Portfolio transformation successful – adjusted EBITDA target likely to be met in 2019 already

Adjusted EBITDA in € bn

- **Generation and Trading**: 1.2 (2012) → 0.3 (2020), -80%
- **Renewable Energies**: 0.2 (2012) → 0.7 (2020), +250%
- **Grids**: 0.8 (2012) → 1.0 (2020), +25%
- **Sales**: 0.2 (2012) → 0.4 (2020), +100%

Adjusted EBITDA in € m

- **Outlook 2019**: 2,350 to 2,500
- **Current Range**: 1,300 to 1,400
- **Upper Range**: 425 to 500
Transformation phase 2013 - 2020 followed by growth phase 2021 - 2025

Development of earnings
Adjusted EBITDA in € bn

1. **Sustainable power infrastructure, i.a.**
   - Expansion of renewable energies (e.g. onshore and offshore wind to ≥ 3,500 MW, portfolio development of large photovoltaic projects)
   - Selective international business activities
   - Active design of decarbonisation

2. **System-critical infrastructure, i.a.**
   - Profitable growth in the distribution grid (e.g. grid integration of e-mobility and decentralised energy generation)
   - Significant expansion of electricity transmission grid
   - Growth of network-related services (grid)

3. **Smart infrastructure for customers, i.a.**
   - Reorganisation and digitisation of B2C sales as well as transformation to customer infrastructure business
   - Expansion of the solution portfolio (e.g. e-mobility, photovoltaic / battery and heat)
   - New infrastructure-related business areas beyond energy (e.g. urban infrastructure and public security)
SuedLink is the largest infrastructure project of the Energiewende

Cooperation with

Main investments expected to start in 2020

2025 Expected date of commissioning

Rated output: 2 x 2 GW high voltage direct current transmission

Voltage level: Planned ±320 kV DC

€10 bn total invest

Bruns-büttel
Wilster
Grafen-rheinfeld
Groß-gartach
SuedLink
800 km
600 km

TransnetBW
Competitive edge in sales mainly based on smart infrastructure solutions

E-mobility
- EnBW as full service provider: expansion of electricity supply and charging infrastructure
- Cooperations to extend fast-charging infrastructure
- EnBW mobility+ App tripling charging points from 8,000 to 22,000 in 2018
- SAFE project together with 77 municipalities, utilities and communities to extend charging infrastructure in Baden-Wuerttemberg

Contracting
- Optimised offer process, customer proximity and response times
- E.g. energy interconnections between industrial companies and local authorities
- Cogeneration and utilisation of waste heat leading to lower carbon emissions and energy cost

Sales

Broadband
- Supporting communities in planning and setting up infrastructure
- Focus on cost efficiency, high implementation speed and customer satisfaction
- E.g. RBS wave (subsidiary of NetCom) as general project planner for optical-fibre network

EnBW solar+
- Solar system to produce and store electricity
- Cooperation with SENEC (acquired in 2018): EnBW now full-range provider of smart home energy solutions
- SENEC sold 20,000 systems to make them one of the Top German providers
EnBW intends to become a multinational specialist for offshore wind power

**Hohe See & Albatros**
- €2.2 bn total invest
- Construction on track: operation to start in Q4 2019 as expected
- Budget on track: partner Enbridge Inc. with 49.9%
- Both wind farms to make major contribution in achieving 2020 targets
- Offshore wind remains significant pillar of EnBW’s strategy even after 2020

**EnBW goes international**
- Development of new markets in Europe
- Market entry into selective global markets with focus on offshore wind project development
- Establishment of local offices with local employment
- Local market, project & supply chain development
- Long-term presence in perspective markets

2011: Baltic 1: 48.3 MW  
2015: Baltic 2: 288 MW  
2019: Hohe See: 497 MW  
2019: Albatros: 112 MW  
2025: He Dreiht: ~900 MW
Further expansion of onshore portfolio and development of solar portfolio as third pillar

**Onshore wind:**
~718 MW in operation; target of doubling onshore and offshore capacity to over 3.5 GW by 2025

**Photovoltaics:**
Development of a portfolio of large projects

- 200 MW by 2020
- 600-800 MW by 2025

**Sweden**
Acquisition of 7 onshore wind farms with 105 MW in 2018

**Brandenburg (Germany)**
Building of largest solar project in Germany with 175 MW and first project without EEG funding (FID in 2019)

**France**
EnBW selected as exclusive bidder for the acquisition of Valeco Group in March 2019
- 276 MW wind onshore and 56 MW photovoltaics
- Project pipeline of 1,700 MW
Wide range of activities offsetting declining physical generation portfolio

**Generation portfolio**

**Low-carbon generation**
- EnBW’s generation fleet getting smaller
- 1,706 MW CO₂ intensive installed capacity already transferred to grid reserve

**Fuel switch**
- Energiewende also in the heat sector
- E.g. combined heat and power plant in Stuttgart-Gaisburg with 30 MW electrical and 205 MW thermal capacity

**Nuclear phase out**
- 2019: Philippsburg 2
- 2022: Neckarwestheim II

**Management of EnBW’s outright position**

**First long-term power purchase agreement**
- PPA for subsidy-free 85 MW solar park with Energiekontor in 2019
- Fixed price/15 years

**EnBW gas trading also active in international LNG business**
- Expansion of trading business in cooperation with VNG
- Acquisition of 2 ship cargoes (each 1 TWh)

Gradual reduction of physical position being substituted by contracts
No immediate effect by suggestions of coal commission due to EnBW´s fleet structure

Implications on EnBW

- Moderate wholesale price effect expected (2-3 €/MWh in 2030)
- No short/medium-term effect on EnBW plants due to system relevance or high efficiency
- Potential fuel switch subsidy to build highly efficient district heating plants

Coal Capacity in Germany [in GW]

- 2018: 23 Hard Coal, 20 Lignite
- 2022: 15 Hard Coal, 15 Lignite
- 2030: 8 Hard Coal, 9 Lignite
- 2038 (2035): 0 Hard Coal, 0 Lignite

Until 2022: Individual compensation agreements

2022-2030: Lignite: Individual agreements
Hard Coal: Tender for voluntary decommissioning premium

2030-2038: No regulation for decommissioning

Phase out of coal-generated power

Jan 2019: Report of Coal Commission
2019/2020: Climate Change Law

Overview German power plants / Source: Bundesnetzagentur: https://www.bundesnetzagentur.de/EN/Areas/Energy/Companies/SecurityOfSupply/GeneratingCapacity/PowerPlantList/PubliPowerPlantList_node.html
Sustainable business model reflected in EnBW’s key performance indicators

<table>
<thead>
<tr>
<th>Sustainability Dimensions</th>
<th>Economic</th>
<th>Environmental</th>
<th>Social/employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>3.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>3.7</td>
<td>4.4 to 4.5</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finance Dimensions</th>
<th>Installed capacity of renewables in GW</th>
<th>Renewables share of installed capacity in %</th>
<th>CO₂ intensity in g/kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 2017: Installed capacity of renewables in GW: 3.4 GW
- 2018: Installed capacity of renewables in GW: 3.7 GW
- 2019: Installed capacity of renewables in GW: 4.4 to 4.5 GW

- 2017: Renewables share of installed capacity in %: 25.8%
- 2018: Renewables share of installed capacity in %: 27.9%
- 2019: Renewables share of installed capacity in %: 31 to 32%

- 2017: CO₂ intensity in g/kWh: 556 g/kWh
- 2018: CO₂ intensity in g/kWh: 553 g/kWh
- 2019: CO₂ intensity in g/kWh: -10% to 0%
Financing follows strategy - corporate financing based on sustainable products

Issuance of inaugural **Green Bond** on 31 Oct 2018
- €500 m issue size
- 15 years maturity
- 1.875% coupon

**Green Financing** underpins strategy
- Transformation towards 70% **low-risk** earnings in 2020
- **Renewables** and smart **infrastructure** as core element of strategy
- Integral **sustainability** in business model

**Use of proceeds**: Asset categories

- **Offshore wind**
- **Onshore wind**
- **Solar**
- **E-mobility**

<table>
<thead>
<tr>
<th>Renewable energy: 98% Portfolio share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind: 93% Portfolio share</td>
</tr>
</tbody>
</table>

Clean transportation: 2% Portfolio share

---

1 SPO ISS-oekom, 10 October 2018: Verification of the sustainability quality of the first Green Bond by EnBW
Infrastructure investments add well to EnBW’s business model

**€1.8 bn investment**

**2018**
- Grids, almost €1 bn
  - Expansion of electricity grids
  - Construction of the EUGAL gas pipeline
  - Electromobility and smart grids
- Renewables, almost €500 m
  - Onshore wind farms in Germany and Sweden

**~€0.5 bn divestments**
- Primarily sale of VNG Norge (E&P business)

**€12 bn investment**

**2021-2025**
- ~35% Sustainable power infrastructure
- ~50% System-critical infrastructure
- ~15% Smart infrastructure for customers

**€3.7 bn mainly in SuedLink & ULTRANET**

**2019-2021 €6.4 bn invest**

- Grids
- Renewables
- G&T

**~€1 bn divestments**
- Participation models in onshore sector
- Disposal of the remaining minority share in EWE
Internal financing capability and ALM model express EnBW’s high financial discipline

EnBW’s CF-based Asset Liability Model
in € m

100% coverage projected 2031

Max. €300 m

impact on OCF

1 Adjusted for inflation
Diversified and sustainable low-risk business profile

Securing profitability

Until 2020 portfolio transformation towards high share of low-risk business
2021 - 2025 growth phase diversification into new markets

High level of financial discipline

Internal financing capability until 2020
Retained cash flow > net investments

High attention on investors

Access to debt capital markets
Solid investment grade ratings

Focus on sustainability

Transforming generation portfolio
Expansion of renewables and zero-carbon electricity generation

Adj. EBITDA target 2020 ≥ €2.4 bn
Adj. EBITDA target 2025 > €3.0 bn

Debt repayment potential 2021-2025
Retained cash flow / net debt of at least 16%

Sustainable dividend level
Payout ratio of 40% to 60% (medium-term target)

Funding strategy
Based on sustainable finance products
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>EnBW at a glance</td>
<td>17</td>
</tr>
<tr>
<td>Political &amp; regulatory environment</td>
<td>18</td>
</tr>
<tr>
<td>German electricity market</td>
<td>20</td>
</tr>
<tr>
<td>German gas market</td>
<td>24</td>
</tr>
<tr>
<td>Figures FY 2018</td>
<td>27</td>
</tr>
<tr>
<td>Generation portfolio</td>
<td>34</td>
</tr>
<tr>
<td>Sustainability</td>
<td>35</td>
</tr>
<tr>
<td>Financial profile</td>
<td>39</td>
</tr>
<tr>
<td>Rating</td>
<td>41</td>
</tr>
<tr>
<td>Dividend</td>
<td>42</td>
</tr>
<tr>
<td>Shareholder structure</td>
<td>43</td>
</tr>
<tr>
<td>Calendar 2019</td>
<td>44</td>
</tr>
<tr>
<td>IR contact</td>
<td>45</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>46</td>
</tr>
</tbody>
</table>
EnBW at a glance

One of the largest German utilities
- 5.5 m customers
- 13 GW generation portfolio
- Stable shareholder structure
- 21,775 employees
- Strong roots in Baden-Wuerttemberg

Balanced risk-return profile
- Focus on renewables and grids
- ~68% EBITDA contribution from low-risk business
- Solid investment grade ratings
- Active in selected foreign markets

Key financial figures
- Revenue: €20.6 bn
- Adj. EBITDA: €2.2 bn
- Group net profit: €334 m

Fully integrated utility in Germany

Four business segments
- Sales
- Grids
- Renewable Energies
- Generation & Trading

1 As of 31 December 2018
Political & regulatory environment: Overview

Paris Climate Agreement: Hold the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels

<table>
<thead>
<tr>
<th>EU 2020 goals</th>
<th>EU 2030 goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>-20% GHG emissions</td>
<td>-40.0% GHG emissions</td>
</tr>
<tr>
<td>20% RE in final energy consumption</td>
<td>32.0% RE in final energy consumption</td>
</tr>
<tr>
<td>20% Energy savings</td>
<td>32.5% Energy savings</td>
</tr>
</tbody>
</table>

German Climate & Energy Policy Goals

**Nuclear phase-out**
- **Goal**
  - Last NPP to shut down by end of 2022
- Responsibility for financing of phase-out split between operators and government
- State-owned fund established in mid 2017
- Operators have partly transferred nuclear provisions and related liabilities to state

**Renewables**
- **Goal**
  - 2025: 40–45% RE
  - 2035: 55–60% RE in electricity production
- RE share goal to be increased to 65% by 2030 in current legislative period
- Additional tenders for onshore wind (4GW) and PV (4GW) between 2019-2021
- Debate on tariff system and costs of power ongoing
- Debate on increasing acceptability of RES expansion ongoing

**Coal phase-out**
- **Goal**
  - Coal phase-out commission recommends phase-out by 2038 (check in 2032 if phase-out by 2035 possible)
- Various intermediate steps proposed:
  - By 2022: decommissioning of 3GW lignite + 4GW hard coal
  - By 2030: decommissioning of further 6GW lignite + 7GW hard coal
- Compensations for operators envisaged
- Financial support for gas-to-coal fuel switch

**Electricity grid expansion**
- **Goal**
  - Remove bottleneck in energy transition (i.e. slowing grid expansion)
  - Underground cabling given priority over overhead powerlines
  - System of grid charges to be amended in next legislative period
Political & regulatory environment: Market development

**Generation and trading**
- Sustained trend towards renewable energies: > 120 GW by 2020, > 160 GW by 2030
- Time of profitable operation of conventional power plants in steady decline
- Increasing power generation from gas power plants due to coal-to-gas fuel switching
- Increasing volatility of prices and volumes

**Power and gas grids**
- Volatile electricity generation detrimental to grid stability
- Transmission grid expansion accelerated by raising the renewable energy target to 65% by 2030
- Further investment needed for expansion of power distribution grids, e.g. due to the increase in e-mobility
- Conventional power stations increasingly in back-up role
- Accelerating expansion of smart grids
- Moderate expansion of gas grids

**Customers**
- Downturn in demand for electricity and gas due to energy efficiency and rise in demand from electric vehicles and residential heating sectors
- Renewables for the most part in the hands of non-PSCs
- Consumer playing an increasingly active role with PV and battery systems and electromobility
- Landlord-to-tenant electricity supply still uneconomic (inhibited by EEG levy)
- Number of energy co-operatives has increased sixfold since 2008 from ~150 to 970.
- Rising importance of developing new (digital) business models

**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

1 Depending on regulatory policies
2 Power supply companies
3 Rising new registrations compared to previous years
German electricity market:
Installed capacity and electricity generation 2017¹

- Installed Capacity: 216.0 GW (net)
- Electricity generation: 620.5 TWh (net)

- Offshore wind: 2.5%
- Onshore wind: 14.0%
- Photovoltaic: 6.4%
- Biomass and other renewable energies: 7.9%
- Oil, pumped storage and other: 4.9%
- Natural gas: 13.5%
- Hard coal: 13.6%
- Lignite: 22.0%
- Nuclear power: 11.6%
- Hydropower (excluding pumped storage): 3.2%

Source: BDEW, April 2018
¹ As of 31 December 2017
Net electricity consumption stable in the past few years; reduction due to efficiency is compensated by changes in consumption habits and economic growth.
German electricity market: Wholesale forward price

Forward price for baseload electricity in Germany

in €/MWh

2013 2014 2015 2016 2017 2018

- Base 2019
- Base 2020
- Base 2021

Investor Update April 2019
German electricity market: CSS at low levels and negative prices for CDS

**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 is the corresponding indicator for coal-fired generation of electricity.
German gas market: Gas price

Gas price

Taxes and duties

Regulated network user charges (including metering, billing and metering station operation)

Gas procurement and sales (market-determined)

Single-family home, gas central heating
including hot water, customer on contract with regional default supplier

Cents/kWh

<table>
<thead>
<tr>
<th>Year</th>
<th>Taxes, fees and cost allocation</th>
<th>Network user charges, including metering, billing and metering station operation</th>
<th>Procurement and sales</th>
<th>Franchise fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>6.52</td>
<td>0.55</td>
<td>3.41</td>
<td>0.03</td>
</tr>
<tr>
<td>2015</td>
<td>6.26</td>
<td>0.55</td>
<td>3.15</td>
<td>0.03</td>
</tr>
<tr>
<td>2016</td>
<td>5.89</td>
<td>0.55</td>
<td>2.75</td>
<td>0.03</td>
</tr>
<tr>
<td>2017</td>
<td>5.73</td>
<td>0.55</td>
<td>2.65</td>
<td>0.03</td>
</tr>
<tr>
<td>2018</td>
<td>5.70</td>
<td>0.55</td>
<td>2.68</td>
<td>0.03</td>
</tr>
</tbody>
</table>

1 Average net network user charge including charges for metering, metering station operation and billing, subject to large regional variation, source: BDEW, as of 01/2018

2 Most heating gas customers are customers on contract with the regional default supplier, with reduced concession fee (0.03 ct/kWh), source: BDEW, 01/2018
German gas market: Front month price development

Front month reference prices

in €/MWh

1 Average of Gaspool and NCG
German gas market: Spot price development

Spotmarket reference prices\(^1\)
in €/MWh

\(^1\) Average of Gaspool and NCG
### Adjusted EBITDA

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted EBITDA in € m</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>330</td>
</tr>
<tr>
<td>2018</td>
<td>271</td>
</tr>
</tbody>
</table>

-18% decrease

### Sales volume Electricity

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales volume in TWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>38.7</td>
</tr>
<tr>
<td>2018</td>
<td>36.4</td>
</tr>
</tbody>
</table>

-6% decrease

#### B2B
- 2017: 23.7 TWh
- 2018: 21.5 TWh

#### B2C
- 2017: 15.0 TWh
- 2018: 14.9 TWh

### Gas

<table>
<thead>
<tr>
<th>Year</th>
<th>Gas sales in TWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>57.0</td>
</tr>
<tr>
<td>2018</td>
<td>56.3</td>
</tr>
</tbody>
</table>

-1% decrease

#### B2B
- 2017: 42.6 TWh
- 2018: 39.2 TWh

#### B2C
- 2017: 14.4 TWh
- 2018: 17.1 TWh

---

Planned elimination of positive out-of-period effects, i.a. the reversal of provisions for issues that have since lapsed.
**Adjusted EBITDA**
in € m

- 2017: 1,046
- 2018: 1,177

**Transmission volume Electricity**
in TWh

- 2017: 64.4
- 2018: 64.3

**Gas**
in TWh

- 2017: 33.1
- 2018: 33.3

---

- Full consolidation of VNG
- Higher revenues from the electricity grid user charges
Improved generation output, due to new onshore wind farms commissioned since mid-2017 (+178 MW)

- Reduced earnings from run-of-river power plants due to low water levels

- Lower wind yields compared to previous year, notably at offshore wind farms

---

1 Figures are taken from the segments. Segment excludes generation from pump storage plants that is associated in the generation and trading segment
Generation and Trading
Improved operating performance

Adjusted EBITDA
in € m

- Downtime of KKP 2 nuclear power plant in 2017
- Extended revision of the GKN II nuclear power plant
- Unfavorable weather conditions

Generation volume
in TWh

- Figures are taken from the segments. Segment includes pump storage plants

Conventional generation mix
in TWh

- Figures are taken from the segments. Segment includes pump storage plants
FFO decreased mainly driven by the nuclear fuel tax refund in 2017.

<table>
<thead>
<tr>
<th>Year</th>
<th>EBITDA (€ m)</th>
<th>FFO (€ m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>3,752</td>
<td>3,135</td>
</tr>
<tr>
<td>2018</td>
<td>2,090</td>
<td>1,312</td>
</tr>
</tbody>
</table>

- **Provisions**: -395 € m
- **Taxes**: -271 € m
- **Non-cash items**: -116 € m
- **Net interest/dividends received**: +38 € m
- **Contribution to dedicated financial assets**: -34 € m
Increase in net debt

In € m

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>8,418</td>
<td>-1,312</td>
<td>481</td>
<td>1,344</td>
<td>313</td>
<td>343</td>
<td>9,587</td>
</tr>
</tbody>
</table>

+14% increase

¹ The figure for the previous year has been restated
Adjusted group net profit decreased as expected.

Adjusted Group net profit\(^1\)
in € m

- 2017: 793
- 2018: 438

\(-45\%\)

Dividend proposal 2018
€0.65 per share

Distribution
€176 m

\(^1\) In relation to the profit attributable to the shareholders of EnBW AG
## Generation and portfolio of the EnBW Group in 2018

<table>
<thead>
<tr>
<th>Generation portfolio in MW</th>
<th>Own generation in GWh</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018</td>
</tr>
<tr>
<td><strong>Renewable Energies</strong></td>
<td></td>
</tr>
<tr>
<td>Run-of-river</td>
<td>3,738</td>
</tr>
<tr>
<td>Storage/pumped storage (using natural flow of water)</td>
<td>1,006</td>
</tr>
<tr>
<td>Wind onshore</td>
<td>1,507</td>
</tr>
<tr>
<td>Wind offshore</td>
<td>718</td>
</tr>
<tr>
<td>Other</td>
<td>336</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1,71</td>
</tr>
<tr>
<td><strong>Thermal power plants</strong></td>
<td>9,661</td>
</tr>
<tr>
<td>Brown coal</td>
<td>875</td>
</tr>
<tr>
<td>Hard coal</td>
<td>3,491</td>
</tr>
<tr>
<td>Gas</td>
<td>1,468</td>
</tr>
<tr>
<td>Other</td>
<td>349</td>
</tr>
<tr>
<td>Pumped storage (not using natural flow of water)</td>
<td>545</td>
</tr>
<tr>
<td>Nuclear</td>
<td>2,933</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>13,399</td>
</tr>
</tbody>
</table>

Divergence from 100% possible due to rounding effects
Corporate Sustainability: Integral part of the strategy

Sustainability at EnBW

- Sustainability dimensions
  - Economic
  - Environmental
  - Social/employees

- EnBW stakeholders
  - Customers
  - Partners
  - Shareholders
  - Communities
  - Investors
  - Politics
  - Employees
  - Society

Sustainability is integrated in

- Corporate strategy
- Non-financial top KPIs and targets
- Stakeholder management
- Risk and opportunity analysis
- Annual reporting
## Corporate Sustainability: Ratings

<table>
<thead>
<tr>
<th>ISS-oekom</th>
<th>Sustainalytics</th>
<th>Carbon Disclosure Project</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2018 B-</strong>&lt;br&gt;Prime status</td>
<td><strong>2018 73</strong>&lt;br&gt;Outperformer status</td>
<td><strong>2018 B</strong>&lt;br&gt;Management status</td>
</tr>
</tbody>
</table>

**Major improvements in**
- Products and services
- Corporate governance and business ethics

**Major improvements in**
- Environmental aspects
- Social aspects

- Effective initiatives in the field of climate protection
- Transparent reporting on emissions, opportunities and risks of climate change
EnBW is committed to climate protection

- EnBW’s long-term strategy is in line with the Paris Agreement and the goals of the EU and the German government.

- EnBW has introduced a TOP-KPI in 2013, covering expansion of RE, in 2016 a TOP-KPI focusing on CO₂ intensity.

- Long-term forecasts include scenarios with ambitious climate protection targets (see TCFD recommendations).

- TOP KPI CO₂ intensity reflects the great importance of climate protection as an economic and ecological goal of EnBW.

- EnBW strives for greatest possible CO₂ free power generation – with grid expansion, we support climate-friendly energy supply.

- EnBW strongly advocates a price floor for CO₂ of 25 EUR/t in 2020 and 30 EUR/t in 2025.
Focusing on sustainability, EnBW supports CO\textsubscript{2} reduced generation with a minimum CO\textsubscript{2} price

**EnBW’s position on minimum CO\textsubscript{2} price**

€25 minimum price specified for 2020 (€30 for 2025)

Options for use of additional revenue:

- Reduction in electricity tax (≥ 50%)
- Repurchase of CO\textsubscript{2} certificates

ETS Market

Payment of market price (currently ca. €17)

Payment price difference (currently ca. €5)

Energy taxes adjusted for individual CO\textsubscript{2} intensity

**Introduction of a national CO\textsubscript{2} target price of €25 from 2020 and €30 from 2025**

- This would render significant market based CO\textsubscript{2} reductions economically viable – climate-friendly power plants would be allocated more operating hours. At the same time risks for renewable energy investments would be mitigated.”

**Reduction of electricity tax by at least 50%**

- Most of today’s electricity and energy taxes have no significant impact on carbon emissions.
- Reduction of the electricity tax facilitated with the additional revenue from the minimum price of CO\textsubscript{2}; the natural gas tax can be abolished

**Alignment of energy taxes with the CO\textsubscript{2} intensity of the energy source**

- Fundamental reform of the energy tax system: focus on the climate impact of energy sources
- Existing refunds and exemptions remain unaffected
Maturities of EnBW’s bonds

In € m

- **1,000** in 2021
- **993** in 2022
- **89** in 2023
- **500** in 2024
- **500** in 2025
- **500** in 2026
- **500** in 2027
- **700** in 2028
- **50** in 2029
- **500** in 2030
- **1,000** in 2031
- **993** in 2032

**First call dates of hybrid bonds**
- **1st call: hybrid maturing in 2023**
- **1st call: hybrid maturing in 2024**
- **1st call: hybrid maturing in 2025**
- **1st call: hybrid maturing in 2026**
- **1st call: hybrid maturing in 2027**
- **1st call: hybrid maturing in 2028**
- **1st call: hybrid maturing in 2029**
- **1st call: hybrid maturing in 2030**
- **1st call: hybrid maturing in 2031**
- **1st call: hybrid maturing in 2032**

**Senior bonds**
- **1,000** in 2021
- **500** in 2022
- **500** in 2023
- **500** in 2024
- **500** in 2025
- **500** in 2026
- **500** in 2027
- **500** in 2028
- **500** in 2029
- **500** in 2030
- **500** in 2031
- **500** in 2032

**Green bond**
- **1,000** in 2021
- **500** in 2022
- **500** in 2023
- **500** in 2024
- **500** in 2025
- **500** in 2026
- **500** in 2027
- **500** in 2028
- **500** in 2029
- **500** in 2030
- **500** in 2031
- **500** in 2032

**Hybrid bonds**
- **1,000** in 2021
- **993** in 2022
- **89** in 2023
- **500** in 2024
- **500** in 2025
- **500** in 2026
- **500** in 2027
- **700** in 2028
- **50** in 2029
- **500** in 2030
- **1,000** in 2031
- **993** in 2032

---

1. First call date: hybrid maturing in 2076
2. First call date: hybrid maturing in 2077
3. Includes USD 300 million (swap in EUR), Coupon before Swap 5.125%
4. CHF 100 million, converted as of the reporting date of 31/12/2018
5. JPY 20 billion (swap in EUR), Coupon before Swap 3.880%
6. Includes USD 300 million, converted as of 05/10/2016
EnBW has a flexible access to various financing sources\(^1\)

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount (€ bn)</th>
<th>Utilised (€ bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt Issuance Programme</td>
<td>7.00</td>
<td>2.6</td>
</tr>
<tr>
<td>Hybrid Bonds(^2)</td>
<td>2.00</td>
<td>0.25</td>
</tr>
<tr>
<td>Commercial Paper Programme</td>
<td>2.00</td>
<td>0.25</td>
</tr>
<tr>
<td>Syndicated Credit Line(^1)</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Bilateral Free Credit Lines(^2)</td>
<td>1.1</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) As of 31 December 2018  
\(^2\) Rounded figures
Rating: a sound financial policy has allowed EnBW to maintain A category ratings against the negative sector trend

Leadership position as a vertically integrated utility within Baden-Wuerttemberg

Around 50% of EBITDA from low risk regulated distribution and transmission activities and growing share of renewables under contracts, as EnBW continues to invest in line with its 2020 strategy

Difficult operating environment in Germany for conventional generation and increasingly challenging environment in retail markets

Certain execution risks relating to a large investment programme

Balanced financial policies and track record in implementing measures to shore up its financial profile

Strong shareholder support

Solid regional competitive position and increasing foothold in national gas distribution

Considerable progress made in business repositioning strategy

Increased share of operating income from low-risk regulated activities and long-term contracted renewables

Still significant exposure to volatile and commodity-driven wholesale power prices

Well managed funding of nuclear waste-related liabilities, without major disruptions to its strategy or changes to the capital structure

Prudent financial policy underpinned by utilisation of nuclear tax refund for capex and deleveraging

Continued evolution towards a more regulated and contracted business profile

High earnings visibility in grids and renewables partly offset by residual nuclear decommissioning risk; payment of EUR4.8 billion for transferring responsibility for nuclear waste storage has substantially reduced these risk

Average forecast credit metrics are generally stronger than peers, with some exceptions with respect to funds from operations (FFO) fixed charge cover

If the share of regulated EBITDA exceeds 50% on a sustained basis, Fitch may apply a one-notch uplift to the senior unsecured rating
Appropriate dividend payment for EnBW’s shareholders

Dividend for 2018

› Dividend proposal of €0.65 per participating share
› Total of 270,855,027 participating no-par value shares corresponds to a total amount of € 176,055,767.55

Subject to approval of AGM 2019 on 8 May 2019
Equity capital market: Shareholder structure

**Shareholder structure**¹

<table>
<thead>
<tr>
<th>Shareholder</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>OEW Energie-Beteiligungs GmbH</td>
<td>46.75%</td>
</tr>
<tr>
<td>NECKARPRI-Beteiligungsgesellschaft mbH²</td>
<td>46.75%</td>
</tr>
<tr>
<td>Badische Energieaktioners-Vereinigung</td>
<td>2.45%</td>
</tr>
<tr>
<td>Gemeindeelektrizitätsverband Schwarzwald-Donau</td>
<td>0.97%</td>
</tr>
<tr>
<td>Neckar-Elektrizitätsverband</td>
<td>0.63%</td>
</tr>
<tr>
<td>EnBW Energie Baden-Wuerttemberg AG</td>
<td>2.08%</td>
</tr>
<tr>
<td>Other shareholders</td>
<td>0.39%</td>
</tr>
</tbody>
</table>

**Stock exchange information**

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

¹ Divergence from 100 % possible due to rounding effects
² 100% subsidiary of NECKARPRI GmbH which is a 100% subsidiary of the federal state of Baden-Wuerttemberg

Investor Update April 2019
Financial calendar 2019

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.05.2019</td>
<td>Annual General Meeting 2019</td>
</tr>
<tr>
<td>11.05.2019</td>
<td>Quarterly Statement January to March 2019</td>
</tr>
<tr>
<td></td>
<td>Conference time: 01:00 pm</td>
</tr>
<tr>
<td></td>
<td>Conference time: 01:00 pm</td>
</tr>
<tr>
<td>08.11.2019</td>
<td>Quarterly Statement January to September 2019</td>
</tr>
<tr>
<td></td>
<td>Conference time: 01:00 pm</td>
</tr>
</tbody>
</table>

Upcoming Events
EnBW’s Team

› Thomas Kusterer  
Chief Financial Officer

› Ingo Peter Voigt  
Head of Finance, M&A and IR  
T +49 721-6314375  
i.voigt@enbw.com

› Peter Berlin  
Director Capital Markets  
T +49 721-6312844  
p.berlin@enbw.com

› Julia v. Wietersheim  
Senior Manager  
Investor Relations  
T +49 721-6312060  
j.vonwietersheim@enbw.com

› Julia Reinhardt  
Manager  
Investor Relations  
T +49 721-6312697  
julia.reinhardt@enbw.com
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