

October 2020



# Overview



- 1 Climate neutrality
- 2 Business overview

# Political and regulatory environment is the starting point for EnBW's climate strategy



### Climate package

## German Climate & Energy Policy Goals

-40% GHG emissions by 2020 (-55% by 2030) -20% primary energy consumption by 2020 (-61 to -62% by 2030)

#### Climate Protection Act



Establishes German climate protection targets by 2050 and sets a legal framework.



**Climate neutrality** by 2050 pursued as long-term target. Annual **sectoral emission budgets** specified through to 2030; German government can arbitrarily reallocate sectoral emission budgets.



Monitoring process for target attainment by 2030: If sectoral annual emission targets missed, department in charge has to submit an immediate action programme.

### Climate protection programme 2030



Target of **65% renewables in 2030**<sup>1</sup> and target ranges specified for specific technologies, e.g. offshore wind target raised and 52 GW PV cap lifted.



New act implements coal phase out by 2038 at the latest. Reduction of coal-fired capacity from ~40 GW to 30 GW in 2022 and 17 GW in 2030.



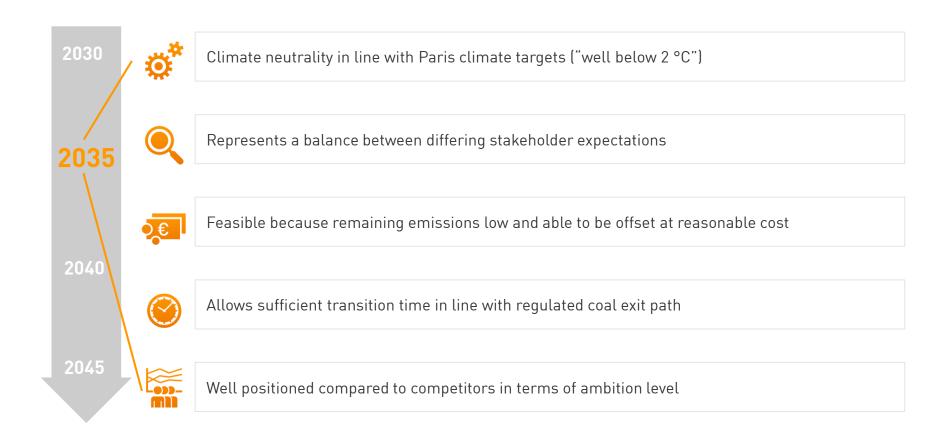
New act (BEHG) to implement national CO<sub>2</sub> pricing system in transport and heating, starting in 2021 with fixed prices followed by a cap-and-trade system from 2026.

<sup>&</sup>lt;sup>1</sup> Specific tender quantities for target of 65% renewables by 2030 are expected to be implemented in pending amendment of EEG.

# EnBW aims for climate neutrality by the end of 2035



### Reasons for choosing 2035 as the target year for EnBW to attain climate neutrality



# EnBW uses various instruments on the path to climate neutrality



### Coal exit/fuel switch

- > (Partly) required by coal phaseout
- > Only latest hard coal plants and one lignite plant<sup>1</sup> expected to be still in operation in 2030
- District heating/power generation fuel switch to natural gas, biogas/ biomass, hydrogen etc.

## Use of climate-neutral qases

- Transition to climateneutral gases necessary in medium term
- Climate-neutral hydrogen not expected to be universally available until mid-2030s

# Use of green electricity

- Mainly relevant as substitute for 'grey' grid loss purchases in Scope 2<sup>2</sup>
- > Surcharge for green grid loss purchases

## Offsetting

- Unavoidable residual emissions offset by purchase of recognised offsetting allowances (Scope 13)
- Reduction prioritised over offsetting

### Other options

- Action package to avoid relatively small-scale emissions (such as canteen and building emissions)
- > About 2% of total emissions at FnBW

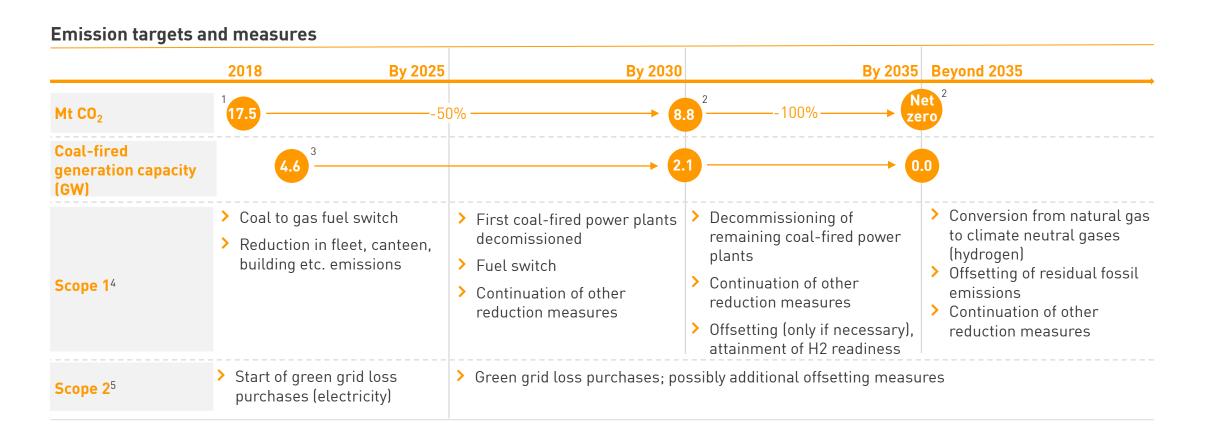
<sup>1</sup> Of EnBW's coal-fired power stations, only RDK8, GKM9 and LIP currently still expected to be in service beyond 2030, plus electricity from Walsum in 2030

<sup>&</sup>lt;sup>2</sup> Indirect emissions from electricity purchased and used by the organisation.

<sup>&</sup>lt;sup>3</sup> All direct emissions from the activities of an organisation or under their control.

# EnBW has a clear-cut implementation plan for emission reductions: 50% by 2030, net zero by 2035





<sup>&</sup>lt;sup>1</sup> Starting figure for Scope 1 and 2 (mainly power generation and grid losses) <sup>2</sup> Target for Scope 1 and 2 <sup>3</sup> As of October 2020

<sup>&</sup>lt;sup>4</sup> All direct emissions from the activities of an organisation or under their control.

<sup>&</sup>lt;sup>5</sup> Indirect emissions from electricity purchased and used by the organisation.

# EnBW's transition towards climate neutrality is a just transition





### **Clear climate targets**

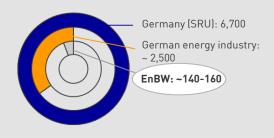
### Long-term climate targets for EnBW

- > -50% by 2030
- > -100% by year-end 2035
- Offsets for unavoidable residual emissions from 2036

# Calculation of Paris-compliant residual emission budget

Based on German Advisory Council on the Environment (SRU)

EnBW residual emissions budget with 2/3 probability of 1.75°C global warming [Mt CO<sub>2</sub>]





### **Just transition**

# No additional job cuts (currently 3,400 employees in conventional generation)

- Attaining EnBW climate neutrality by 2035 does not mean decommissioning coal-fired power plants in excess of the statutory decommissioning path
- > EnBW delivers on its social responsibility in the exit from coal: suitable HR instruments (further training e.g.) and forward-looking HR planning
- Former conventional power generation employees are already contributing their technical expertise in other areas today, such as in offshore wind power



### Financial feasibility

#### **Cost management**

- No need for offsetting expected up to 2035 as 50% target realistically attainable by EnBW
- Offsetting only expected to be needed from 2036 to 2040, on declining trend (notably due to use of climate-friendly gases in power plants)
- EnBW offsets according to Gold Standard and thus complies with prevailing minimum requirements

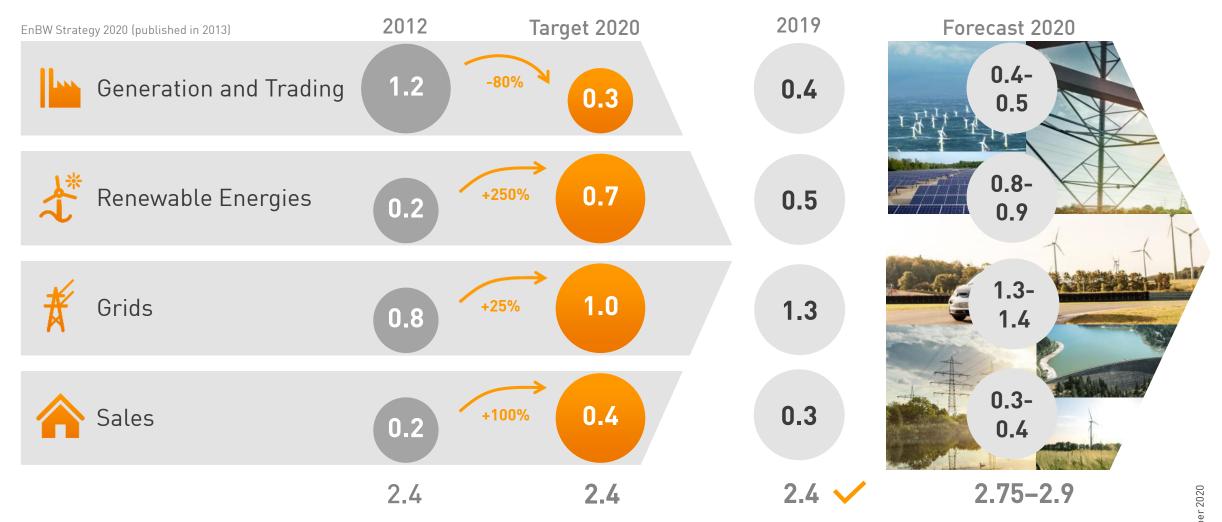
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# Portfolio transformation successful – overall EBITDA 2020 target already achieved in 2019 – overachievement expected in 2020





# COVID-19: Business model resilient - EnBW takes social responsibility



#### Effects of corona pandemic on adjusted EBITDA of business segments

#### Adjusted EBITDA H1 2020 on Group level

> Earnings increase driven by Renewable Energies segment due to new offshore wind farms Hohe See and Albatros

#### Sales

> Lower sales to B2B customers and impairments on receivables

#### Grids

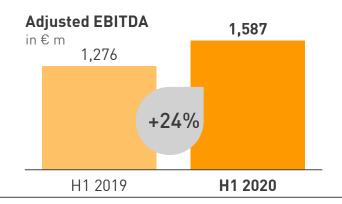
> Earnings performance not significantly influenced

#### Renewable Energies

No impact

#### Generation and Trading

> Electricity sold at higher wholesale market prices



#### EnBW takes responsibility at an exceptional time

#### 24/7 security of supply

> Supply of electricity, gas, water and heat secure at all times

#### Protecting the health of EnBW's employees

- > Investments in IT and digital infrastructure pay off
- > 10,000 working from home thanks to the capabilities of modern IT
- > Physically separate teams for key units with strict safety measures

#### Social responsibility beyond energy supply

- Donation of a total of €150,000 to the food banks run by the "Tafel" charities in Baden-Württemberg.
- > Support for the book business / book stores in Baden-Württemberg
- Donation of face masks to medical facilities
- > EnBW has restored connections to all those who had their electricity and gas supplies cut off in the first months of 2020



# Generation & Trading: On its way to climate neutrality





# Phase-out of conventional generation: currently 6.5 GW<sup>1</sup>

#### Coal exit

**>** By 2035

#### Nuclear exit

- Final shutdown of KKP 2 (1.4 GW) on 31 December 2019
- > GKN II (1.1 GW) by end of 2022

Reserve power plants (1.7 GW)<sup>2</sup> Federal Network Agency confirmed extension of system relevance until 31 March 2023.

<sup>1</sup> without nuclear; <sup>2</sup> not included in EnBW's generation portfolio



#### Regulated generation for grid stability

- 300 MW plant at EnBW's power plant location in Marbach
- > Highly-flexible open gas turbine
- Planning approval granted by Stuttgart regional council in July 2020
- > Commissioning expected in 2022
- Use and operating time in the responsibility of transmission system operators
- EnBW's generation business could be regulated and unregulated



#### **Trading**

 2020 generation position completely hedged one year in advance

#### Strategic dimensions

- Regional expansion
  - into CWE and Nordics
- Extension of product range
  - e.g. liquified natural gas (LNG)
- > Extension of time horizon
  - > PPA with Energiekontor in 2019
- > Smart & digital trading
  - digital trading strategies

# Renewable Energies: core of EnBW's energy transition strategy





## Offshore wind: 945 MW Secured pipeline: 900 MW

#### Germany

- > Hohe See 497 MW
- > Albatros 112 MW
- > Baltic 1 und 2 with 336 MW
- > EnBW He Dreiht ~ 900 MW FID expected 2023; COD 2025
- Project development in the US and Taiwan
- Experienced and successful offshore developer and operator



## Onshore wind: 878 MW Secured Pipeline 2,200 MW

#### Germany

- > 626 MW
- > Expansion needs further support Sweden - EnBW Sverige AB
- > 108 MW
- Development of further projectsFrance Valeco

141 MW + 244 MW equity-accounted

- > 1,700 MW pipeline
- EnBW prepared to invest further when environment develops favorably



# Photovoltaic: 178 MW Secured Pipeline 840 MW

#### France - Valeco

> 51 MW + 32 MW equity-accounted Germany: currently 102 MW

Project Weesow-Wilmersdorf

- > 187 MW under construction
- > Full commission by end of 2020 Project Langenenslingen-Wilflingen
- > 70 MW in planning process
- Potential start of operations in summer 2022
- Expand expertise to neighbouring countries

# Grids: Backbone of EnBW's sustainable business portfolio





### **Electricity distribution grids** (141,000 km)

- > Integration of renewables and e-mobility
- Securing grid stability

### Netze BW partnership approach

- > 116 municipalities indirectly own 9%
- > Next investment phase to start 1 July 2021
- Joint implementation of the Energiewende



#### **Electricity transmission grids** (3,000 km)

- > Power transmission in Baden-Württemberg, within Germany and to other European countries
- Safe grid operation to ensure security of supply

SuedLink (TransnetBW & TenneT: 50:50 cooperation)

- > 2 x 2 GW, > 600 km
- Definition of corridor ongoing ULTRANET (TransnetBW & Amprion)
- > 2 GW, 340 km, 40 km under TransnetBW
- > Construction in Philippsburg to begin this year



#### Gas grids (25,000 km)

- Secure, efficient and environmentally-friendly transmission of natural gas
- Products, services and solutions terranets bw (Baden-Wuerttemberg)
- Nordschwarzwaldleitung: Additional connection to the Trans Europe Natural Gas Pipeline

### Ontras (Eastern Germany)

Completion of the first section of EUGAL1 in 2019

#### Netze BW Distribution grid

> Pilot project H<sub>2</sub> island: Gas infrastructure can already deliver climate-friendly supply

# Sales: E-mobility and broadband – delivering sustainability for our customers





#### Electricity and gas sales

- Only limited impact of COVID-19 due to focus on retail customers
- Migration of customers to new EnPower system
- > Further reduction in product portfolio
- Realise further synergies between brands
- State of the art IT systems: first huge powercloud user, highly efficient



#### E-mobility

- Due to COVID-19 temporary reduction in number of charges at public stations
- Leading position in DC based charging
- > Fast-charging locations today: >390
- EnBW mobility+ is Germanys most popular e-mobility app, with access to over 100,000 charge points
- → EnBW offers largest network coverage in DACH¹

<sup>1</sup>Source: https://www.p3-group.com/pressemitteilung-e-mobility-excellence-enbw-mobility-bietet-das-groesste-ladenetz-in-der-dach-region-und-kunden-zugang-zu-knapp-90-der-verfügbaren-



#### **Broadband/Telecommunication**

- COVID-19 as mid-term opportunity due to incresed importance of telecommunications infrastructure
- Building ambitious strategy combining fibre infrastructure footprint with sophisticated products & services portfolio

#### <u>Plusnet</u>

- > ~25,000 telecommunications business customers
- > Strong sales force >300 partners
- > PMI process close to completion

#### NetCom BW

- > ~ 56,000 customers, (7,700 commercial and industrial)
- > ~ 15,200 km of fibre optic cable

# EnBW 2025 Strategy:

# Developing into a sustainable and innovative infrastructure partner

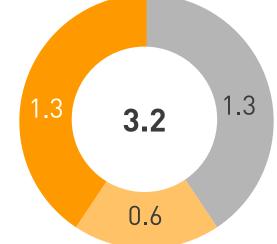


### From portfolio transformation to growing profitability

Adjusted EBITDA in € bn

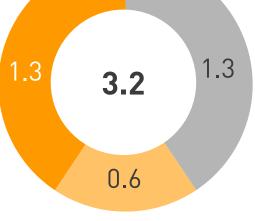
#### Sustainable generation infrastructure

- Increase wind power capacity
- Expansion solar energy portfolio in Germany
- > First projects in post-EEG phase without subsidies
- > Internationalisation into selected foreign markets



# System-critical infrastructure

- Expansion of transmission system by construction of Suedlink and Ultranet
- Converting distribution grids into smart grids and preparing them for future demands such as e-mobility
- Enabling the transformation of the gas sector by getting the gas infrastructure H<sub>2</sub> ready



#### **Smart infrastructure for customers**



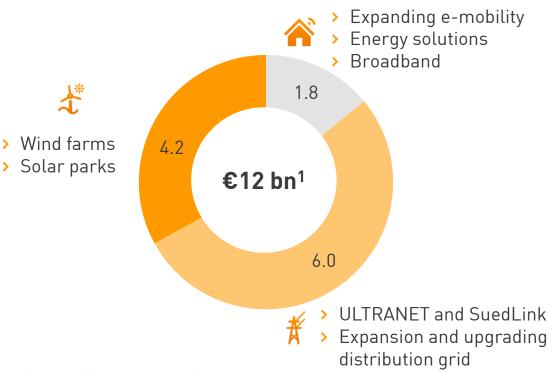
- > Expansion of the quick-charging grid and retaining market leadership
- > Growth in the telecommunication sector by infrastructure and service activities
- > Transferring EnBW's core competencies to further new and digital business models based on infrastructure

# Infrastructure investments fit well with EnBW's business model and Sustainable Development Goals



### Investment volume 2021-2025

in € bn 80% growth



### Contribution to the UN Sustainable Development Goals





- > Expanding renewables
- Research on renewable energy





- Grid expansion
- Infrastructure solutions

- Infrastructure solutions
  - - E-mobility





- > Renewable energies
- E-mobility

Sustainable generation infrastructure

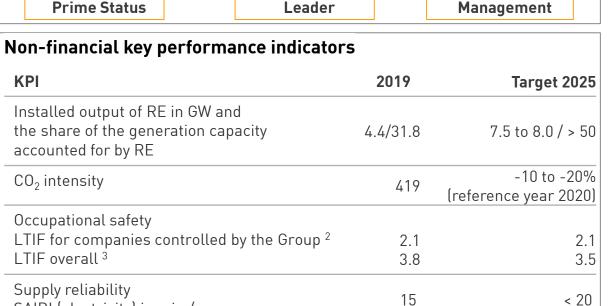
System-critical infrastructure

■ Smart infrastructure for customers

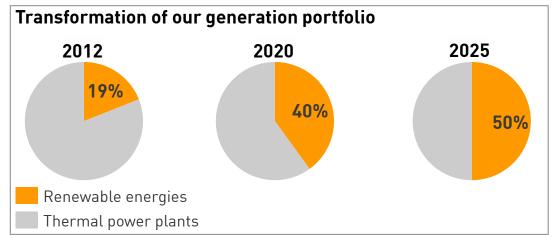
# Strong sustainability ratings based on EnBW's non-financial goals and integrated reporting







SAIDI (electricity) in min./vear



## Active engagement to promote disclosure and raise awareness on relevant sustainability topics

- Technical Expert Group on Sustainable Finance (TEG)
- > Task Force on Climate Related Financial Disclosures (TCFD)
- Sustainable Finance Committee
- International Integrated Reporting Council (IIRC)

**TCFD** 

### Promote sustainable action in all business segments

- Integrated Reporting since 2014
  - Green Bond Impact Reporting since 2018







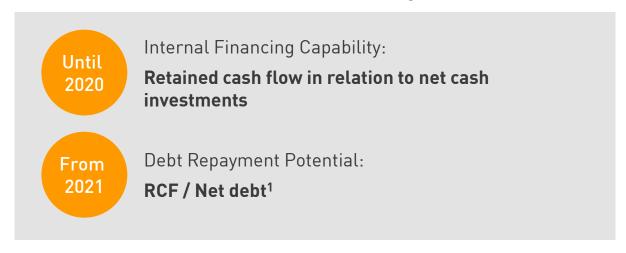
# Financial profile and financial targets are focused on credit investors' needs



# Financial profile

- Solid investment grade ratings
- Diversified and well-established access to capital markets
- Well-balanced financing profile
- Subordinated capital and partnership models where necessary
- > Stable government-related shareholder structure
- Dividend policy with a payout ratio of 40% to 60% of Group net profit

# Key performance indicator used to manage our credit metrics



# Separate management of financing needs for pension and nuclear obligations

Asset Liability Management Model in place since 2003

Impact on Operating Cash Flow limited to €300 m p.a.<sup>2</sup>

Timely coverage of nuclear and pension obligations by financial assets

<sup>&</sup>lt;sup>1</sup>To ensure EnBW's rating target is met, the target value is reviewed annually in line with the requirements of the rating agencies.

<sup>&</sup>lt;sup>2</sup> Adjusted for inflation

# EnBW ideally positioned to implement sustainable strategy and become climate-neutral





Largest integrated utility in Germany with a high share of low-risk business



EnBW proactively drives the Energiewende in Germany



Expansion of sustainable generation infrastructure



Clear implementation path to climate neutrality by 2035



Financial profile geared towards controlled growth

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