

9 - 10 December 2024

# CACIB Global Sustainable Finance Conference 2024

A solid orange horizontal bar with rounded ends, positioned above the speaker names.

Peter Berlin

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Head of Finance

Head of Investor Relations

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# As the leading integrated utility in Germany, EnBW is a key player in the energy transition

## Engaged in all aspects of the energy business



### Sustainable Generation Infrastructure

- Power generation and marketing of electricity, district heating, trading, gas storage



### System Critical Infrastructure

- Transmission & distribution grids for electricity and gas, water supply



### Smart Infrastructure for Customers

- Sale of electricity and gas, e-mobility, telecommunications and home storage



### Operational track record FY 2023

- Generation capacity: **>12 GW**
- Power generation: **27 TWh**
- Electricity and gas grids: **179,000 km**
- Fast-charging points in Germany: **~5,500<sup>1</sup>**
- B2C & B2B customers: **5.5 m**
- Employees: **28,630**

**With an integrated approach along the value chain and by serving the entire triangle of the energy transition, EnBW is a key player in the European energy transition**

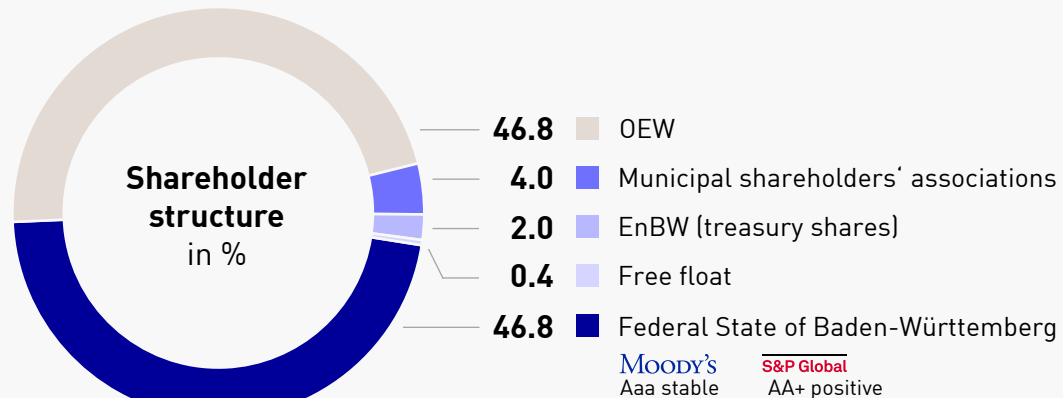
<sup>1</sup> As of October 2024.

# Stable and mostly governmental shareholder structure supports our strategy in the long-term

## Government-related shareholder structure

> **93%** held by two largest shareholders:

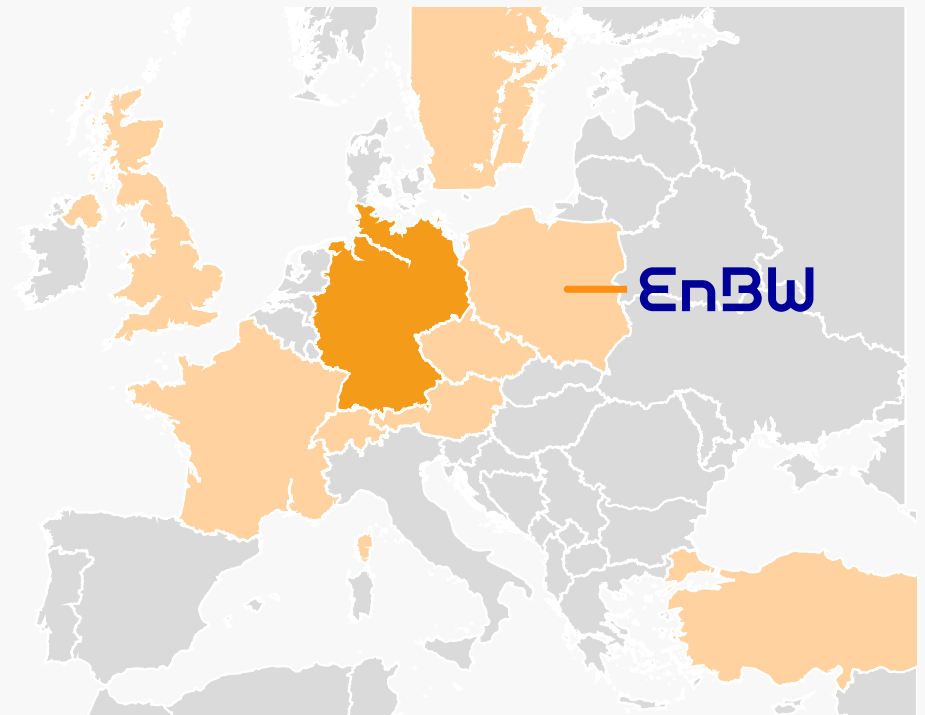
**The state of Baden-Württemberg** (3<sup>rd</sup> largest German state and one of the most prosperous regions in Europe) and **OEW** (an association of districts)



- Shareholder structure without significant changes since 2011

## Regional footprint in our core market Germany and beyond

- Austria, Czech Republic, Denmark, France, Poland, Sweden, Switzerland, Türkiye, United Kingdom

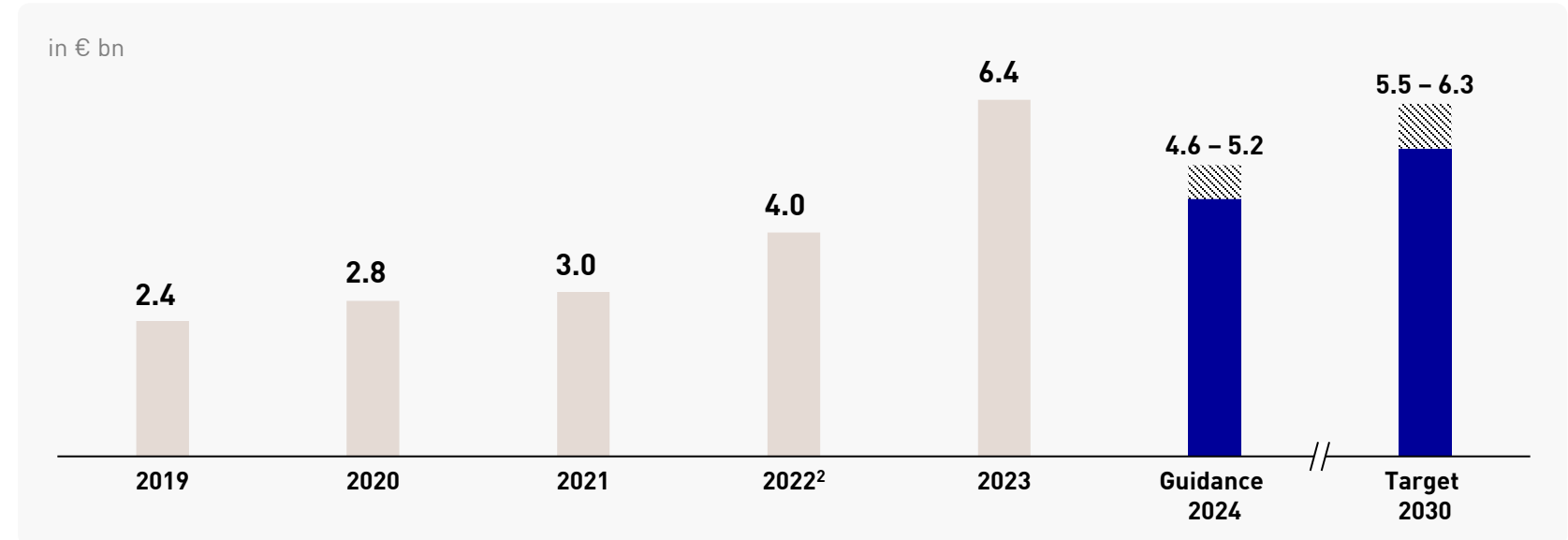


# Sustainably strong earnings performance supports the achievement of the strategic target by 2030

## FY 2023

- Revenues: **€44.4 bn**
- Retained cash flow: **€4.8 bn**
- Gross investments: **€4.9 bn**
- Taxonomy-aligned capex: **87%**
- Net debt: **€11.7 bn**
- Credit ratings: **A-** (S&P)  
**Baa1** (Moody's)
- ESG ratings<sup>1</sup>: **AA** (MSCI)  
**A-** (CDP)

## Adj. EBITDA development (2019-2023) with guidance 2024 and target 2030



### Robust delivery despite:

- Uncertainty in commodity markets (2022)
- Power price volatility (2023)
- Decline in European power prices (2024)

<sup>1</sup> Current ESG rating. | <sup>2</sup> Restated figures.

# Guidance 2024 confirmed

in € bn



Group

**4.6 – 5.2**  
2023: 6.4<sup>1</sup>



**Sustainable Generation Infrastructure**

FY 2023

4.6



Guidance 2024

**2.6 – 3.1**

- Lower energy prices due to normalized market environment
- Capacity growth in renewables



**System Critical Infrastructure**

FY 2023

1.8



Guidance 2024

**1.9 – 2.2**

- Higher earnings from grids as a result of increased investments



**Smart Infrastructure for Customers**

FY 2023

0.2



Guidance 2024

**0.25 – 0.35**

- No repetition of negative one-offs 2023
- Restructuring of the product portfolio at a subsidiary

<sup>1</sup> Incl. Other/consolidation with -€0.3 bn [-5%].

# Core strategic focus on driving the energy transition in our countries of operation



We continuously increase our renewables portfolio ...



... and consistently reduce our coal assets ...



... while strengthening our balanced integrated portfolio.

**+0.2 GW** (to 6.5 GW)  
Installed renewables capacity<sup>1</sup>

**-1 GW** (to 3.5 GW)  
Coal-based capacity

**1.5 GW** (under construction)  
H<sub>2</sub>-ready new flexible capacity

**>55%**  
Renewables installed capacity share

**3%** (-1% pt yoy)  
Coal-based revenues in H1 2024

**>800 km** (under construction)  
TSO power links projects

**5 GW**  
Offshore pipeline<sup>2</sup>

**-100 g/kWh** (to 290 – 350 g/kWh)  
CO<sub>2</sub> intensity 2024 target adjusted

**~5,500**  
Fast-charging points<sup>3</sup>

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# Overview of the energy market in Germany – transition to a carbon neutral energy system

## Broad consensus to phase-out conventional energy sources

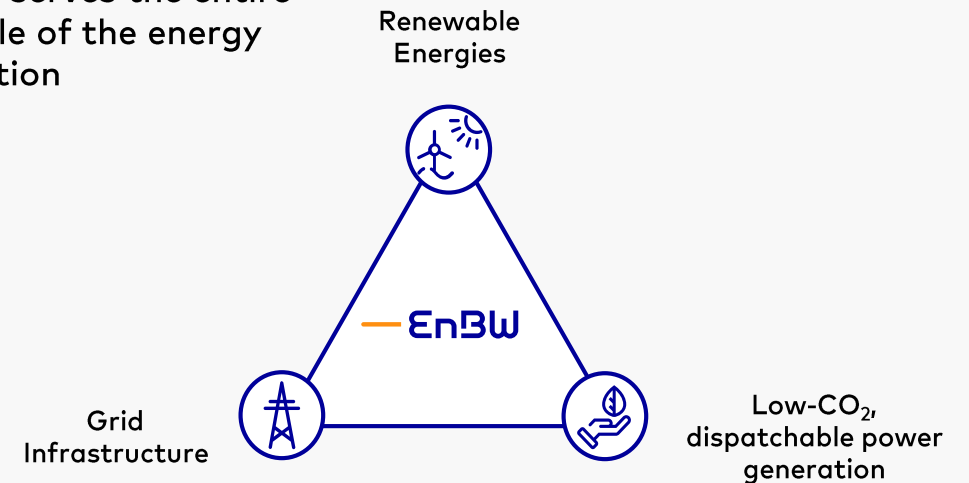
### Phase-out of nuclear energy

- Decided in 2011 in a political and social consensus and regulated by law
- The last 3 nuclear power plants were shut down in April 2023
- All of EnBW's nuclear power plants are in the dismantling stage; it is technically impossible to bring them back into operation

### Phase-out of coal-fired power plants

- Decided in 2020 – law sets the rules for a phase-out of coal by 2038. There is a political will to bring this forward to 2030.
- EnBW targets to fully phase-out of coal by 2028 already

EnBW serves the entire triangle of the energy transition



## The energy transition requires simultaneous investments into all elements of the triangle of the energy transition

- Renewables buildout for replacing thermal generation – EnBW with 6.5<sup>1</sup> GW of renewables capacity
- Grid infrastructure for renewables feed-in and transporting electricity from north to south – EnBW investing into transmission and distribution grids
- Low-CO<sub>2</sub> dispatchable power generation serving as backup capacity – EnBW is constructing three H<sub>2</sub>-ready power plants with capacity of 1.5 GW

<sup>1</sup> As of 30 June 2024.

# With our integrated setup we focus on energy infrastructure, renewables and smart products for our customers



## Strategy 2025

Focus on the infrastructure aspects of existing energy-related business fields

Development of a balanced and diversified business portfolio along the entire value chain

- Sustainable Generation Infrastructure
- System Critical Infrastructure
- Smart Infrastructure for Customers

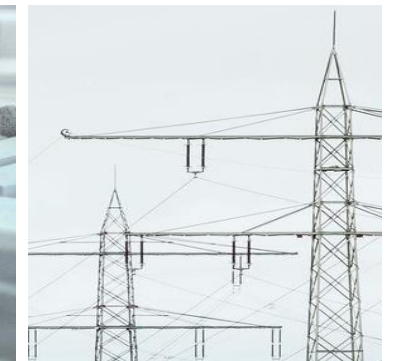
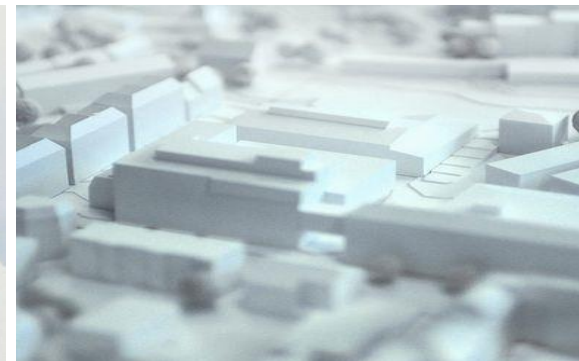
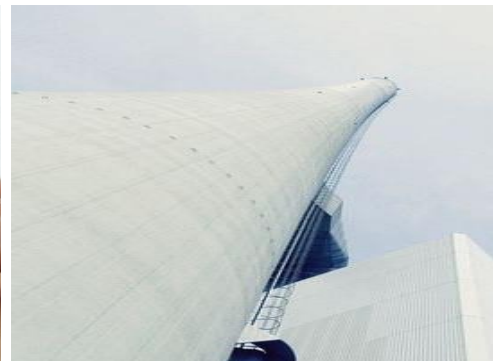
## Benefits

- Integrated strategy along the entire energy value chain
- Demonstrated resilience to adverse market developments
- Quick adaptation to political and social changes
- Investments in energy transition protect us against crises
- Reduced import dependency, improved cost structures, climate protection
- Commitment to continue this path

## Outlook 2030

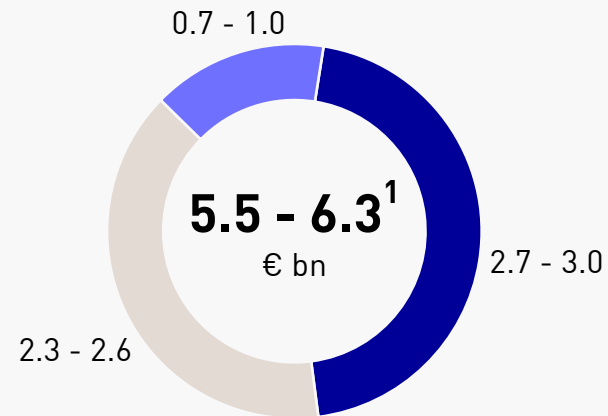
Update of the 2025 strategy with an outlook to the period up to 2030:

- Rigorously push forward the **expansion of the energy infrastructure**
- **Roll-out** of renewable energies and grid infrastructure
- Development of **smart products and services** for our customers that support the energy transition at home and on the move



# Outlook 2030: Integrated setup with profitable growth while building a sustainable future

## Adj. EBITDA target 2030



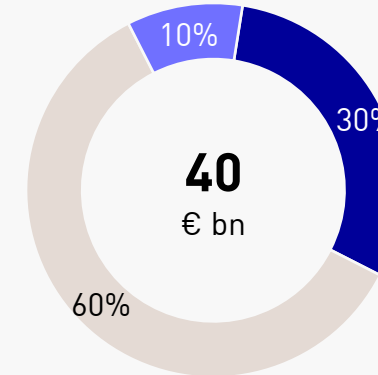
**≥70%**  
**low-risk earnings share**  
 (adj. EBITDA in Grids and Renewables)

■ Sustainable Generation Infrastructure

■ System Critical Infrastructure

■ Smart Infrastructure for Customers

## Gross investments 2024-30



**≥85%**  
**taxonomy-aligned capex**

**> Net investments<sup>2</sup> 2024-30: €22 bn**



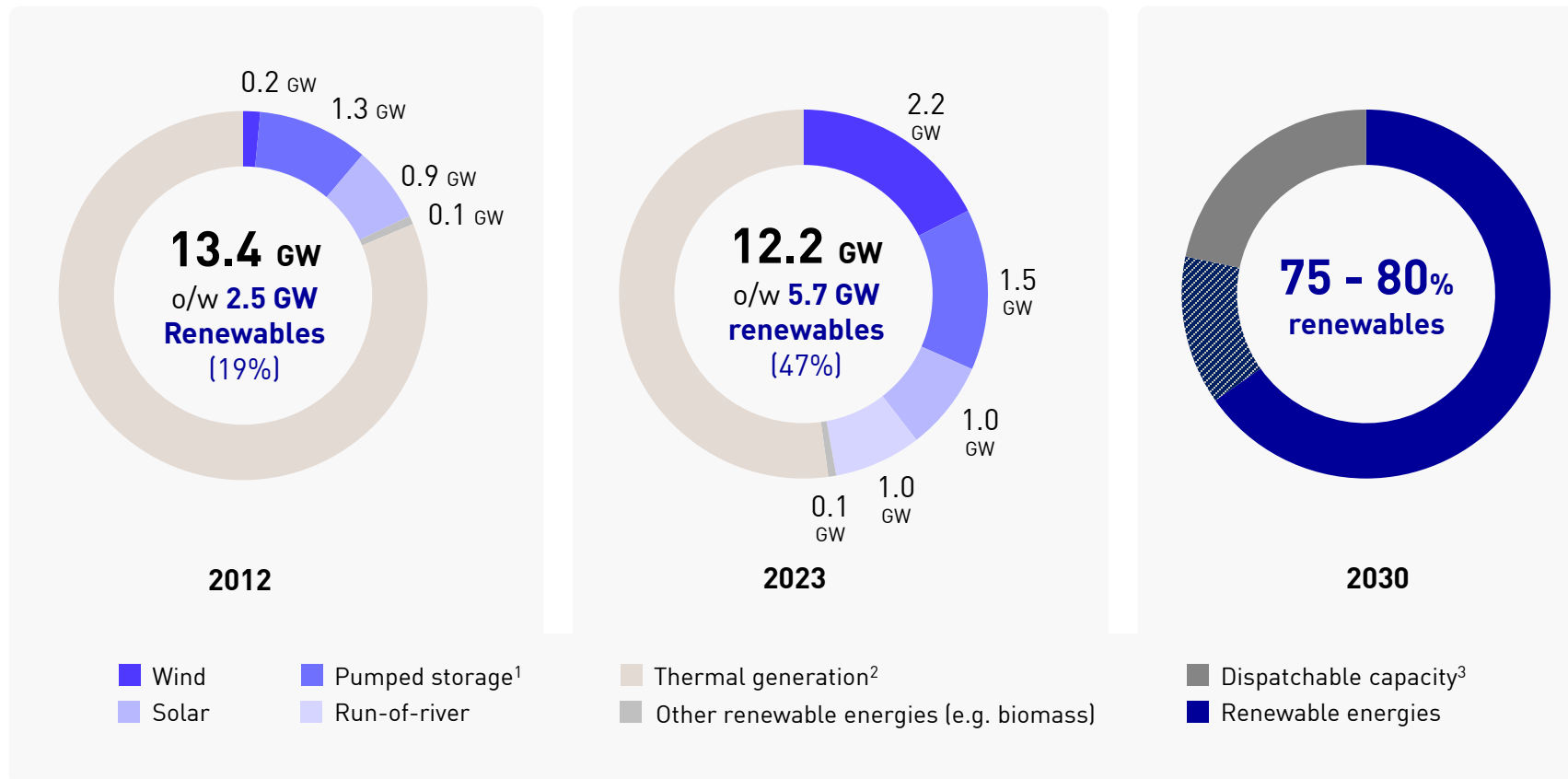
### Environmental targets 2030

- Expansion of renewable energies from ~6 GW (2023) to 10 - 11.5 GW
- Reduction of CO<sub>2</sub> intensity from 347 g/kWh (2023) to 90 - 110 g/kWh

<sup>1</sup> Incl. Other/consolidation. | <sup>2</sup> Net investments = Gross investments – share of CAPEX covered by third parties under partnership model.

# EnBW is fundamentally transforming its generation portfolio towards climate neutrality by 2035

## Transformation of the EnBW generation portfolio



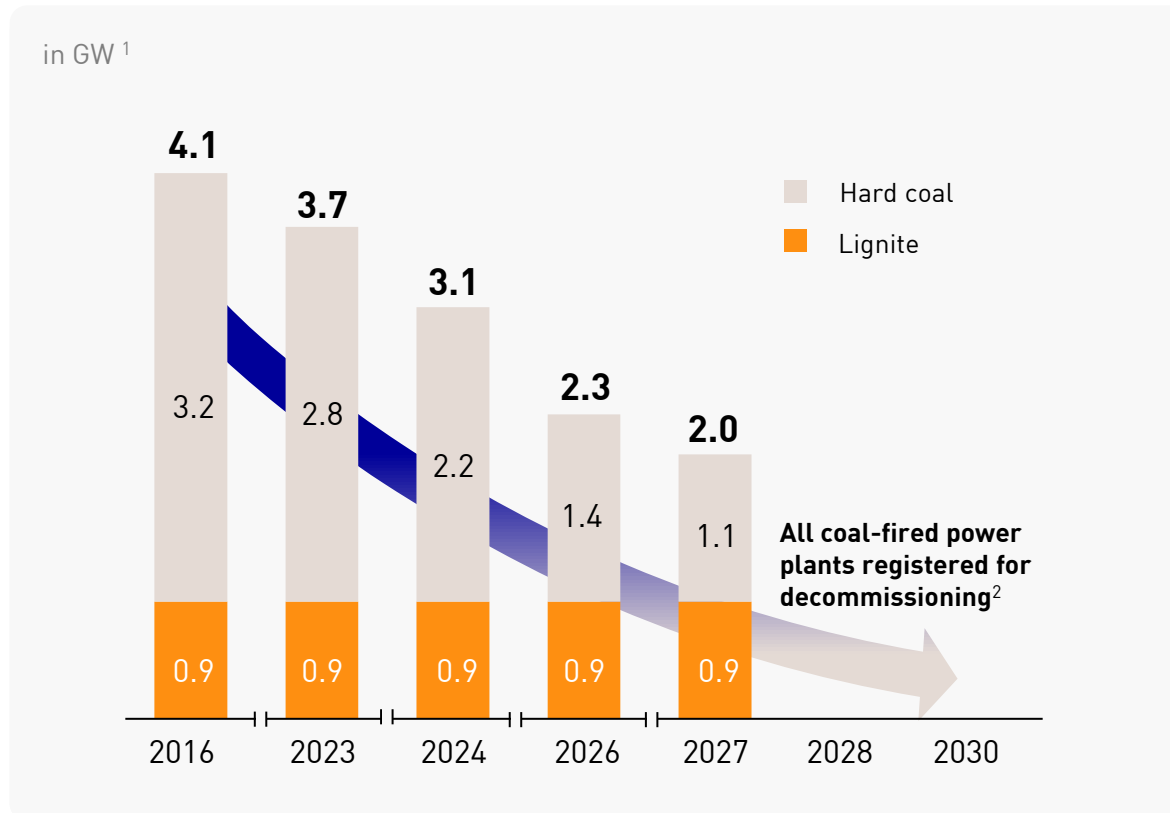
## Major developments

- Significant expansion of the portfolio
- **Renewable** portfolio increases to **10 – 11.5 GW** by 2030
- Thermal generation is **gas-based**; coal-free in 2028
- Switch to climate-neutral **hydrogen** as soon as available
- **Almost zero emissions** subsequently achieved in the power plant portfolio

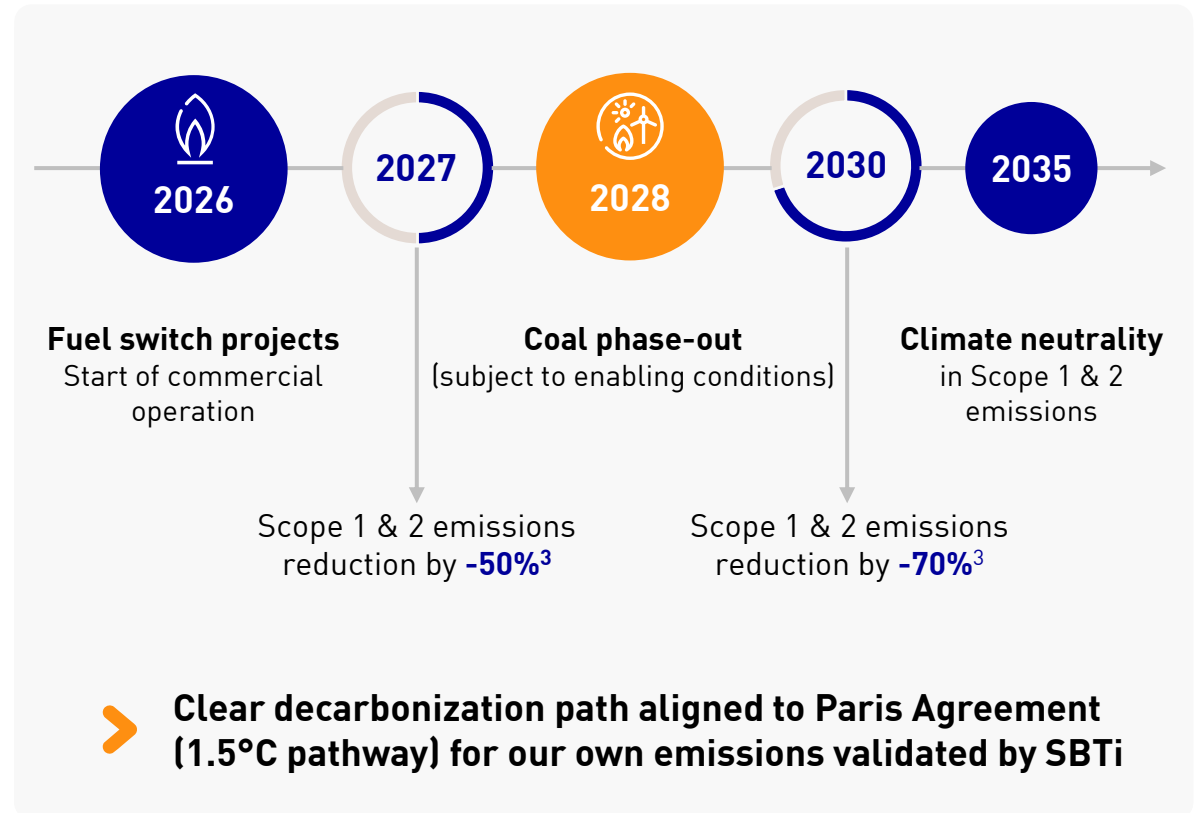
<sup>1</sup> Pumped storage with natural flow of water. | <sup>2</sup> Thermal power plants: Coal, gas, pumped storage without natural flow of water. | <sup>3</sup> Thermal dispatchable capacity: Pumped storage with and without natural flow of water; gas-based thermal power plants.

# EnBW keeps pushing the energy transition forward

Early coal phase-out by 2028 in line with our SBTi targets, way ahead of German legal framework



Well on track with our climate neutrality roadmap



<sup>1</sup> As of end of the year; excl. activities in which we own minority shareholdings without operational control and PPAs. | <sup>2</sup> Provided the energy transition progress allows a coal phase-out by 2028. | <sup>3</sup> Compared to the base year 2018.

# Installed renewables capacity on the rise

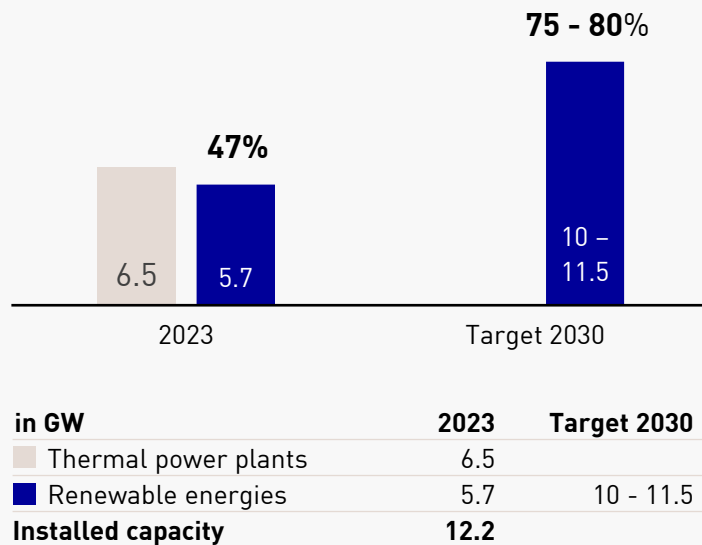
## Activities

- Power generation and marketing of electricity, district heating, trading, gas storage

## Goals

- Joint ventures with bp to build 5.9 GW offshore wind farms in the UK by 2029
- 30% of all investments will be on the expansion of wind farms and solar parks and the construction of climate-friendly, hydrogen-ready power plants until 2030

## Share of generation capacity



## Energy Trading

- EnBW follows a risk mitigating hedging strategy focused on reducing the earnings impact from price fluctuations
- Forward hedging of our expected electricity generation up to 3 years in advance, whilst also hedging the prices for necessary fuels and emission allowances
- Sales contracts closed on back-to-back basis
- Hedge levels<sup>1</sup>  
**2024:** almost fully hedged  
**2025:** >90%, **2026:** 50 - 80% , **2027:** 10 - 40%

## Thermal Generation and Trading | Renewables

- **Adj. EBITDA 2023<sup>2</sup> :** €2.9 bn | €1.7 bn  
Share of total adj. EBITDA: 46% | 27%
- **Investments 2023:** €0.6 bn | €1.2 bn
- **Employees 2023:** 7,563 (total segment)
- **Generation capacity 2023:** 6.5 GW | 5.7 GW
- **Electricity generated 2023:** 14 TWh | 13 TWh
- **Under construction:** 3 dispatchable H<sub>2</sub>-ready gas power plants, 1.5 GW in total | 230 MW onshore and 360 MW solar, 960 MW offshore, 4 GW offshore pipeline<sup>3</sup>

# Our lighthouse projects – building out offshore wind



**100%**  
Environmentally  
sustainable

## ① Mona and Morgan | ② Morven

<b>Location</b>	United Kingdom
<b>Capacity</b>	3 GW (leases) Mona and Morgan 2.9 GW Morven
<b>Commissioning</b>	2029/30e Mona and Morgan 2035e Morven Depending on grid connection
<b>Remuneration</b>	CfD <sup>1</sup> , PPA and/or merchant offtake
<b>Shareholders</b>	50% EnBW 50% bp

## ③ Dreekant

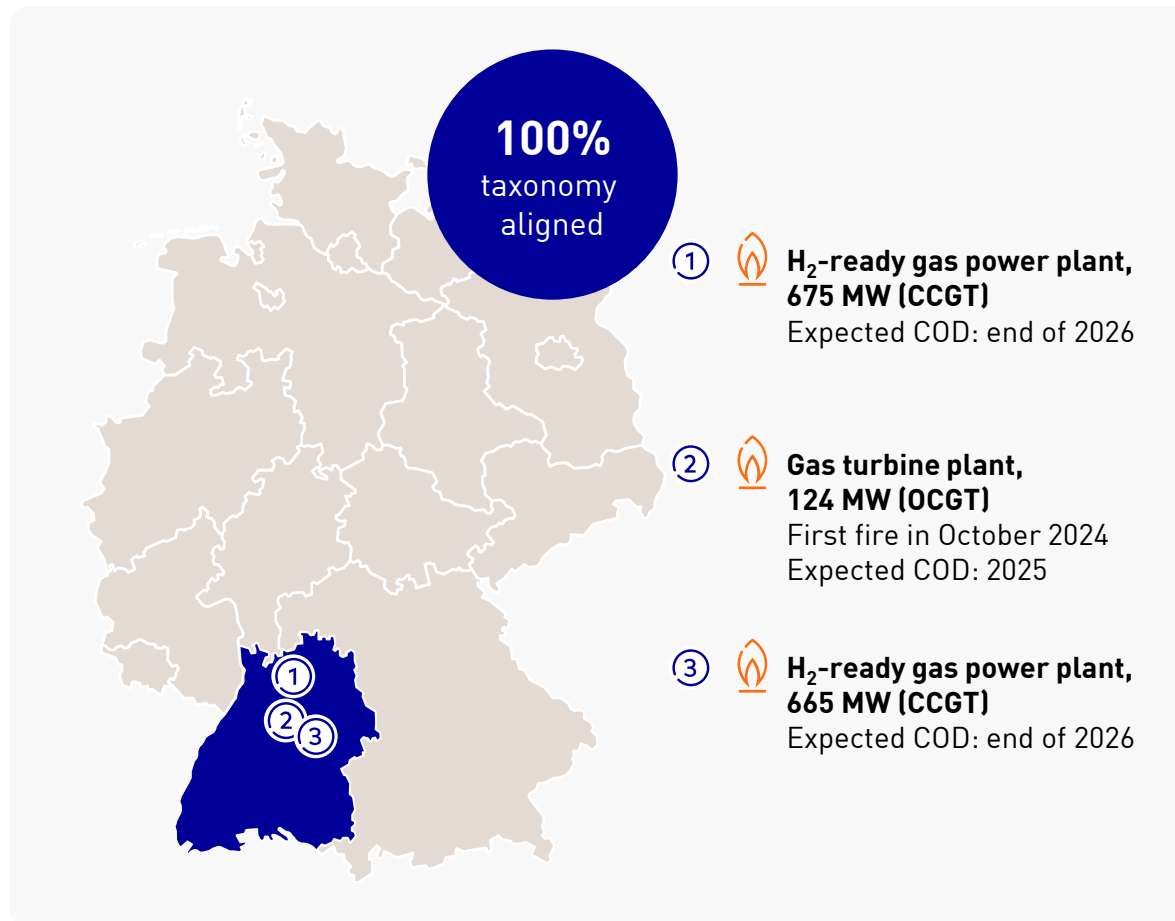
<b>Location</b>	Germany, North Sea
<b>Capacity</b>	1 GW
<b>Commissioning</b>	2031
<b>Remuneration</b>	Without EEG <sup>2</sup> support PPAs will be used
<b>Shareholders</b>	100% EnBW

## ④ He Dreiht (under construction)

<b>Location</b>	Germany, North Sea
<b>Capacity</b>	960 MW
<b>Commissioning</b>	2025
<b>Remuneration</b>	Without EEG support >50% capacity secured via PPAs
<b>Shareholders</b>	50.1% EnBW 49.9% consortium of Allianz Capital Partners, AIP and Norges Bank Investment Management

<sup>1</sup> CfD: Contract for Difference. <sup>2</sup> EEG: Renewable Energy Act is a German scheme to support the production of electricity from renewable energy sources approved by the European Commission.

# New-build projects – H<sub>2</sub>-ready flexible gas power plants




## 3 major fuel switch projects from coal to natural gas to climate neutral gases reduce CO<sub>2</sub> from dispatchable generation significantly

- Final Investment Decision in March 2022
- All 3 projects under construction
- Switch to natural gas reduces carbon emissions immediately by up to 55%
- Dispatchable H<sub>2</sub>-ready gas power plants pave the way to exit coal
- Support heat energy transition; located on sites with district heating or industrial heat requirement
- Profitable due to heat supply and contributing to security of supply
- Operation with climate-neutral gases expected from the mid-2030s



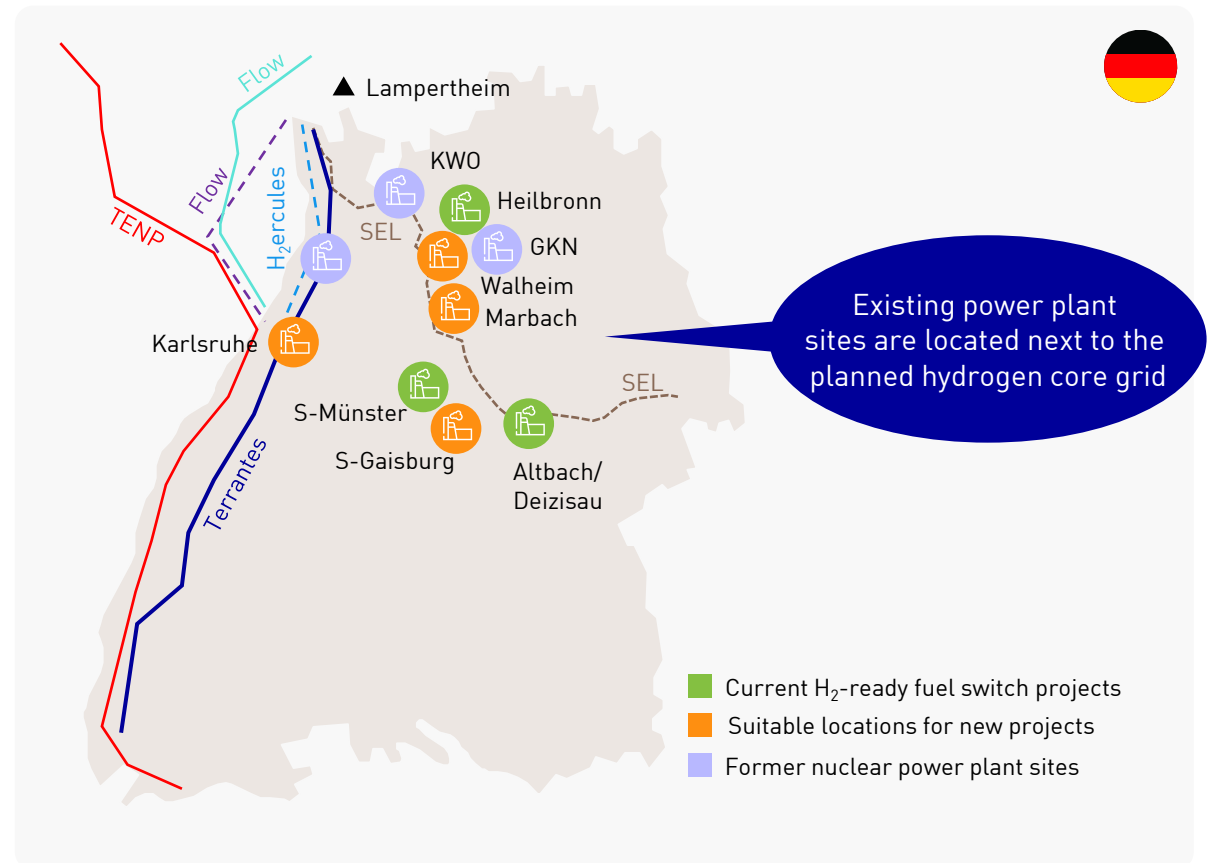
# New-build projects – German Power Plant Strategy

## New H<sub>2</sub>-ready CCGT and OCGT in South Germany

- In 2024, Germany's government announced a **tender program for 10 GW of new gas power plants, 5 GW of them H<sub>2</sub>-ready**. First tenders are foreseen in **2025**.
- Power plants must convert their operation to hydrogen 8 years after commissioning.
- **EnBW in an excellent position** for the planned tenders:
  - Due to the location in southwest Germany and the existing and future grid infrastructure
  - Opportunities for up to 4 projects at existing power plant sites brings savings on capex and makes EnBW an attractive partner for technology suppliers.
- Project development for initial power plants already started in order to take part in the first tender in 2025. In total, EnBW is planning up to four new projects with a total capacity of **2 - 2.5 GW**.

### EnBW's plan for new projects under the German Power Plant Strategy

<b>Number of plants/sites</b>	Up to 4
<b>Total capacity installed</b>	2 - 2.5 GW
<b>Type of plants</b>	CCGT and/or OCGT
<b>Fuel</b>	Natural gas/from 2035-2040 hydrogen
<b>Location</b>	Established power plant sites in Baden-Württemberg



# Ⓐ System Critical Infrastructure

## Electricity and gas grids

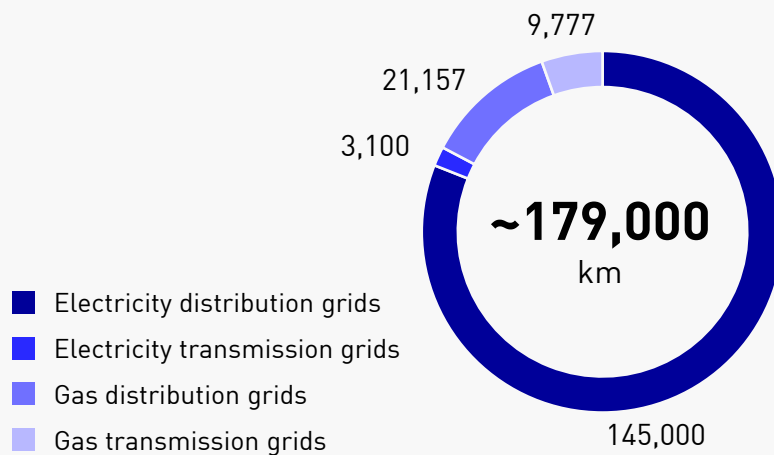
### Activities

- Transmission and distribution grids for electricity and gas
- Water supply and provision of grid-related services

### Goals









- Expansion of electricity and gas transport grids
- Preparation of grid infrastructure for future demands (mobility, heat pumps, decentralized energy)

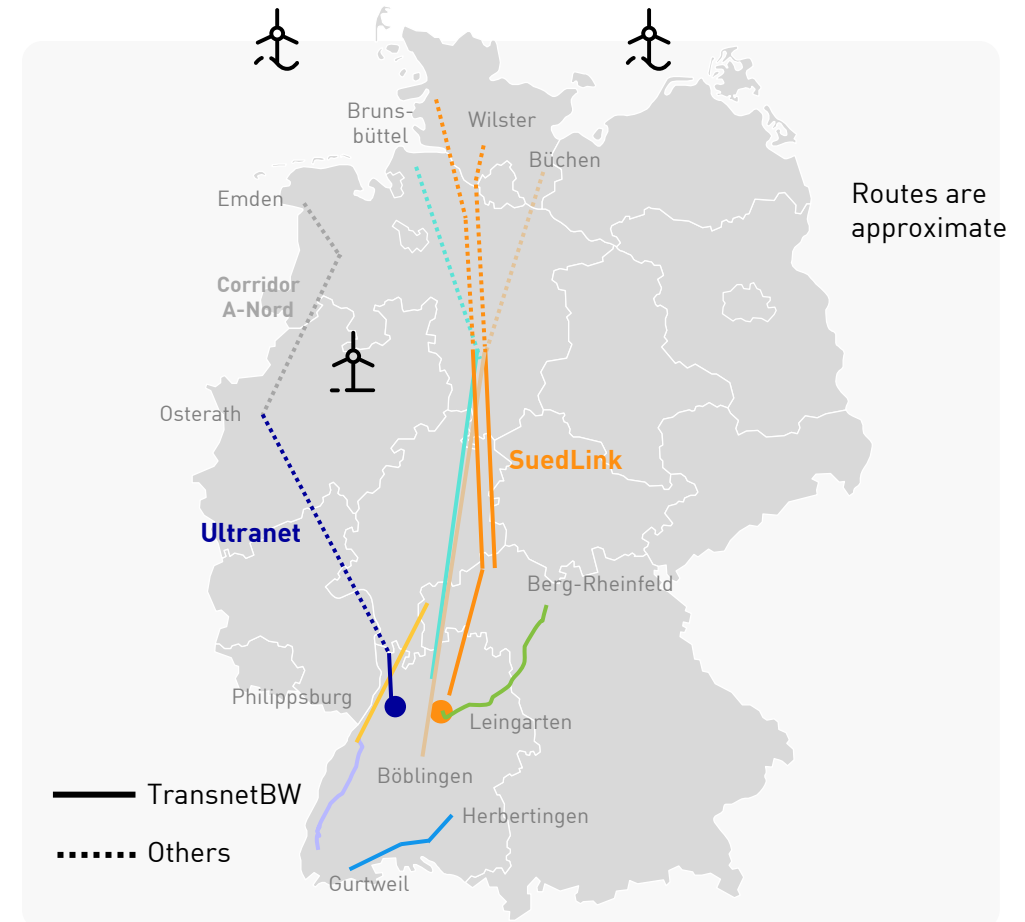
### Grid lengths 2023



- **Adj. EBITDA 2023:** €1.8 bn  
Share of total adj. EBITDA: 28%
- **Investments 2023:** €2.7 bn
- **Employees 2023:** 11,635
- **Transmission volumes 2023:** electricity 56 TWh, gas 29 TWh
- **Sale of 49.9% minority stake in TransnetBW** (Transmission System Operator) to long-term partners
- **Large-scale Transmission System Operator projects under construction:** Start of SuedLink converter, start for the southernmost section of ULTRANET project (both in Germany)

# Our lighthouse projects – expansion of electricity transmission grids to support energy transition and security of supply

	Projects	Grid length total	Grid length TransnetBW	Scheduled
AC <sup>4</sup> grid reinforcement	 Rhine river area in Baden		~121 km	2029
	 North Baden-Württemberg		~82 km	2031
	 North-east Baden-Württemberg		~99 km	2026
	 Hochrhein		~140 km	2032
DC <sup>4</sup> grid expansion	 SuedLink <sup>1</sup> 2x2 GW	~700 km	~450 km	2028
	 Ultranet <sup>2</sup> 2 GW	341 km	~42 km	2026
	 NordWestLink <sup>3</sup> 2 GW	~600 km	~440 km	earliest 2037
	 SuedWestLink <sup>3</sup> 2x2GW	~730 km	~526 km	earliest 2037

## System Critical Infrastructure

# Supporting our customers with fast-charging and household energy solutions

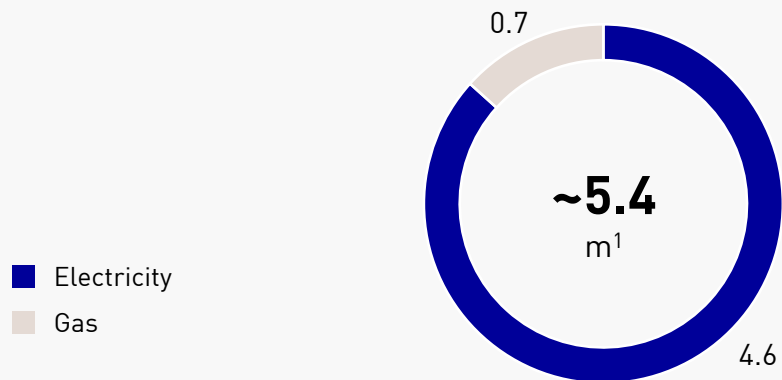
## Activities

- Sale of electricity and gas, in addition to telecommunications
- E-mobility and home storage systems for solar electricity

## Goals

- Focus on expanding fast-charging infrastructure for e-mobility to >20,000 points by 2030
- Expansion of household energy solutions, such as photovoltaics and storage

## B2C electricity and gas customers



- **Adj. EBITDA 2023:** €0.2 bn  
Share of total adj. EBITDA: 4%
- **Investments 2023:** €0.4 bn, mainly in e-mobility
- **Employees 2023:** 5,711
- **B2B and B2C customers<sup>2</sup>:** 5.5 m
- **Leading charge point operator and e-mobility provider in Germany**
  - Largest fast-charging network in Germany with ~5,500 fast-charging points (own infrastructure)<sup>3</sup>
  - Access to >600,000 charging points in 17 European countries (roaming)
  - EnBW mobility+ app downloaded >2.7 m times

<sup>1</sup> 0.9 m outside Germany. | <sup>2</sup> Mainly electricity and gas customers. | <sup>3</sup> As of October 2024.

# Strengthening our leading position in e-mobility in Germany

## EnBW is market leader in EV fast-charging

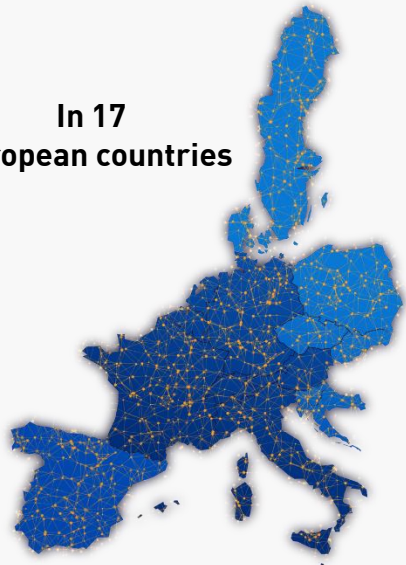


Most popular  
electromobility app  
in Germany!

**>2.7 million**

downloads of EnBW mobility+ app

In 17  
European countries



**>600,000**

charging points across Europe in the "EnBW  
HyperNetwork" (roaming)

**~5,500**

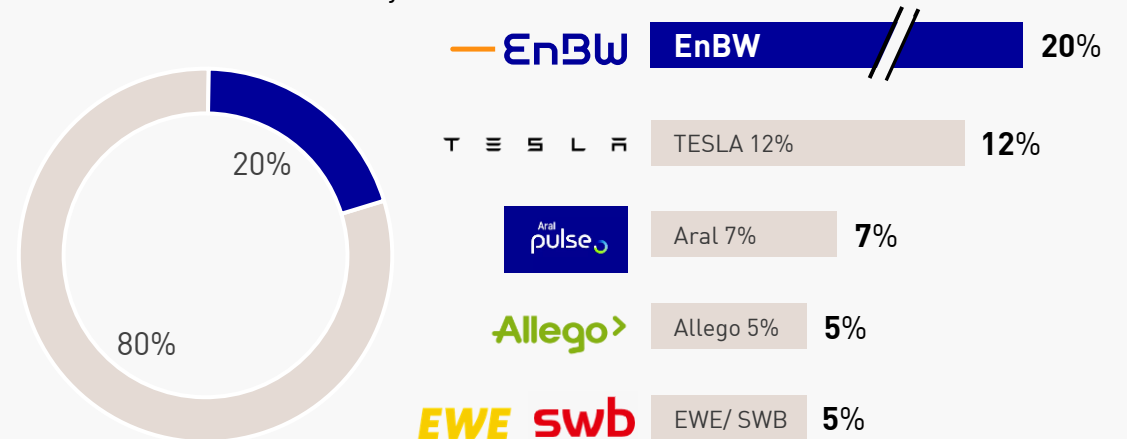
fast-charging points in Germany  
(own infrastructure)

**100%**

green electricity at EnBW charging stations

## What makes us unique

- EBITDA break-even expected in 2024
- Ranked as the winner in consumer tests as Germany's largest and best electromobility supplier and rated as VERY GOOD as a charging network operator for the third time in a row
- Market share in Germany<sup>1</sup>



<sup>1</sup> Share by number of CCS LP, min. 50 kW, Germany, as of January 2024, goingelectric.de.

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# Diversified funding strategy



## Funding volumes

€2.5 - 3 bn p.a.  
on average

- Refinancing of maturing liabilities
- Funding of corporate growth



## Tenors

up to **30** years

- EnBW's assets are typically characterized by long life cycles
- Decision based on market demand, maturity profile & interest levels



## Green financing

Cumulative total  
issuance of €**7.8** bn<sup>1</sup>

- First green bond issued in 2018
- Target 2030: At least 85% of all new issues to be sustainable
- Green Financing Framework use of proceeds 100% environmentally sustainable



## Currencies

**EUR, CHF, USD, AUD,  
GBP & JPY** outstanding

- Main focus EUR but also AUD, CHF, GBP, JPY & USD
- Flexible use of cross-currency opportunities



## Diversification

... in **instruments,  
currencies & markets**

- Bonds, promissory notes, USPP
- Exploring new markets and broadening investor base
- Public offerings & private placements

<sup>1</sup> As of 20 November 2024.

# Strict balance sheet management and high share of low-risk business reflected in solid investment grade ratings

## EnBW's top KPIs for financial steering

- Debt repayment potential**

- EnBW regularly checks whether target value is in line with key credit metrics of the rating agencies to safeguard rating targets

*Retained Cash Flow<sup>1</sup>*  
*Net Debt*



*target adjusted in Integrated Annual Report 2023*

- High share of low-risk earnings**

- EnBW wants to ensure strong cash flow predictability from its business mix

*Adj. EBITDA from Grids and Renewables*  
*Group adj. EBITDA*

**≥70%**

**S&P Global**  
Ratings

**A-**  
stable

**MOODY'S**  
RATINGS

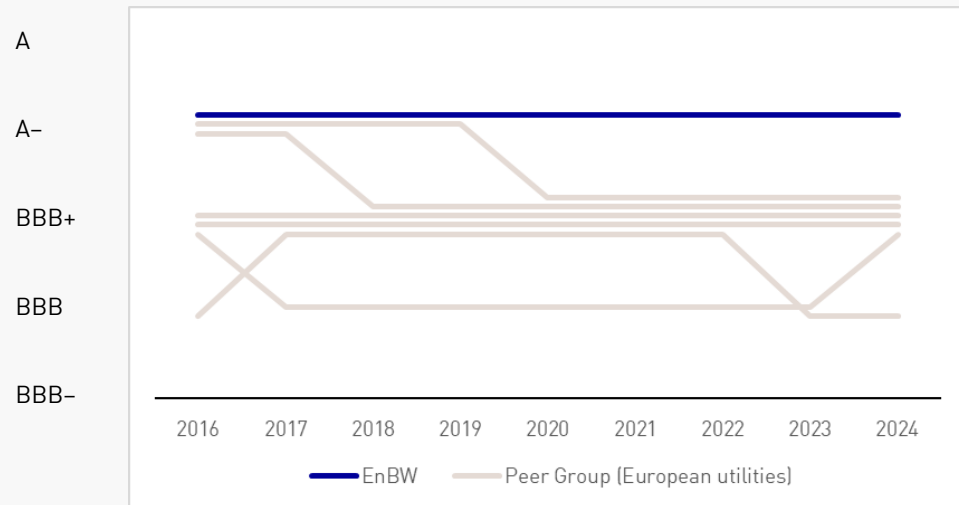
**Baa1**  
stable

<sup>1</sup> After covering ongoing costs and dividend payments, the retained cash flow is available to the company for investment without the need to raise additional debt.



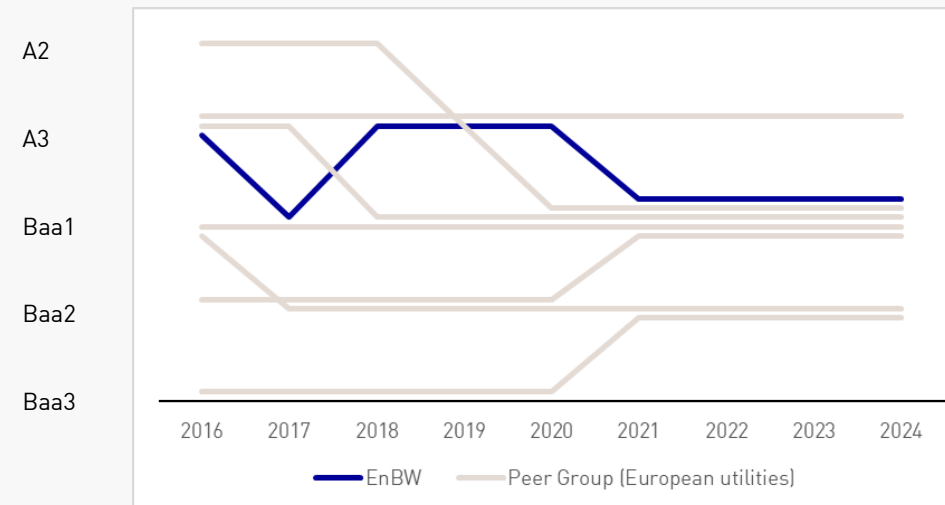
# EnBW's rating has remained resilient in times of market volatility and geopolitical tensions

## S&P Global Ratings















- EnBW is the highest and most stably rated company within its peer group, maintaining an A- rating since 2016
- Slight overall downward trend over time recognizable within the utility sector

## MOODY'S RATINGS



- EnBW is at the high end of the rated universe, only one company within its peer group maintains an A3 rating with Moody's currently
- From a broad perspective, credit ratings within the utility sector have converged towards a level of Baa1 over time

# We aspire to be an ESG leader and count ESG ratings among our key performance indicators

		Status quo	Recent development (last 12 months)	Scale
	ESG rating	 <b>AA</b> Leader		<b>AAA to CCC</b> Leader AAA – AA; Average A – BB; Laggard B – CCC
	ESG rating	 <b>B</b> Prime status		<b>A+ to D-</b> absolute best-in-class basis; Prime Status awarded
	ESG risk rating	 <b>23.6</b> Medium risk		<b>0 to 40+</b> Risk Score: negligible (0-10); low (10-20); medium (20-30); high (30-40); severe (40+)
	Climate rating	 <b>A-</b> Leadership		<b>A to D</b> Leadership A/A-; Management B/B-; Awareness C/C-; Disclosure D/D-; Failure F

# Green Financing Framework reflects commitment to sustainability, best market practices and regulatory framework









## Key facts

- First published in 2018 and most recently updated in 2024
- Alignment with ICMA Green Bond Principles & LMA Green Loan Principles
- Second-party opinion by ISS-Corporate



## Use of proceeds

**100%**  
taxonomy  
aligned

Eligible green activity	Project category	Contribution to UN SDGs	EU taxonomy <sup>1</sup>
Renewable energy	• Solar (PV) energy generation		4.1 Electricity generation using solar photovoltaic technology (NACE: D35.1.1)
	• Offshore/onshore wind energy generation	 	4.3 Electricity generation from wind power (NACE: D35.1.1)
	• Hydropower energy generation		4.5 Electricity generation from hydropower (NACE: D35.1.1)
	• Electricity distribution & transmission infrastructure	 	4.9 Transmission and distribution of electricity (NACE: D.35.1.2, D.35.1.3)
	• Smart meters	 	7.5 Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings (NACE: D.35.1.3)
Clean transportation	• E-mobility charging infrastructure	 	6.15 Infrastructure enabling low-carbon road transport and public transport (NACE: D.35.1.2, D.35.1.3, F.42.2.1)

<sup>1</sup> The taxonomy is an EU-wide system for classifying sustainable economic activities.

# Key credit strengths



## Integrated portfolio approach

- Demonstrated resilience across cycles and crises



## High share of low-risk business

- Target 2024-30:  $\geq 70\%$  share of regulated grids and contracted or guaranteed renewables earnings



## Strong financial performance

- Strong FY23 and good 9M 24 earnings performance, robust FY24 guidance



## Strict balance sheet management

- Commitment to strong capital structure and solid investment grade ratings



## Stable government-related shareholder structure

- $> 93\%$  of share capital constantly held by Baden-Wuerttemberg (third-largest German state) and OEW (an association of counties)



## Attractive energy transition investment

- €40 bn of gross investments 2024-2030 with  $\geq 85\%$  environmentally sustainable capex



## Prudent hedging strategy

- Locking in margin up to three years in advance in addition to natural hedge between own generation and sales



## Strong ESG focus

- Validated SBTi emission reduction targets lead the way to climate neutrality of our own emissions in 2035

Thank you very much  
for your attention!



1. EnBW at a glance .....	3
2. Corporate and sustainability strategy .....	9
3. Funding strategy .....	23
4. Appendix .....	30

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# Additional information: Management team

# Management team with many years of utility sector and financial expertise

## Board of Management<sup>1</sup> (as of September 2024)

- Responsible for Group management and strategy
- Represents the company legally



**Dr. Georg Stamatelopoulos**  
Chairman

25 years industry experience  
Joined EnBW in 2010



**Thomas Kusterer**  
Finance, Deputy Chairman

20 years industry experience  
Joined EnBW in 2004



**Colette Rückert-Hennen**  
Human Resources

10 years industry experience  
Joined EnBW in 2019



**Dirk Güsewell**  
System Critical Infrastructure and Sales<sup>2</sup>

25 years industry experience  
Joined EnBW in 1999



**Peter Heydecker**  
Sustainable Generation Infrastructure

30 years industry experience  
Joined EnBW in 2017

## Supervisory Board

- Consists of 20 experienced, diverse and independent members and is composed of an equal number of shareholder and employee representatives
- Appoints members of Board of Management and sets their remuneration
- Acts as a monitoring and advisory body



**Lutz Feldmann**  
Chairman of the Supervisory Board

Joined Board in 2015



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# Additional information: Nuclear and coal

# As of April 2023, all nuclear power plants in Germany have been shut down

## Shut down of nuclear power plants



2005	-	<b>Obrigheim was shut down</b> and has been in the dismantling process since 2008.
2011	<p><b>March</b> – 6 Nuclear Power Plants shut down immediately after the Fukushima incident.</p> <p><b>June</b> – German Bundestag (Parliament) decides <b>to phase-out nuclear energy completely</b> within a decade.</p>	-
2013	-	EnBW starts the multi-stage application process to <b>decommission and dismantle Neckarwestheim I and Philippsburg 1</b> .
2016	-	EnBW applies for a <b>decommissioning and dismantling license for Neckarwestheim II</b> (granted in 2023) and <b>Philippsburg 2</b> (granted in 2019).
2017	<p><b>Externalization of final and interim storage</b> – Law approved and contract signed in June creating long-term certainty for all parties. The nuclear power plant operators have <b>transferred the financial responsibility for final and interim storage</b> and thus <b>all associated financial and non-financial risks</b> are with the German state. Operators remain responsible for decommissioning and dismantling.</p>	EnBW receives <b>decommissioning and dismantling license for Neckarwestheim I and for Philippsburg 1</b> .
2020	-	Dismantling process starts at <b>Philippsburg 2</b> .
2021	<b>Majority of German nuclear power plants shutdown</b> and only three were left active.	-
2023	<b>April</b> – Last three power plants are finally shutdown. <b>Germany is free of nuclear power.</b>	<b>April</b> – EnBW is granted the decommissioning and dismantling licence for its fifth and last nuclear power plant – <b>Neckarwestheim II</b> . Since then, all nuclear power plants of EnBW have been shut down.

 **Decommissioning and dismantling process for EnBW's nuclear power plants is ongoing!**

# Complete phase-out from nuclear energy in Germany

## Installed generation capacity in Germany<sup>1</sup>

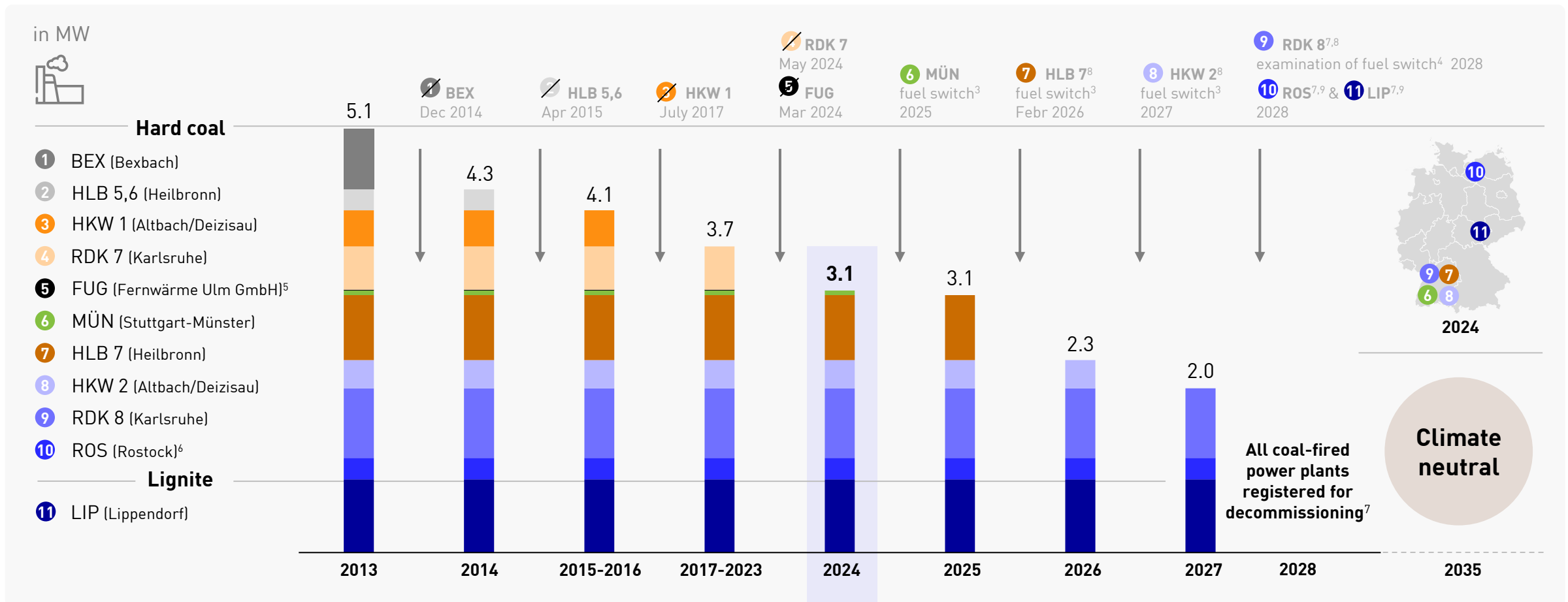
in GW

	2023	2022	2021
Solar	81.8	67.6	60.1
Onshore wind	61.0	58.0	55.9
Biomass	9.0	8.9	8.9
Offshore wind	8.5	8.2	7.9
Hydropower <sup>2</sup>	5.4	5.4	5.5
Gas	34.8	34.3	32.4
Hard coal	18.9	19.0	19.0
Brown coal	18.6	18.7	19.0
Nuclear power	-	4.1	4.1
Oil	4.7	4.7	4.7
<b>Total<sup>3</sup></b>	<b>242.7</b>	<b>228.7</b>	<b>217.3</b>

- **No installed nuclear capacity** for electricity generation in Germany since May 2023
- EnBW considers the **dismantling of its five nuclear power plants to be part of the energy transition** and is rigorously implementing the dismantling measures
- EnBW has set aside dedicated **financial assets to cover nuclear and pension provisions** separately from funding its operating business. As of 31 December 2023, the assets totalled around € 6.2 bn
- The amount of the accounted **nuclear provisions is reviewed** annually by the federal authority Bafa (Federal Office for Economic Affairs and Export Control). Therefore, the risk beyond that is minimal

<sup>1</sup> The figures for the previous year have been restated. | <sup>2</sup> Adjustment to the installed output from hydropower by EnBW. Source: Fraunhofer ISE ([www.energy-charts.de](http://www.energy-charts.de)), as of 24/01/2024. | <sup>3</sup> The figures may not add up due to rounding differences.

# EnBW follows a clear and transparent schedule to phase out coal by 2028<sup>1,2</sup>



<sup>1</sup> As of end of the year. | <sup>2</sup> Excl. minority share (GKM) and PPAs (Buschhaus, Duisburg-Walsum). | <sup>3</sup> Fuel switch from coal to natural gas, and later (mid-2030s) to climate neutral gases e.g. green hydrogen. | <sup>4</sup> Examination of options to switch to climate-neutral dispatchable generation (fuel switch to climate-neutral gases e.g. green hydrogen). | <sup>5</sup> Fernwärme Ulm GmbH: Joint asset of EnBW (50%) and Stadtwerke Ulm/Neu-Ulm GmbH (50%). | <sup>6</sup> Rostock: Joint power plant of EnBW (50,38%) and Rheinenergie (49,62%). | <sup>7</sup> Provided the energy transition progress allows a coal phase-out by 2028. | <sup>8</sup> Market decommissioning as planned, transfer to grid reserve (RDK 8 expected). | <sup>9</sup> In co-operation with a utility partner.

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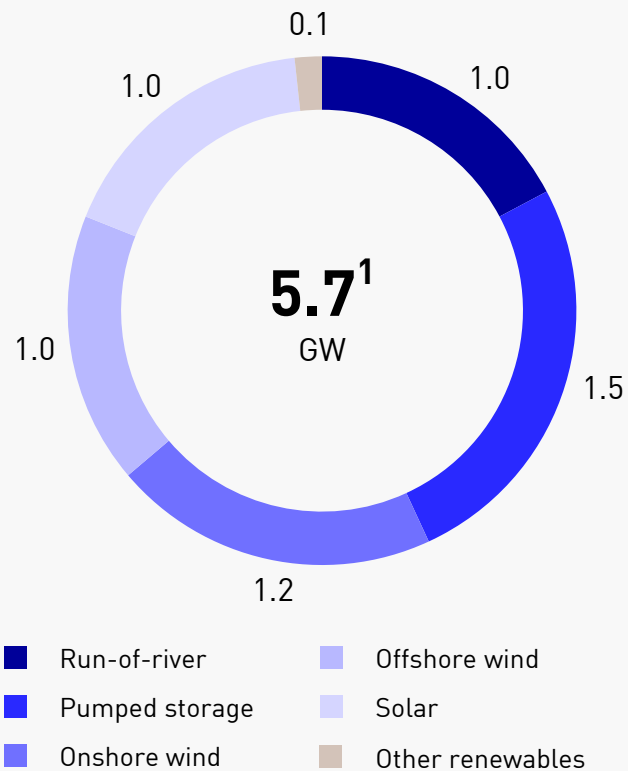
# Additional information: Sustainable Generation Infrastructure

# Sustainable Generation Infrastructure

## Renewable energies



### Renewable generation capacity 2023



- **Adj. EBITDA 2023<sup>2</sup>:** €1.7 bn  
Share of total adj. EBITDA: 27%
- **Investments 2023:** €1.2 bn
- **Employees 2023:** 7,563 (Sustainable Generation Infrastructure)
- **Generation capacity 2023:** 5.7 GW, 47% of total generation capacity
- **Electricity generated 2023:** 13 TWh, 48% of total generation capacity
- **Under construction:** 230 MW onshore and 360 MW solar, 960 MW offshore
- **Offshore pipeline:** 4 GW<sup>3</sup>

<sup>1</sup> Due to rounding, individual values may not add up to the total value. | <sup>2</sup> Previous figures restated due to reallocation of pumped storage. |

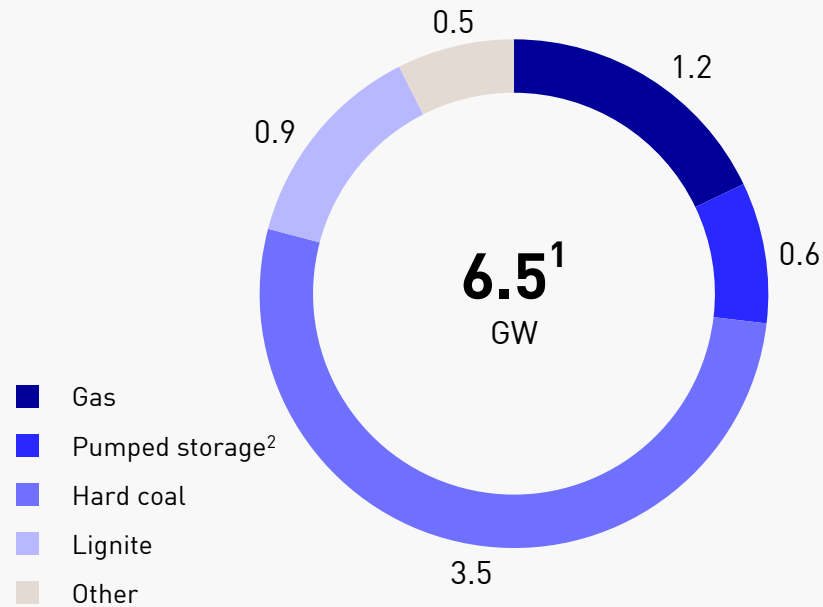
<sup>3</sup> Includes 3 GW UK offshore seabed projects (EnBW pro rata share), 1 GW German seabed offshore project.

# Sustainable Generation Infrastructure

## Thermal Generation



### Thermal Generation capacity 2023



- > • **Coal based revenues:** 4%
- **Own CO<sub>2</sub> emissions YoY:** -37%

- **Adj. EBITDA 2023<sup>3</sup>** (including trading): €2.9 bn  
Share of total adj. EBITDA (including trading): 46%
- **Investments 2023:** €0.6 bn
- **Employees 2023:** 7,563 (Sustainable Generation Infrastructure)
- **Generation capacity 2023:** 6.5 GW, 53% of total generation capacity
- **Electricity generated 2023:** 14 TWh, 52% of total generation capacity
- **Under construction:** 3 dispatchable hydrogen-ready gas power plants, 1.5 GW in total (Expected start of commercial operation 2025/26)

<sup>1</sup> Due to rounding, individual values may not add up to the total value. | <sup>2</sup> Part of renewables since 1 January 2024. | <sup>3</sup> Previous figures restated due to reallocation of pumped storage.

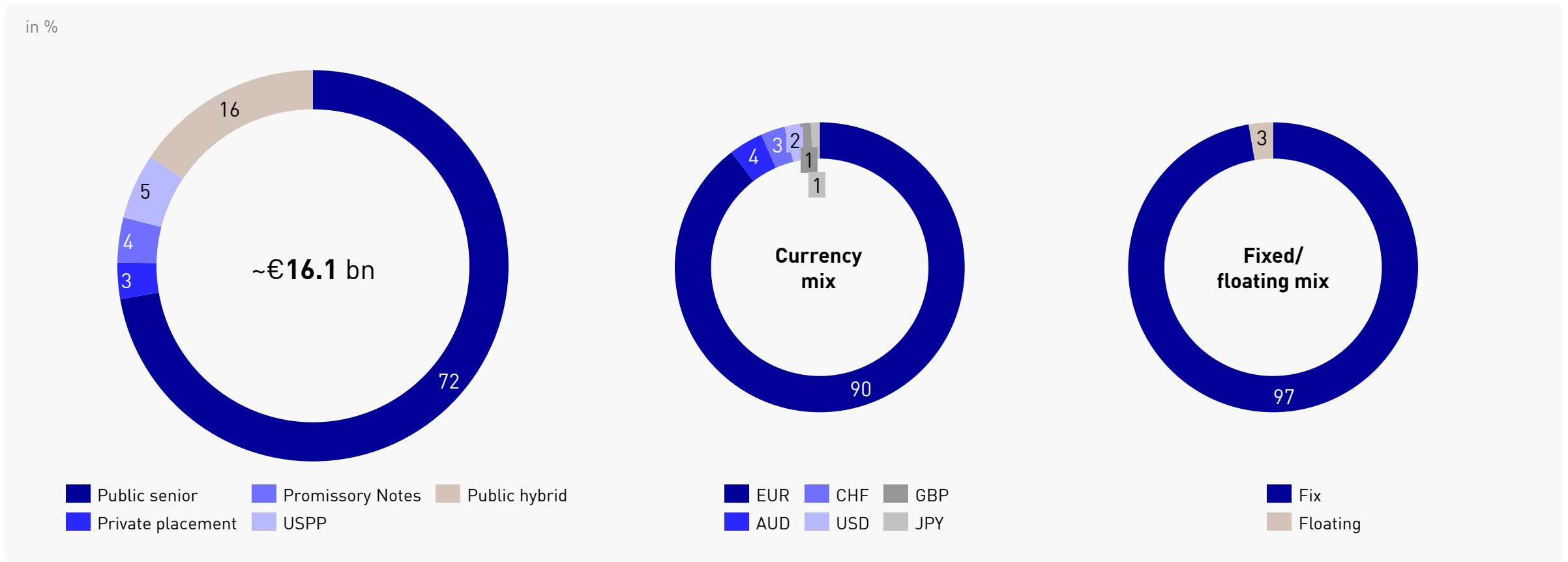
# Additional information: Funding

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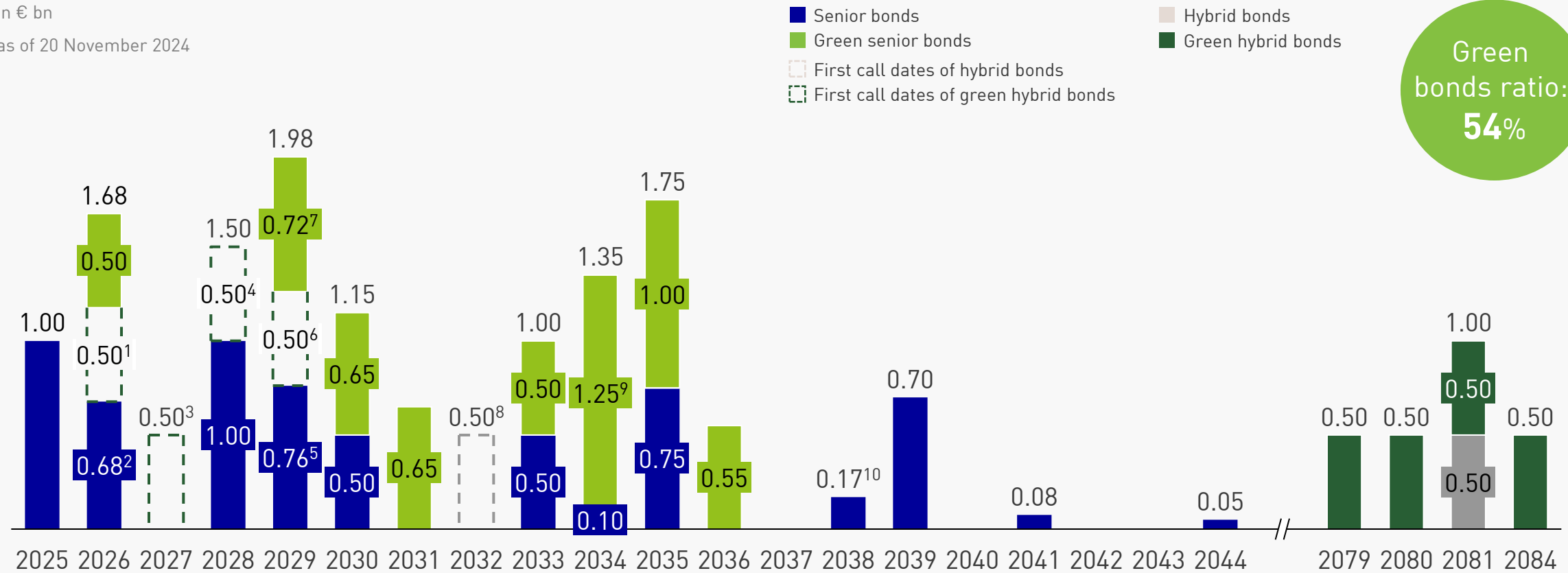
# Prepared to scale up in diversification

## Capital market debt



# Maturities of outstanding bonds

in € bn  
as of 20 November 2024



Green bonds ratio: **54%**

<sup>1</sup> First call date: green hybrid maturing in 2080.

<sup>2</sup> Includes CHF 165 m, converted as of 20 November 2024.

<sup>3</sup> First call date: green hybrid maturing in 2079.

<sup>4</sup> First call date: green hybrid maturing in 2081.

<sup>5</sup> Includes CHF 245 m, converted as of 20 November 2024.

<sup>6</sup> First call date: green hybrid maturing in 2084.

<sup>7</sup> Includes AUD 350 m (swap in € at issuance).

<sup>8</sup> First call date: hybrid maturing in 2081.

<sup>9</sup> Includes AUD 650 m (swap in € at issuance).

<sup>10</sup> JPY 20 bn (swap in € at issuance).

# Allocation of eligible green assets to green bonds reflects the value chain of a fully integrated utility

Offshore & onshore wind



Solar



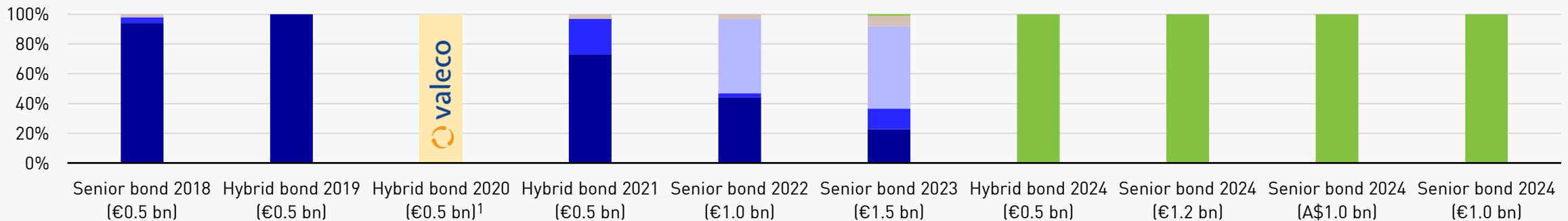
Electricity distribution infrastructure



E-mobility charging infrastructure



Allocation to green bonds



Proceeds will be fully allocated within 24 months after the issuance

<sup>1</sup> The proceeds were used to refinance the acquisition of French wind and solar company Valeco in 2019.

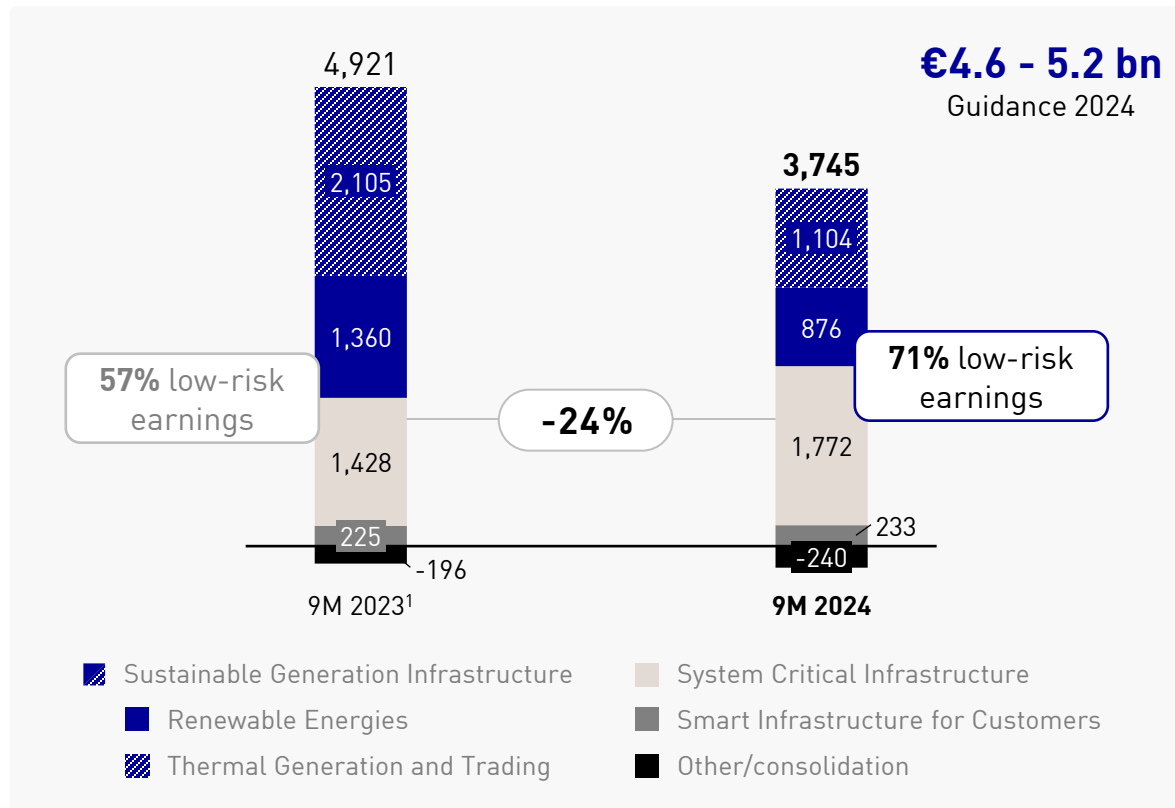
# Additional information: Financial overview

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# Adjusted EBITDA reflects the normalization of energy markets

## Adjusted EBITDA

in € m



### Renewable Energies

- Lower earnings from pumped storage due to decreased spreads

### Thermal Generation and Trading

- Normalized earnings level after extraordinarily high earnings contribution in previous year

### Transmission and distribution grids

- + Higher earnings as a result of ramping up investments in grid expansion

### Customer business

- + Absence of negative prior-year effect

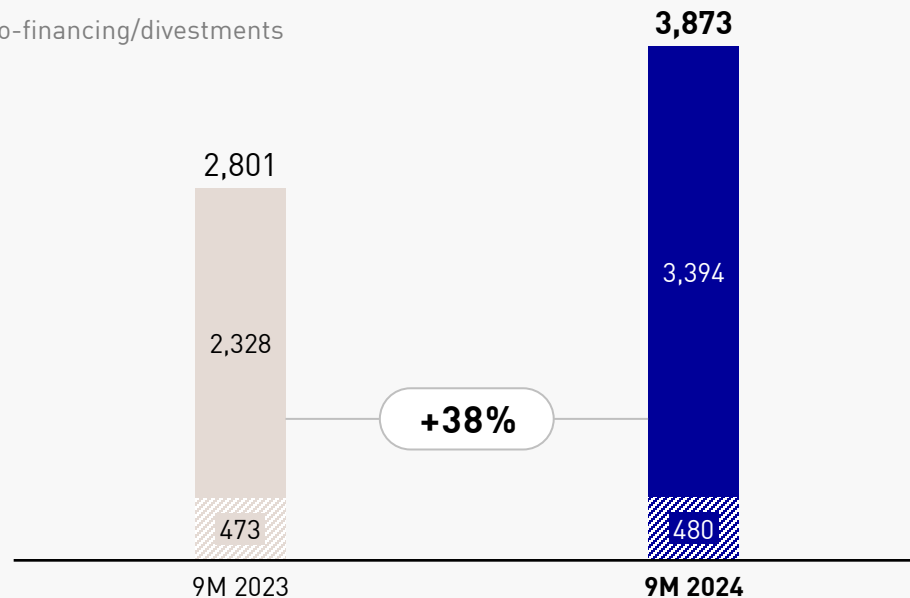
<sup>1</sup> Restated figures due to reallocation of 0.5 GW pumped storage from Therman Generation to Renewable Energies in accordance with the EU Taxonomy classification.

# Significant growth investments in low-risk business

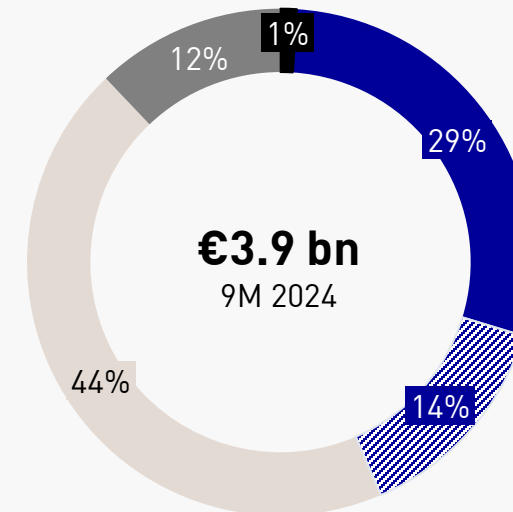
## Total investments

in € m

- Net cash investments
- Co-financing/divestments



## Investments by segments



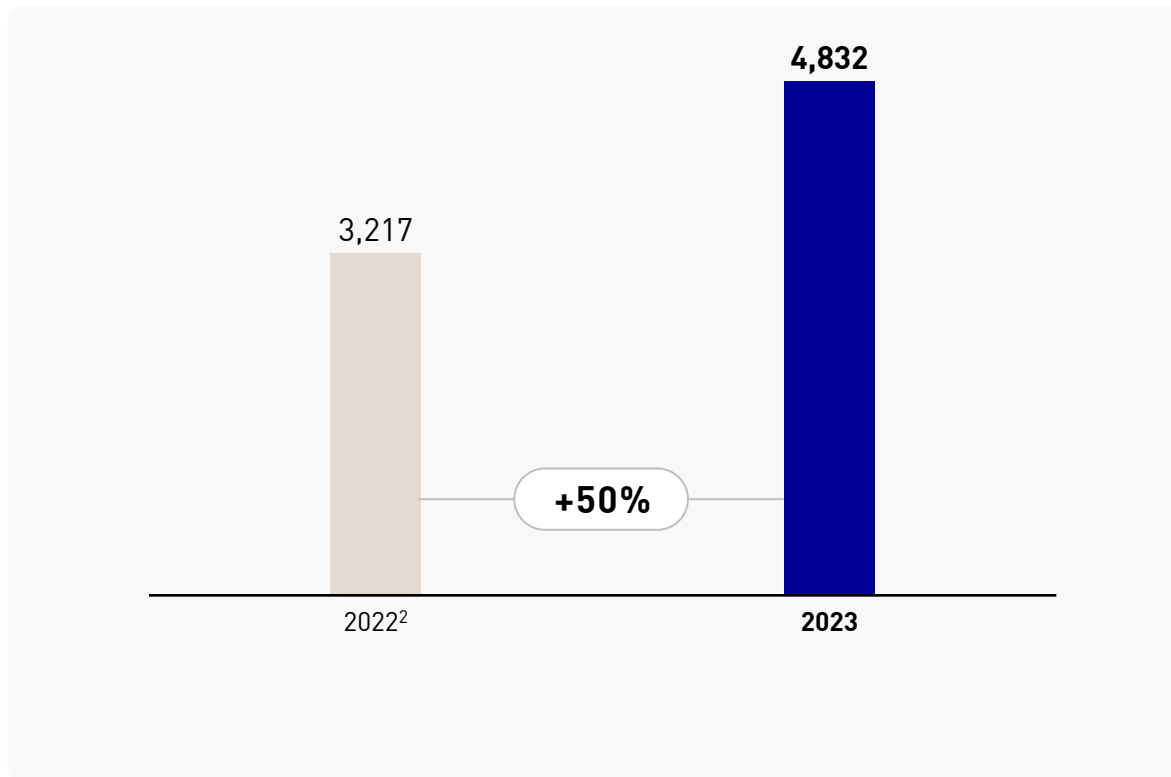
- Sustainable Generation Infrastructure
- Renewable Energies
- Thermal Generation and Trading
- System Critical Infrastructure
- Smart Infrastructure for Customers
- Other/consolidation

**85% of total investments in growth projects**  
**89% taxonomy-aligned capex**

# Retained cash flow<sup>1</sup>

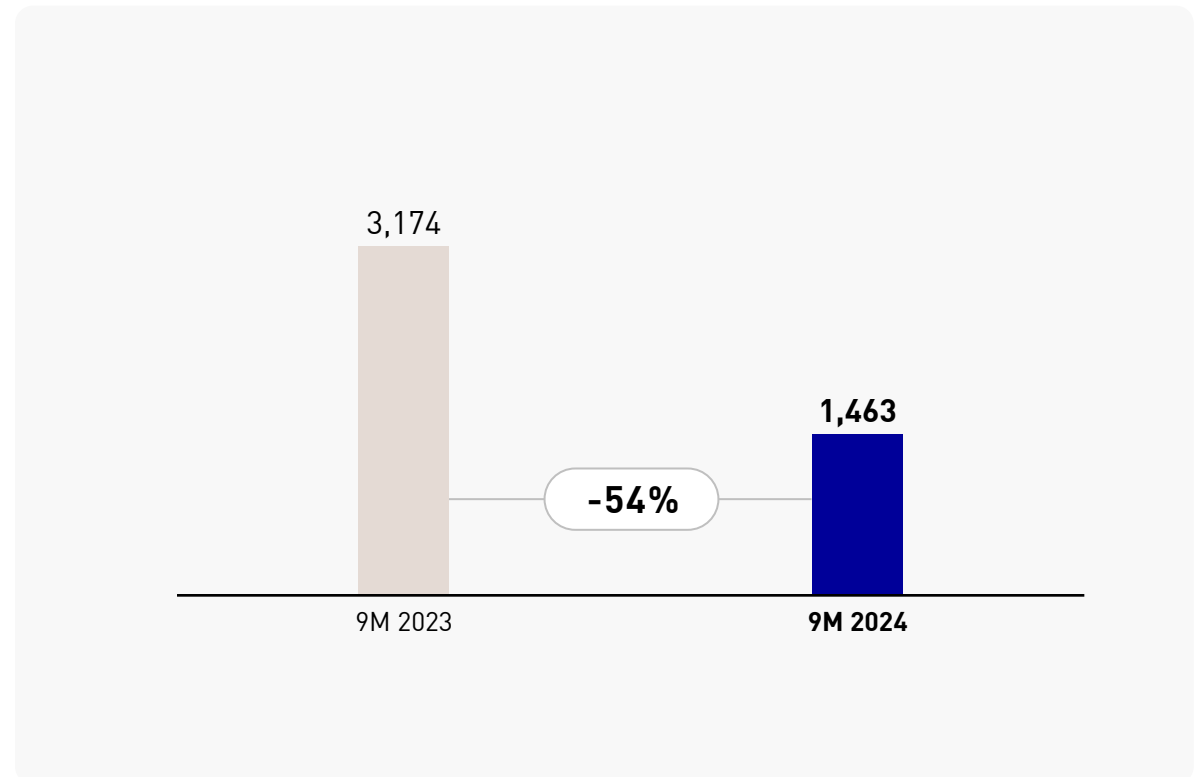
2023: Retained cash flow increased to €~4.8 bn in light of higher FFO driven by strong operating earnings

in € m



RCF in the first 9 months reflects lower adjusted EBITDA and higher dividends

in € m

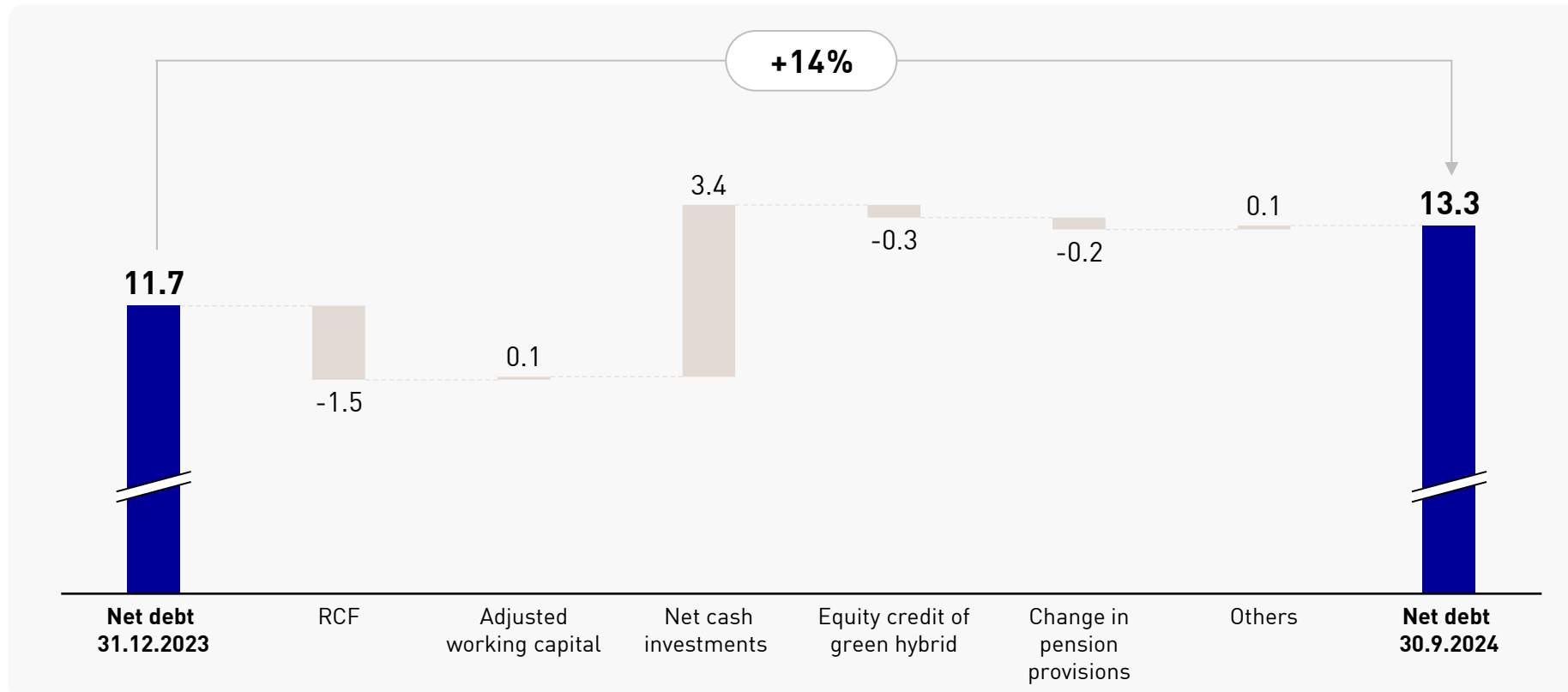


<sup>1</sup> After covering interest expenses, taxes and dividend payments, the retained cash flow is available to the company for investment without the need to raise additional debt. | <sup>2</sup> Previous year's figures restated.

# Net debt mainly driven by growth investments

## Net debt

in € bn



- Debt repayment potential target of **≥15%**<sup>1</sup>
- Current credit ratings: **A-/Baa1**
- Commitment to maintain **solid investment grade ratings**

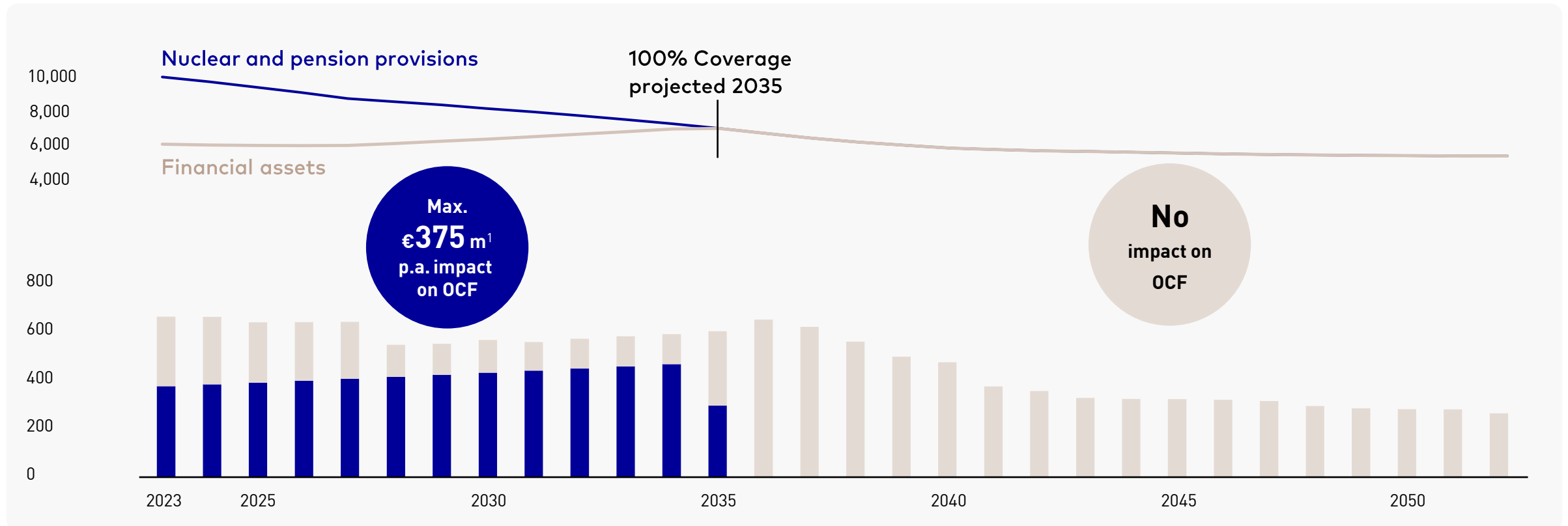
<sup>1</sup> Retained cash flow/net debt.



# Asset Liability Management Model limits the impact on the operating cash flow<sup>1</sup>

## EnBW's cash flow-based model

in € m



# Multi-year overview (1/2)

		2023	2022	2021	2020	2019
<b>Earnings</b>						
External revenue	€ mn	44,431	56,003	32,148	19,694	19,436
Adjusted EBITDA <sup>1</sup>	€ mn	6,365	3,967	2,959	2,781	2,433
Adjusted Group net profit/loss <sup>1,2</sup>	€ mn	2,780	1,413	1,203	683	787
Earnings per share <sup>2</sup>	€	5.68	6.42	1.34	2.20	2.71
Dividend per share/dividend payout ratio <sup>3</sup>	€ / %	1.50/15	1.10/31	1.10/36	1.00/40	0.70/40
<b>Balance sheet</b>						
Equity	€ mn	15,853	12,769	8,499	7,769	7,445
Net debt <sup>4</sup>	€ mn	11,703	10,847	10,351	14,407	12,852
Net financial debt <sup>4</sup>	€ mn	7,558	7,214	4,466	7,232	6,022
<b>Cash flow</b>						
Retained cash flow <sup>1</sup>	€ mn	4,832	3,217	1,784	1,639	1,241
Debt repayment potential <sup>1,4,5</sup>	%	41.3	29.7	17.2	11.4	-
Internal financing capability <sup>5</sup>	%	-	-	-	102.8	90.0
<b>Profitability</b>						
ROCE <sup>1,6</sup>	%	17.6	10.9	6.9	6.3	5.2
Value spread <sup>1,6</sup>	%	10.2	4.1	2.0	-	-

<sup>1</sup> The figures for the 2022 financial year have been restated. | <sup>2</sup> In relation to the profit/loss attributable to the shareholders of EnBW AG. | <sup>3</sup> The dividend payout ratio for 2022 was calculated based on the adjusted Group net profit before the restatement of the figure for the previous year. Adjusted for the valuation effects of IFRS 9 in 2021 and 2019. | <sup>4</sup> For the calculation of the net debt and debt repayment potential, please refer to the section "The EnBW Group" of the management report. | <sup>5</sup> The debt repayment potential replaced the internal financing capacity as a key performance indicator in 2021. | <sup>6</sup> The value spread replaced the return on capital employed (ROCE) as a key performance indicator in 2022.

# Multi-year overview (2/2)

		2023	2022	2021	2020	2019
<b>Energy sales</b>						
Electricity	bn kWh	81	106	108	107	153
Gas	bn kWh	548	509	495	442	362
<b>Sustainable Generation Infrastructure</b>						
External revenue	€ mn	20,832	30,543	13,804	6,064	6,623
Adjusted EBITDA <sup>1</sup>	€ mn	4,648	2,616	1,540	1,278	925
<b>System Critical Infrastructure</b>						
External revenue <sup>1</sup>	€ mn	6,328	6,679	4,413	3,657	3,460
Adjusted EBITDA <sup>1</sup>	€ mn	1,772	1,058	1,263	1,347	1,355
<b>Smart Infrastructure for Customers</b>						
External revenue <sup>1</sup>	€ mn	17,249	18,755	13,924	9,965	9,350
Adjusted EBITDA <sup>1</sup>	€ mn	240	498	344	335	326

<sup>1</sup> The figures for the 2022 financial year have been restated.

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**Additional information:  
Calendar, links and contacts**

# Financial calendar and important links

## Upcoming events



### Publication 12M 2024

26 March 2025, 02:00 p.m. (CET)

Investor and analyst conference call



## Important links

[Quarterly Statement 9M 2024](#) ..... (PDF)

[Six-Monthly Financial Report 2024](#) ..... (PDF)

[Integrated Annual Report 2023](#) ..... (PDF)

[Green Bond Impact Report 2023](#) ..... (PDF)

[Green Financing Framework 2024](#) ..... (PDF)

[ESG Factbook 2024](#) ..... (PDF)

[EnBW Climate Transition Plan 2024](#) ..... (PDF)

[EnBW Investor website](#) ..... Open website

# Key contacts

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## Important links

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Board of management: Dr. Georg Stamatelopoulos (Chairman), Thomas Kusterer (Deputy Chairman),

Dirk Güsewell, Peter Heydecker, Colette Rückert-Hennen