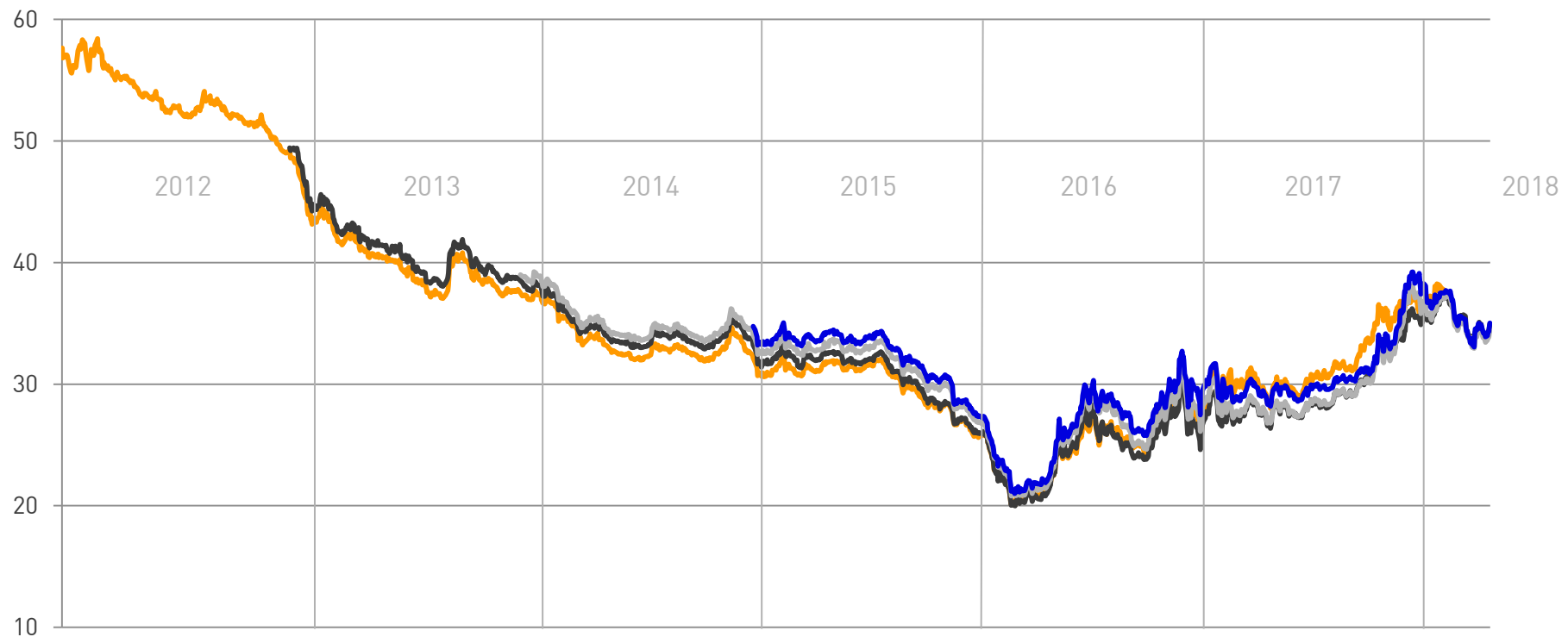
**Slightly growing net electricity consumption in the past few years; reduction due to efficiency is compensated by changes in consumption habits and economic growth**

<sup>1</sup> Data as of February 2018; Source: AGEB

<sup>2</sup> Preliminary data

## Forward price for electricity baseload in Germany

in €/MWh



Base 2018

Base 2019

Base 2020

Base 2021

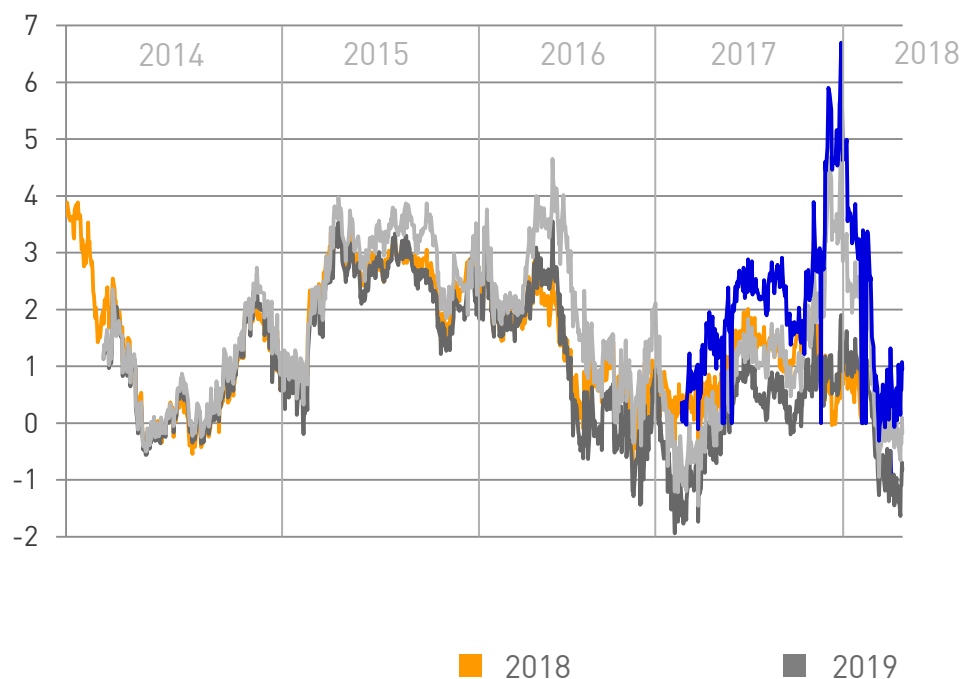


# German electricity market: CDS at low levels and increasing prices for CSS

## Clean-Dark-Spread Base

in €/MWh

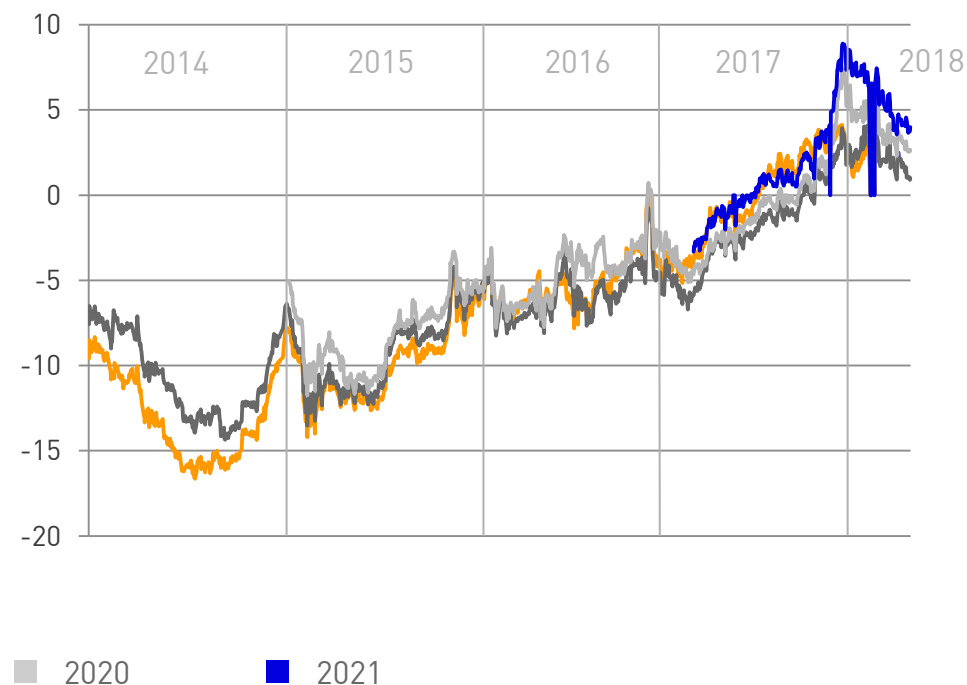
- > Gross margin of a coal-fired power plant (plant efficiency: 36 %)



## Clean-Spark-Spread Peak

in €/MWh

- > Gross margin of a gas-fired power plant (plant efficiency: 50 %)



Clean-spark-spread represents the net revenue a generator makes from selling power, having bought gas and the required number of carbon allowances.  
Clean-dark-spread refers to an analogous indicator for coal-fired generation of electricity.



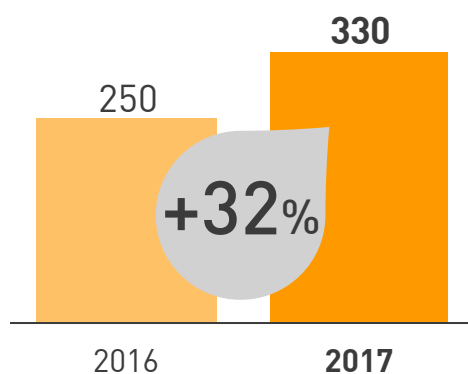
## Sales

Operating increase above expectations

— EnBW

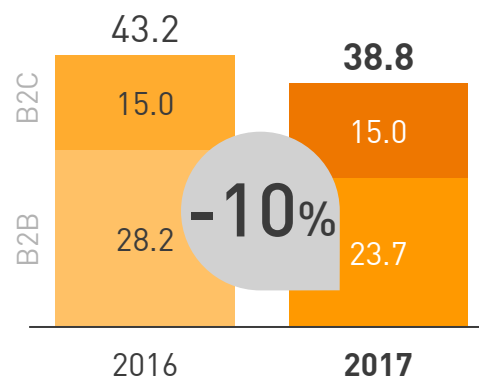
### Adjusted EBITDA

in € m



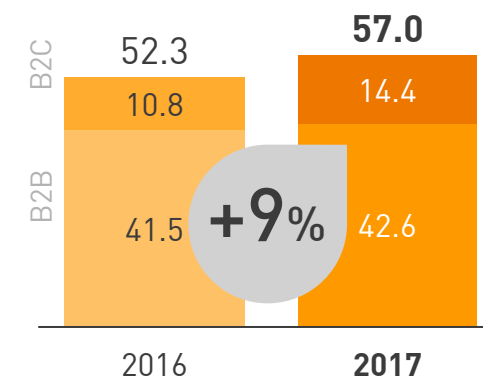
### Sales volume Electricity

in TWh



### Gas

in TWh



Positive effects from exiting the unprofitable EnBW and Watt B2B commodity business in 2016



Reduced ramp-up costs for billing service for other sales and grid operators

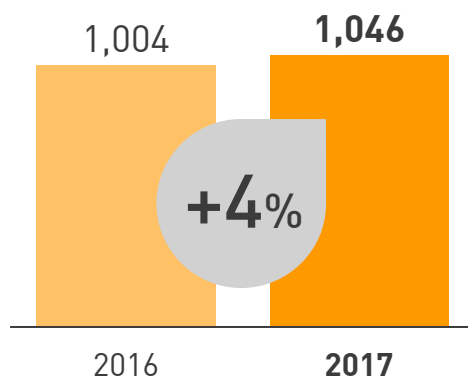




# Grids Increase as expected

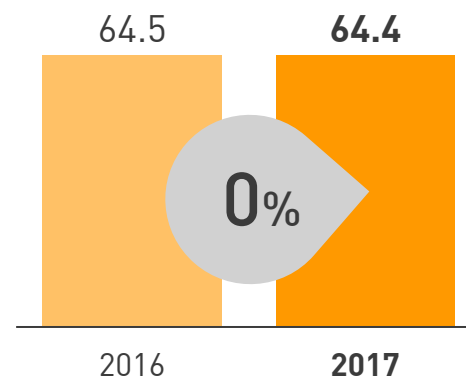
## Adjusted EBITDA

in € m

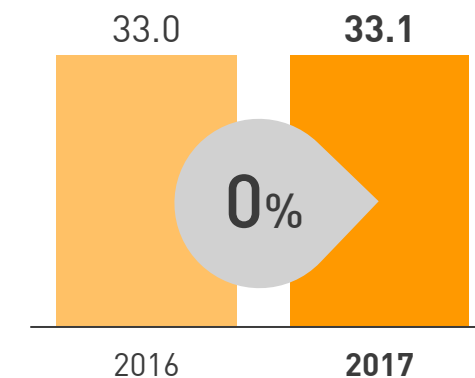


## Transmission volume Electricity Gas

in TWh



in TWh



Positive effects due to first-time consolidation of VNG



Lower earnings from use of distribution grids

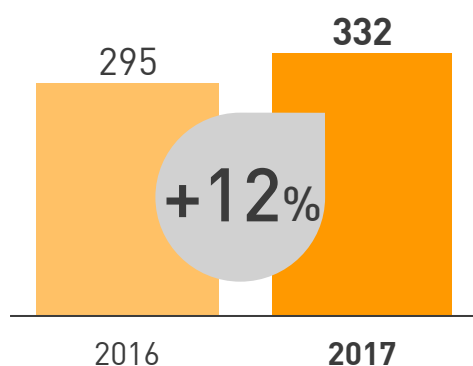


# Renewable Energies

## Increase mainly driven by higher wind yields

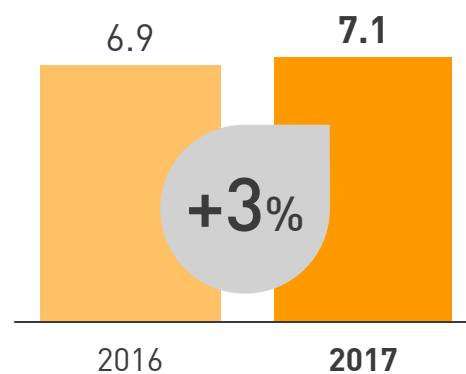
### Adjusted EBITDA

in € m



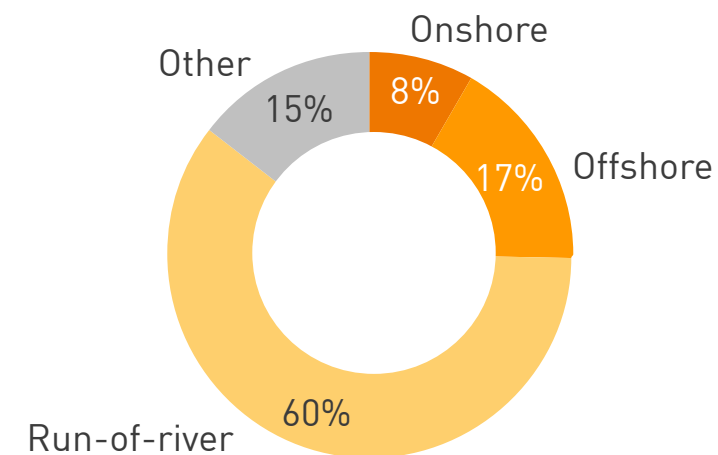
### Generation volume

in TWh<sup>1</sup>



### Renewables generation mix

in TWh



- Higher wind yields compared to previous year, notably at offshore wind farms
- Further onshore wind farms commissioned (+204 MW)
- Reduced water levels at our run-of-river power plants
- Electricity from run-of-river power plants sold on forward market at lower wholesale market prices

<sup>1</sup>Includes long-term procurement agreements and generation from partly owned power stations; the figures indicated are taken from the segments; segment excludes generation from pump storage plants that is associated in the generation and trading segment. Divergence from 100 percent possible due to rounding effects.



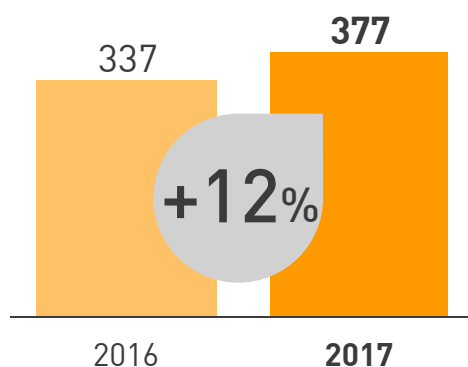
## Generation and Trading

Earnings increase mainly due to consolidation effects

EnBW

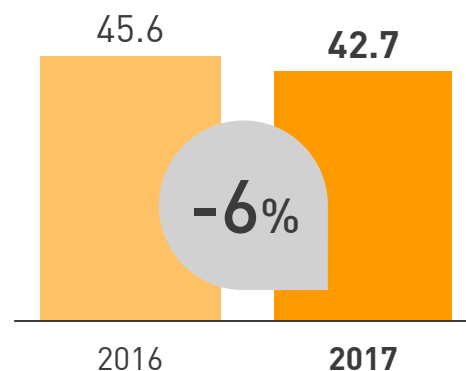
### Adjusted EBITDA

in € m



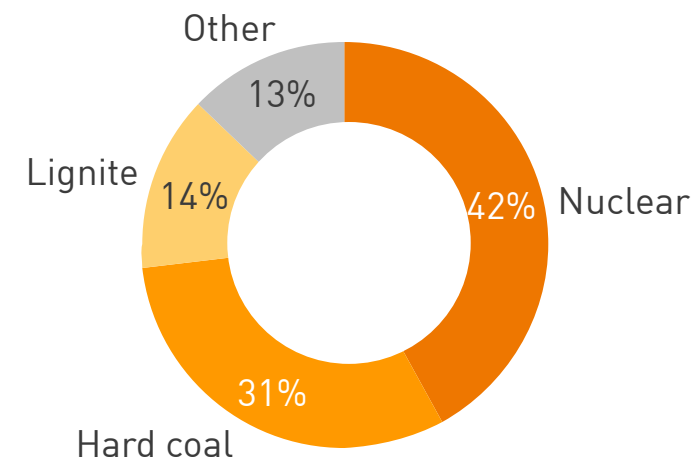
### Generation volume

in TWh<sup>1</sup>



### Conventional generation mix

in TWh



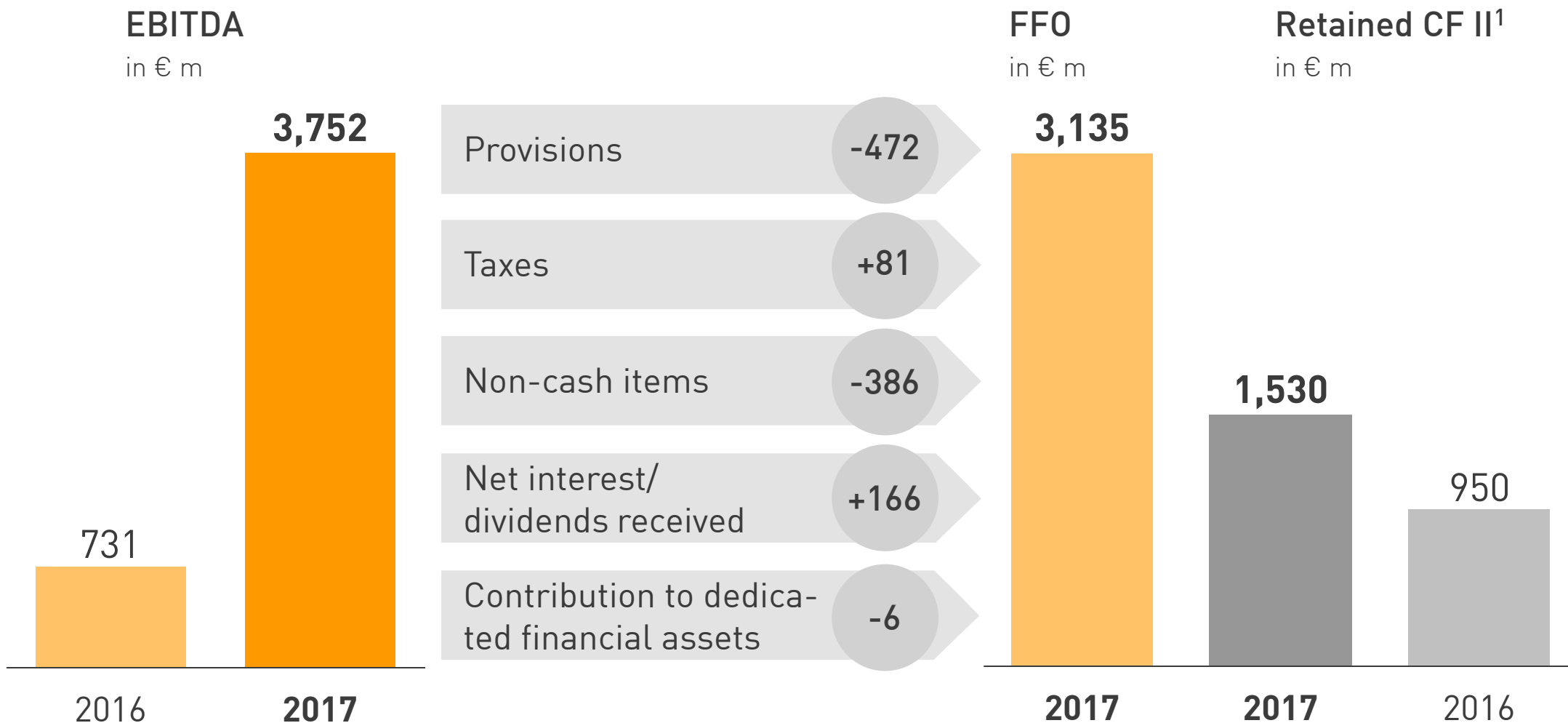
- Positive effects due to first-time consolidation of VNG
- Positive effects from elimination of nuclear fuel tax
- Shutdown of KKP 2 nuclear power plant
- Delivered electricity sold on forward market at lower wholesale market prices

<sup>1</sup> Includes long-term procurement agreements and generation from partly owned power stations; the figures indicated are taken from the segments. Segment includes pump storage plants. Divergence from 100 percent possible due to rounding effects.



# FFO: Significant increase Mainly driven by the nuclear fuel tax refund

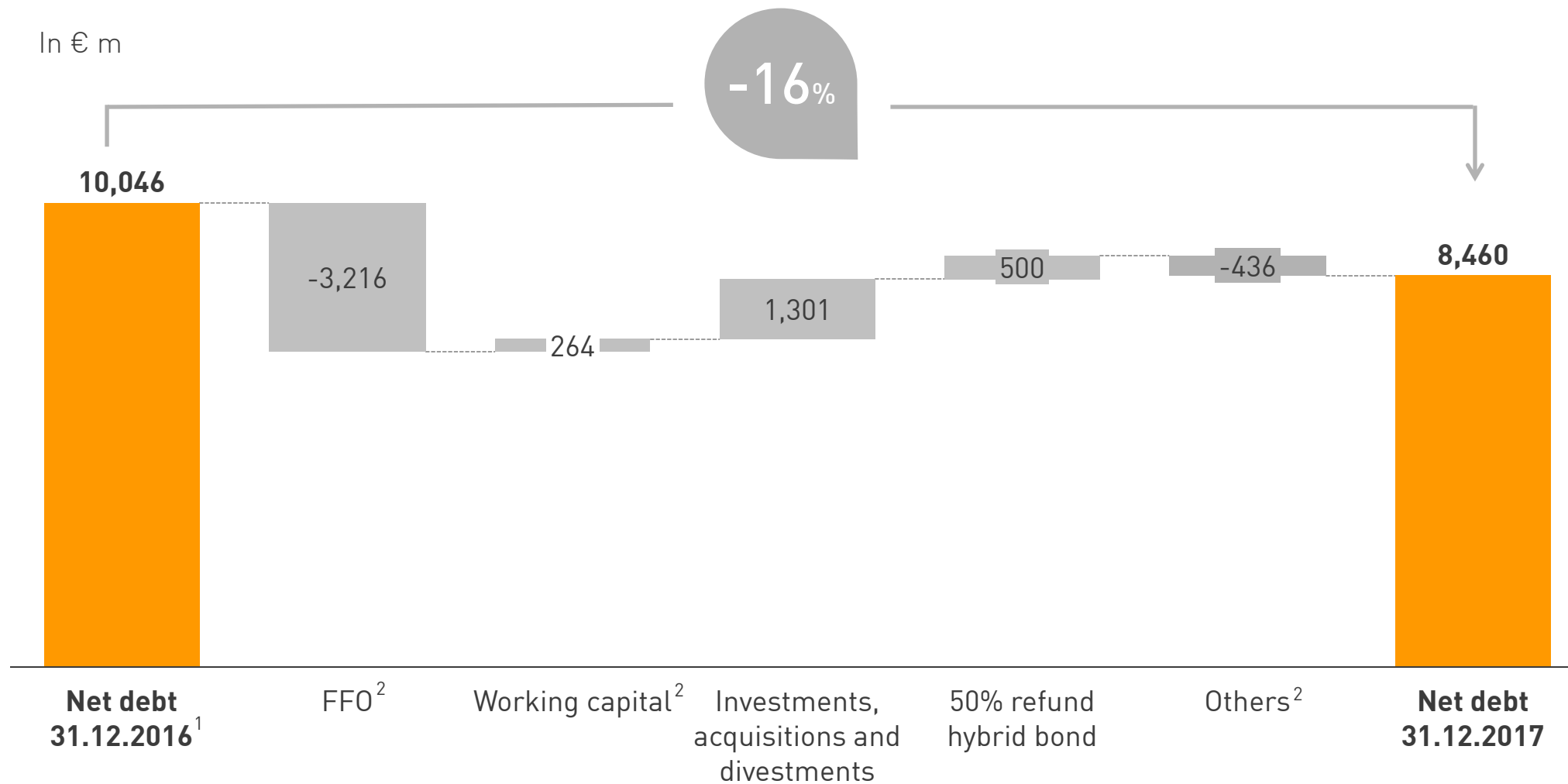
— EnBW



<sup>1</sup> Retained CF corrected for effects of the nuclear fuel tax refund



# Decrease in net debt mainly due to nuclear fuel tax refund



<sup>1</sup> The figure for the previous year has been restated

<sup>2</sup> Netted of for KFK effects



# Strong group profit and EPS driven by operating performance and nuclear fuel tax refund



## Group net profit/loss<sup>1</sup>

**-1.8 bn €** 2016  
**2.1 bn €** 2017

## Earnings per share<sup>1</sup>

**-6.64€** 2016  
**7.58€** 2017

## Net debt of the EnBW Group

**10.0 bn €** 2016  
**8.5 bn €** 2017

## Equity ratio

**8.3 %** 2016  
**15.1 %** 2017

**Dividend  
proposal 2017**  
in €/share

**0.50**

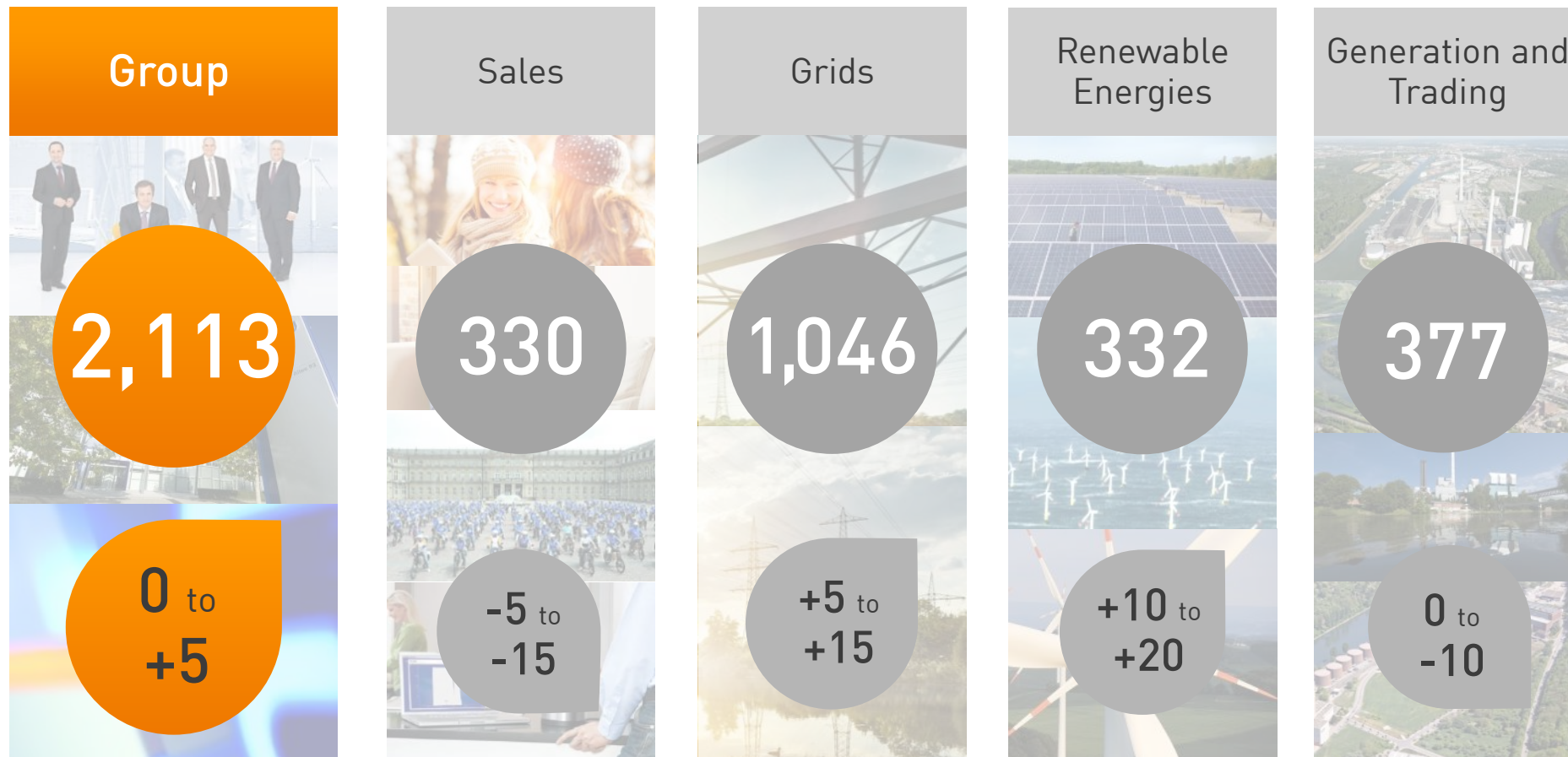


# Outlook operating performance 2018



**Adj. EBITDA  
2017**  
in € m

**Forecast  
2018**  
in %





# Generation and portfolio of the EnBW Group in 2017



	Generation portfolio in MW		Own generation in GWh	
	2017	share	2017	share
<b>Renewable Energies</b>	<b>3,381</b>	<b>26 %</b>	<b>8,290</b>	<b>17 %</b>
Run-of-river	1,034	8 %	5,012	10 %
Storage/pumped storage (using natural flow of water)	1,327	10 %	946	2 %
Wind onshore	540	4 %	661	1 %
Wind offshore	336	3 %	1,416	3 %
Other	114	1 %	255	1 %
<b>Thermal power plants</b>	<b>9,673</b>	<b>74 %</b>	<b>41,904</b>	<b>83 %</b>
Brown coal	875	7 %	6,027	12 %
Hard coal	3,523	27 %	12,977	26 %
Gas	1,448	11 %	3,436	7 %
Other	349	3 %	211	-
Pumped storage (not using natural flow of water)	545	4 %	1,721	3 %
Nuclear	2,933	22 %	17,532	35 %
<b>Total</b>	<b>13,054</b>	<b>100 %</b>	<b>50,194</b>	<b>100 %</b>

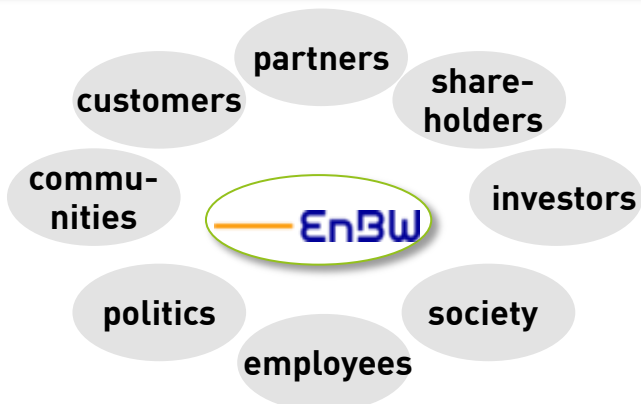


## Sustainability at EnBW

### Sustainability dimensions



### EnBW-Stakeholders



## Sustainability at EnBW is integrated in:

Corporate strategy	✓
Non-financial TOP KPIs	✓
Stakeholder Management	✓
Risk & opportunity analysis	✓
Board remuneration	✓



### Renewables: EnBW "Hohe See"

- ✓ EnBW constructing 500 MW North Sea wind farm with Canadian partner Enbridge
- ✓ Investment volume of around € 1.8 bn



### New Products: EnBW Solar+

- ✓ Innovative product, which combines PV and battery storage
- ✓ Customers can become a member of the "Energy Community" and share power with others



### New Products: E-Mobility

- ✓ Design and operation of charging stations and expansion of electromobility services
- ✓ EnBW and Hyundai Germany cooperate in the area of e-mobility



## Selected Key performance indicators (KPI)

Non financial KPIs are part of the corporate Performance Management System (PMS)

<b>Customers</b>	<b>Satisfaction Index</b>
<b>Employees</b>	<b>Commitment Index</b>
<b>Environment</b>	<b>Renewables capacity</b>

## Oekom research

oekom r|e|s|e|a|r|c|h

2017

B-

- ✓ Strong improvements in
  - ✓ Products and Services
  - ✓ Environmental Management
  - ✓ Corporate Governance and Business Ethics

## Carbon Disclosure Project



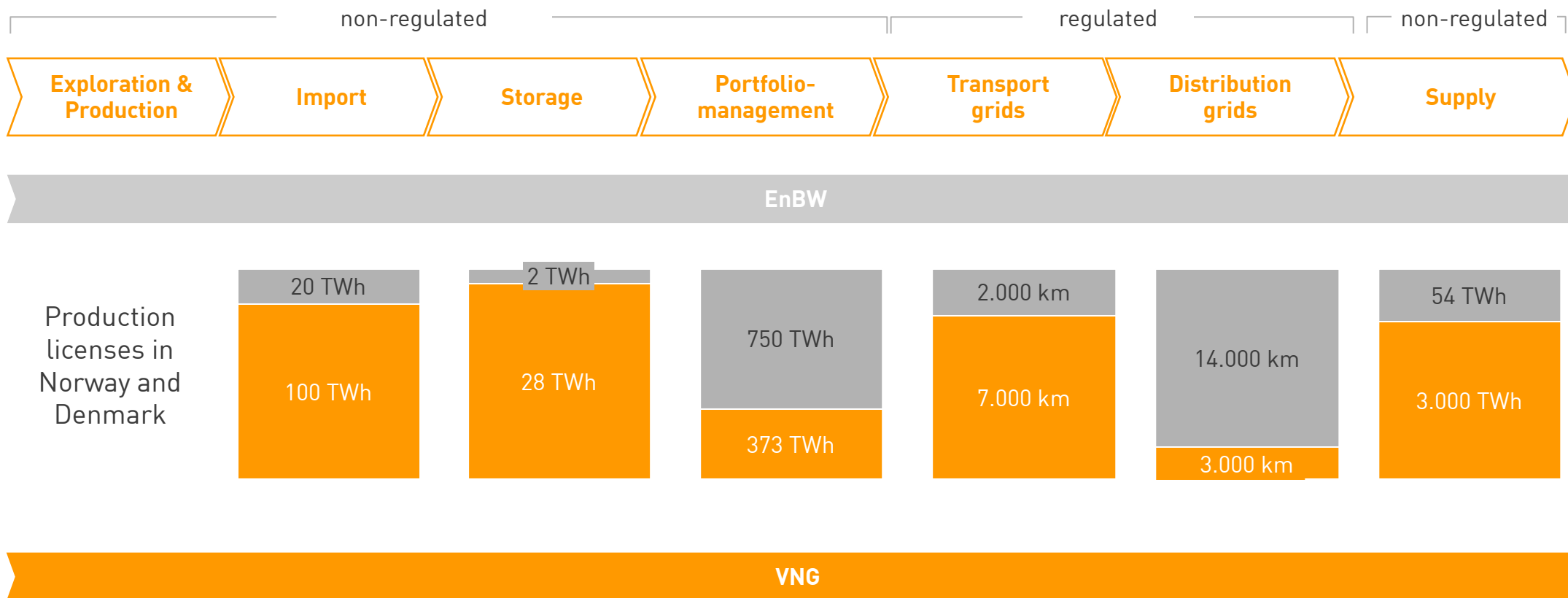
2017

A-

- ✓ Effective initiatives in the field of climate protection (energy efficiency, fuel switch coal to gas etc.)
- ✓ Transparent reporting on emissions, opportunities and risks on climate change



# EnBW/VNG are fully integrated in the gas market

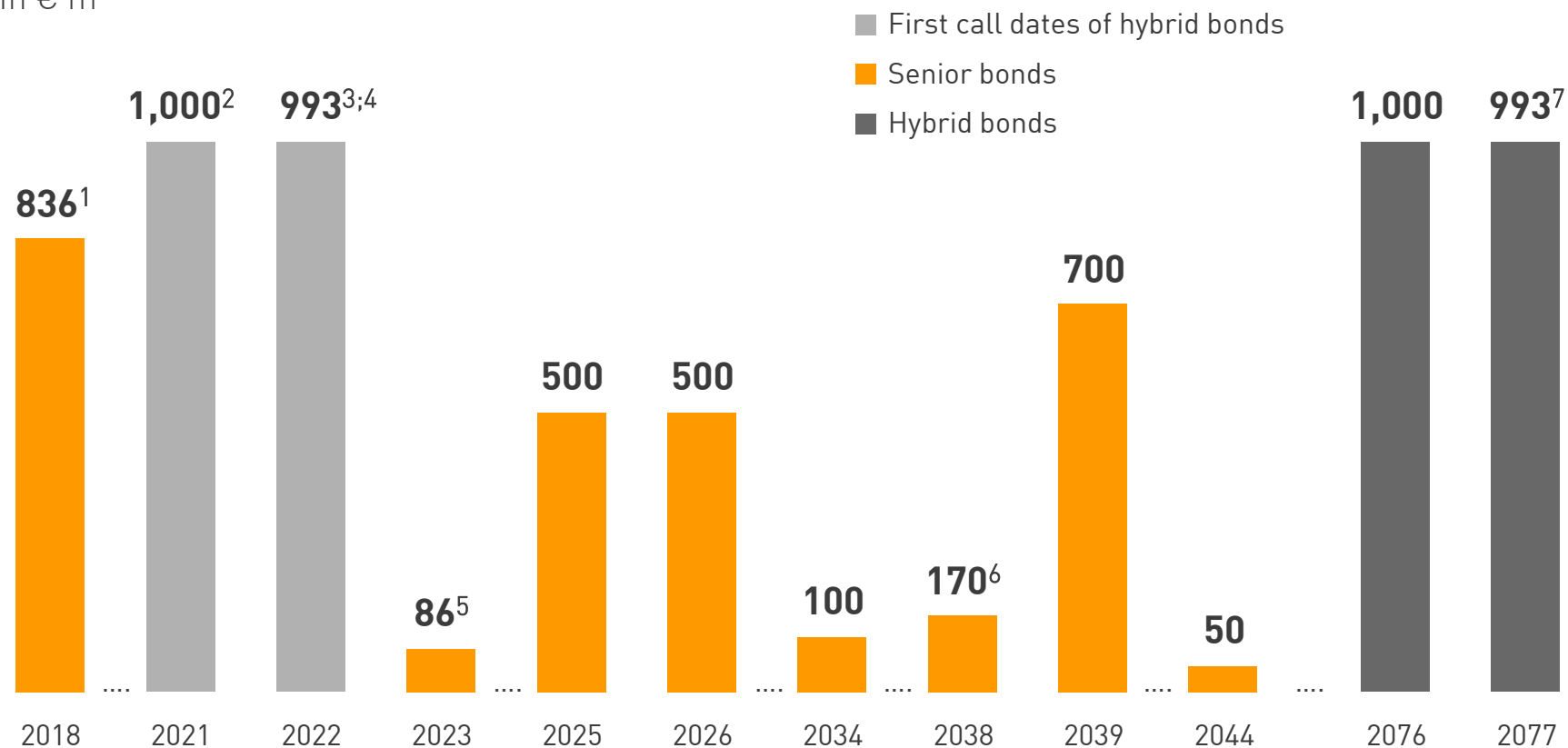




# Maturities of EnBW's bonds



In € m



<sup>1</sup> Includes CHF 100 million, converted as of the reporting date of 31/12/2017

<sup>3</sup> First call date: hybrid maturing in 2077

<sup>5</sup> CHF 100 million, converted as of the reporting date of 31/12/2017

<sup>7</sup> Includes USD 300 million, converted as of 05/10/2016

<sup>2</sup> First call date: hybrid maturing in 2076

<sup>4</sup> Includes USD 300 million (swap in EUR), Coupon for Swap 5,125%

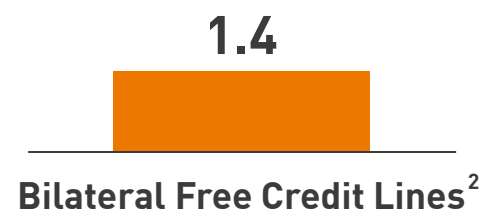
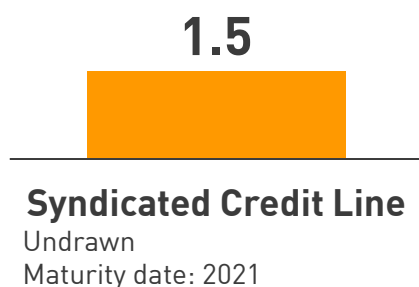
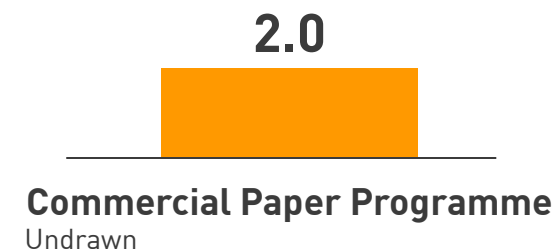
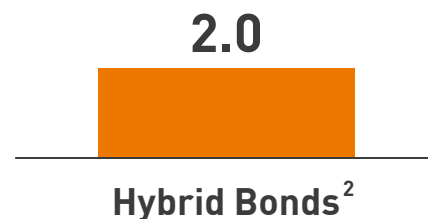
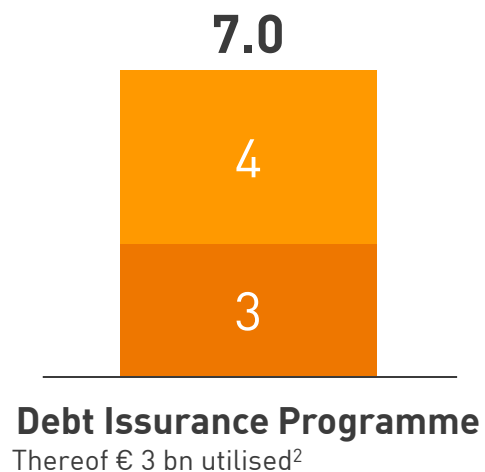
<sup>6</sup> JPY 20 billion (swap in EUR), Coupon for Swap 3,880%



# EnBW has a flexible access to various financing sources<sup>1</sup>



In € bn



Project financing and low-interest loans from the EIB

<sup>1</sup> As of 31 December 2017

<sup>2</sup> Rounded figures



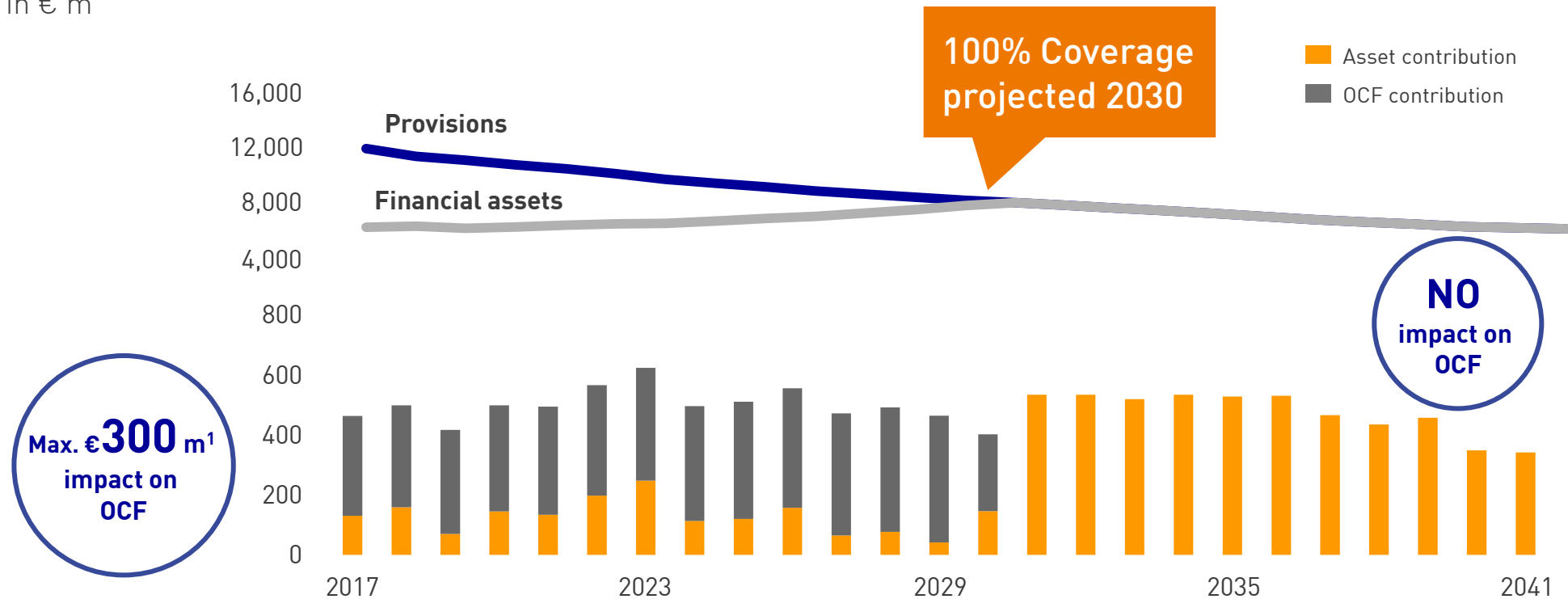
# Asset Liability Management Model

## EnBW nuclear and pension provisions still covered



### EnBW's CF-based model

in € m



<sup>1</sup> Adjusted for inflation



## Rating: a sound financial policy has allowed EnBW to maintain solid ratings against the negative sector trend



### **Baa1/stable**

24 May 2017

- › Conventional generation to remain challenging
- › EnBW 2020 strategy to compensate for negative impact of changing market conditions; de-risking of EBITDA mix, increasing contribution from more stable profit streams
- › KFK agreement creates additional financial burden
- › Continuing implementation of measures to defend credit quality
- › Strong shareholder support



### **A-/stable**

20 June 2017

- › Considerable progress in its business repositioning strategy
- › Funding of nuclear waste-related liabilities without major disruptions to strategy or capital structure
- › Nuclear tax refund will support recovery of credit measures
- › Stable outlook reflects expectation that network operations and growing renewable business will mitigate volatility in power generation and sales, and that credit measures will recover in the near term



### **A-/stable**

7 July 2017

- › Ratings reflect strong integration, expected increase in earnings visibility and lower financial leverage than many of its peers
- › Payment to the state-run nuclear fund (KFK) puts pressure on credit metrics
- › Prudent investment and dividend policy supporting credit ratios
- › Nuclear fuel tax refund will lead to increased headroom assuming that at least part of the amount will be used for strengthening the balance sheet

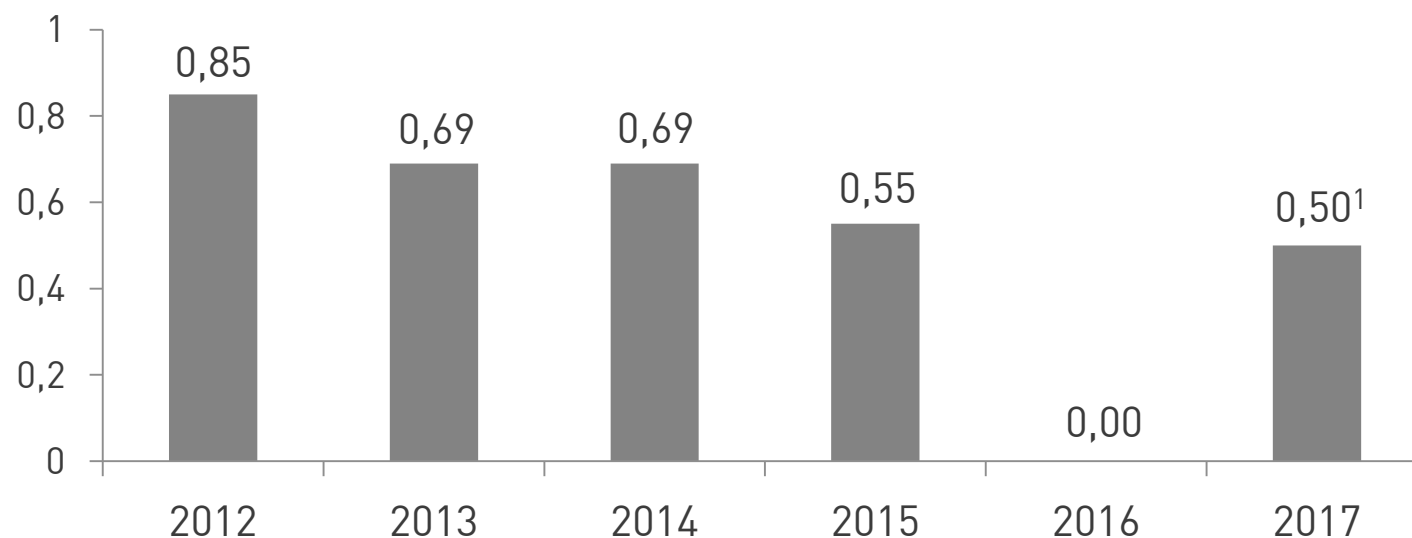


# Appropriate dividend payment for EnBW's shareholders



## Dividend

in €



### Dividend for 2017

- Dividend proposal of €0.50 per participating share
- Total of 270,855,027 participating no-par value shares corresponds to a total amount of € 135,427,513.50

<sup>1</sup> Subject to approval of AGM 2018 on 8 May 2018



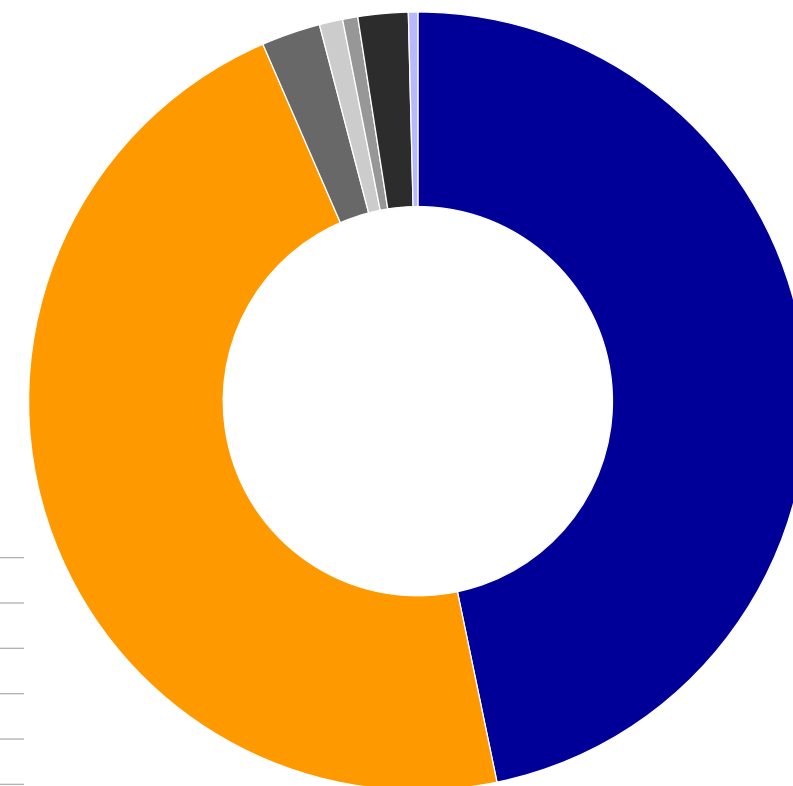


# Equity capital market: Shareholder structure



## Shareholder structure<sup>1</sup>

■ OEW Energie-Beteiligungs GmbH	46.75 %
■ NECKARPRI-Beteiligungsgesellschaft mbH <sup>2</sup>	46.75 %
■ Badische Energieaktionärs-Vereinigung	2.45 %
■ Gemeindeelektrizitätsverband Schwarzwald-Donau	0.97 %
■ Neckar-Elektrizitätsverband	0.63 %
■ EnBW Energie Baden-Wuerttemberg AG	2.08 %
■ Other shareholders	0.39 %



## Stock exchange information

<b>ISIN/security ident. no.</b>	DE0005220008/ 522000
<b>Stock exchange abbreviation</b>	Bloomberg EBK GY/reutersEBK/EBKG.DE
<b>Transparency level</b>	General Standard
<b>Indices</b>	General All Share, DAXsector All Utilities, CDAX
<b>Number of shares</b>	276,604,704
<b>Class of share</b>	Ordinary no-par value bearer shares
<b>Stock markets</b>	Regulated market: Frankfurt and Stuttgart Over-the-counter trading: Berlin and Munich

<sup>1</sup> Divergence from 100 % possible due to rounding effects ;

<sup>2</sup> 100% subsidiary of NECKARPRI GmbH which is a 100% subsidiary of the federal state of Baden-Wuerttemberg

as of 31 December 2017



## Financial calendar 2018



08.05.2018

Annual General Meeting 2018

15.05.2018

Quarterly Statement January to March 2018  
Conference time: 10:00 am

26.07.2018

Six-Monthly Financial Report January to June 2018  
Conference time: 01:00 pm

12.11.2018

Quarterly Statement January to September 2018  
Conference time: 01:00 pm



**Upcoming  
Events**



## EnBW's Team



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