

April 2024



# EnBW Investor presentation



# EnBW - a key player in the energy transition

A leading integrated utility in Germany engaged in all aspects of the energy business: power generation, trading, transmission & distribution, energy sales and e-mobility

## Operational track record FY 2023

- **12 GW** generation capacity
- **27 TWh** own generation
- **179,000 km** electricity and gas grids
- **>1,100** fast-charging stations in Germany alone
- **5.5 m** B2C & B2B customers
- **28,630 employees**

## Financials FY 2023

- Revenues: **€44 bn**
- Adj. EBITDA: **€6.4 bn**
- Retained cash flow: **€4.8 bn**
- Gross investments: **€4.9 bn**
- Net debt: **€11.7 bn**
- Ratings: **A-** (S&P) / **Baa1** (Moody's)

## ESG performance

- ESG ratings: **A** (MSCI), **A-** (CDP)
- **87%** EU taxonomy-aligned capex
- **€5.5 bn green bonds** outstanding
- **~50%** of all bonds are **green**
- Climate protection targets certified by SBTi, 2028 coal exit, **2035 climate-neutrality**

## EnBW's segments focusing on energy infrastructure



### Sustainable Generation Infrastructure

- Power generation, district heating, trading, gas storage



### System Critical Infrastructure

- Transmission & distribution grids for electricity and gas



### Smart Infrastructure for Customers

- Retail, e-mobility, home storage

# Well-positioned with its integrated business model



## Integrated portfolio approach

- The only German utility covering the entire value chain
- Stabilizing the energy system, providing security of supply and driving the German energy transition



## High share of low-risk business

- Regulated grids and contracted or guaranteed renewables earnings are anchor of stability
- Low-risk earnings share 2024-30: >70%



## Prudent hedging strategy

- Natural hedge of own generation and sales activities de-risks unfavorable price movements
- Earnings locked-in by hedging for up to 3 years and growing long-term (10y+) PPA footprint



## Strong ESG focus

- Ambitious SBTi emission reduction targets lead the way to climate neutrality in 2035
- Clear decarbonization roadmap



## Strong financial performance

- Strong FY23 earnings performance, robust FY24 guidance with adj. EBITDA target range of €4.6 – 5.2 bn
- Significant growth potential from strong political commitment to accelerate energy transition



## Stable government-related shareholder structure

- German state of Baden-Württemberg and OEW (an association of counties) > 93% of share capital
- The shareholder structure has remained virtually unchanged and thus very stable since 2011

# Highlights 2023



## Strong earnings 2023

- reaching upper end of upgraded guidance supporting higher investments in energy transition



## Driving forward the energy transition

- significant strategic progress with expansion in renewables, grids, fuel switch and e-mobility



## Successful financing of growth

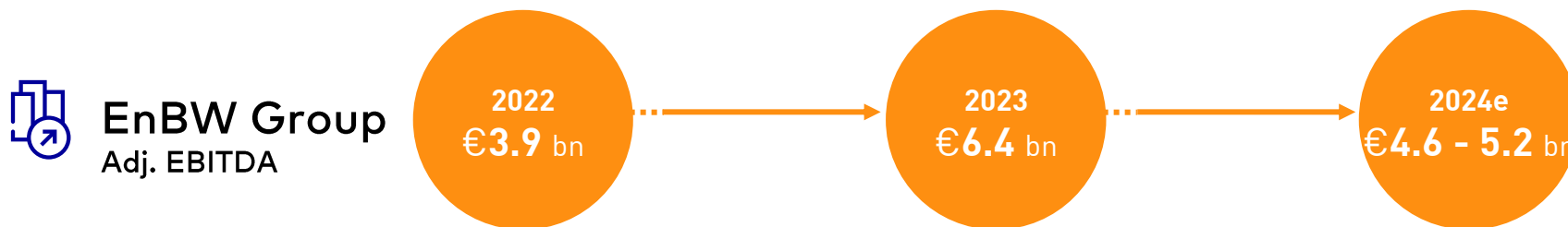
- by attracting new long-term partners and issuing green bonds



## High credit ratings by Moody's and S&P

- acknowledging integrated setup and our financial strength. S&P outlook revised to stable 3/2023

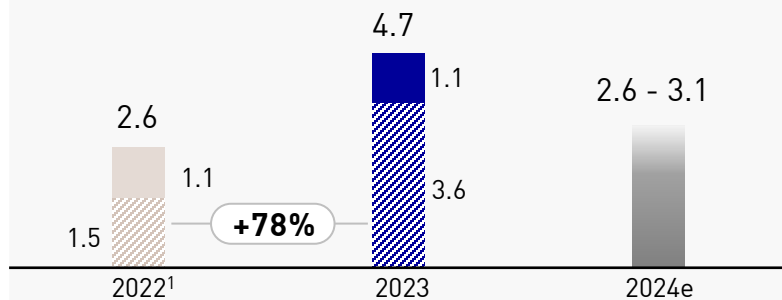
# Sustainably strong earnings performance



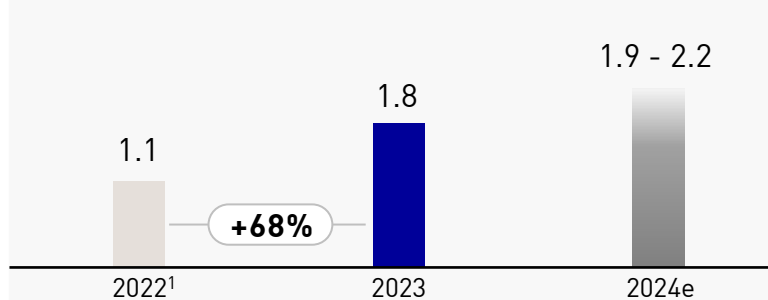
## Robust delivery despite:

- uncertainty in commodity markets
- power price volatility
- decline in European power prices

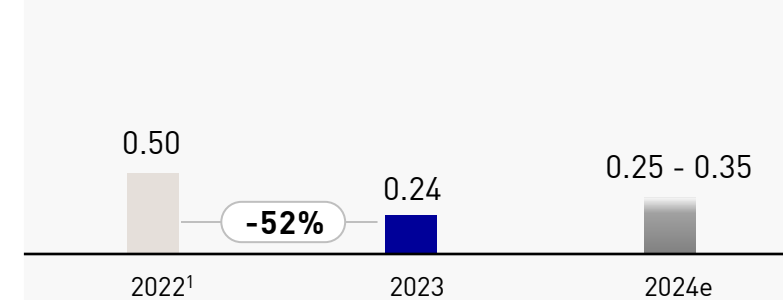
### Sustainable Generation Infrastructure Adj. EBITDA in € bn



### System Critical Infrastructure Adj. EBITDA in € bn



### Smart Infrastructure for Customers Adj. EBITDA in € bn






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

# Outlook 2024 reflects earnings in a normalized environment

in € bn

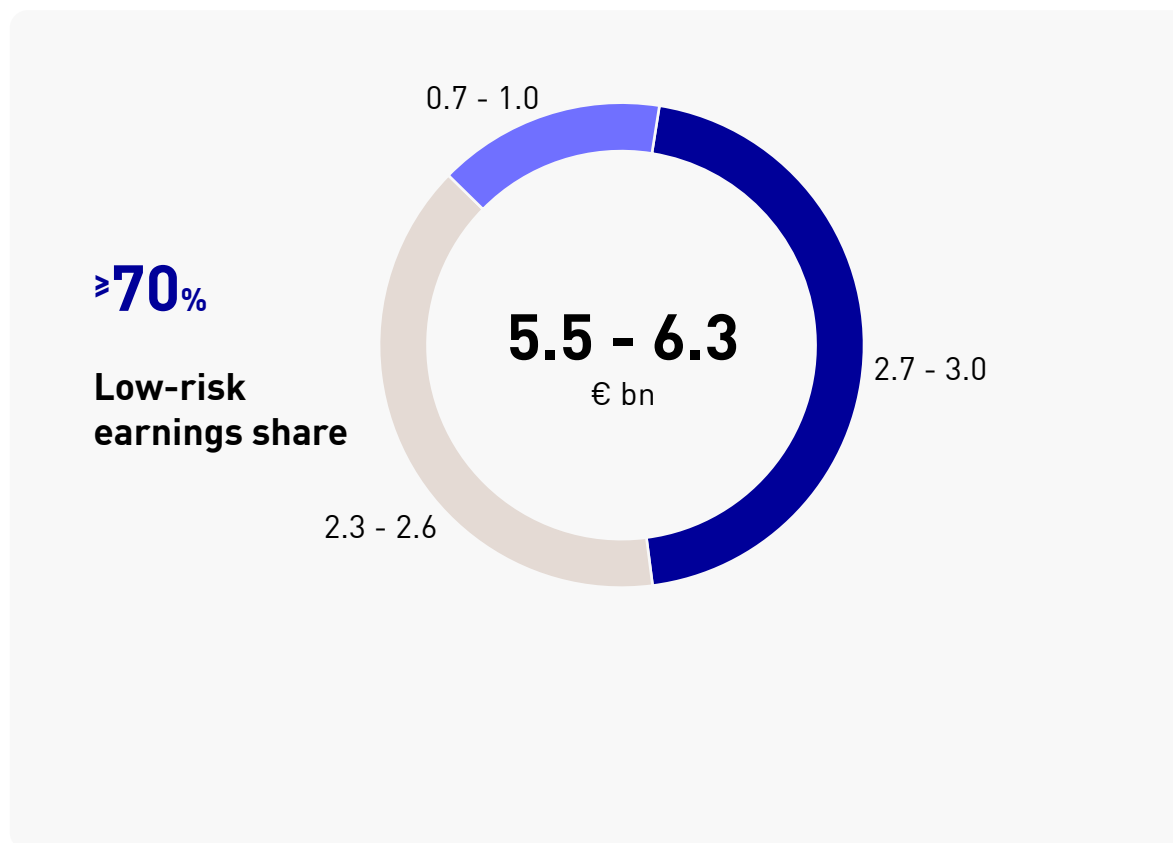


€4.6 – 5.2 bn  
2023: €6.4 bn

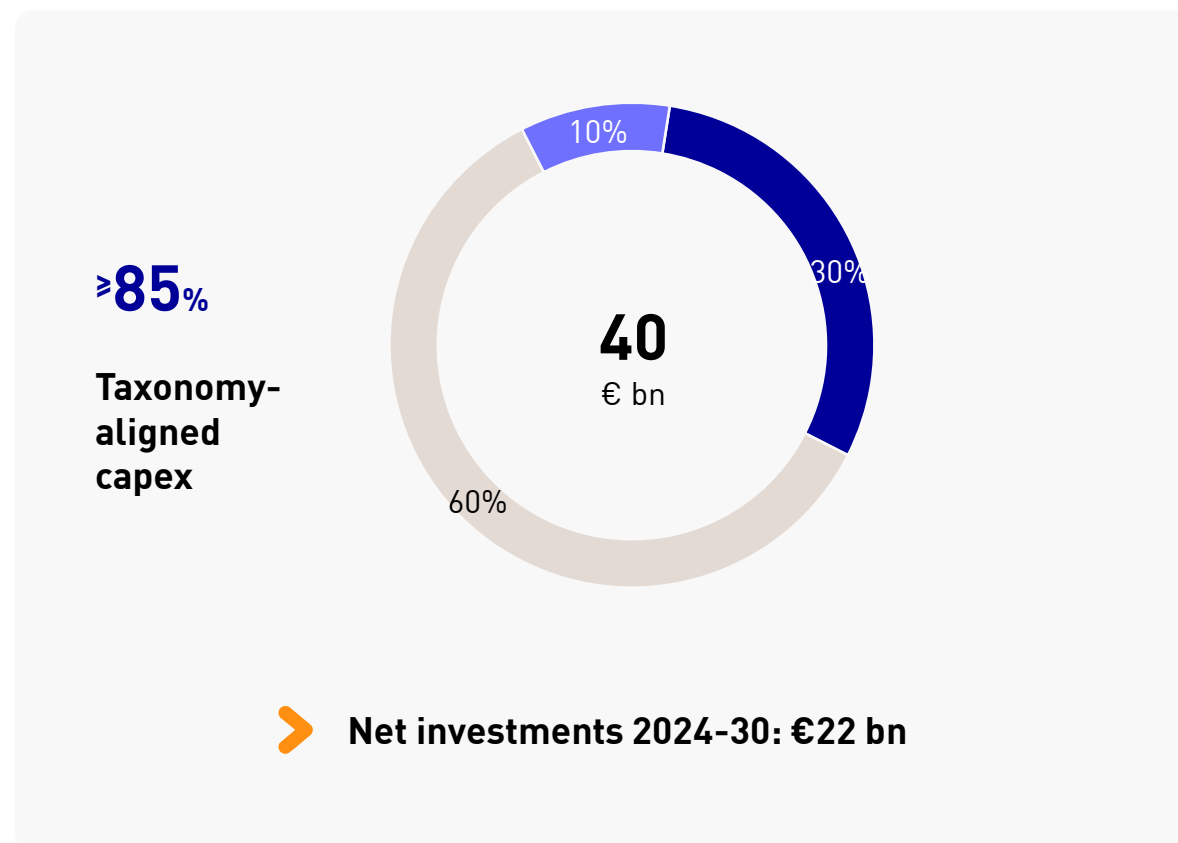
	FY 2023	Outlook 2024	
 <b>Sustainable Generation Infrastructure</b>	4.6	> 2.6 - 3.1	<ul style="list-style-type: none"> <li>Decline on the back of the falling energy prices and lower hedged generation margins</li> <li>Increased capacity in renewables</li> </ul>
 <b>System Critical Infrastructure</b>	1.8	> 1.9 - 2.2	<ul style="list-style-type: none"> <li>Higher earnings from grids through returns from increased investments</li> </ul>
 <b>Smart Infrastructure for Customers</b>	0.2	> 0.25 - 0.35	<ul style="list-style-type: none"> <li>No repeat of negative one-offs 2023</li> <li>Increased competition B2B and B2C customers</li> </ul>

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

## Adj. EBITDA target 2030

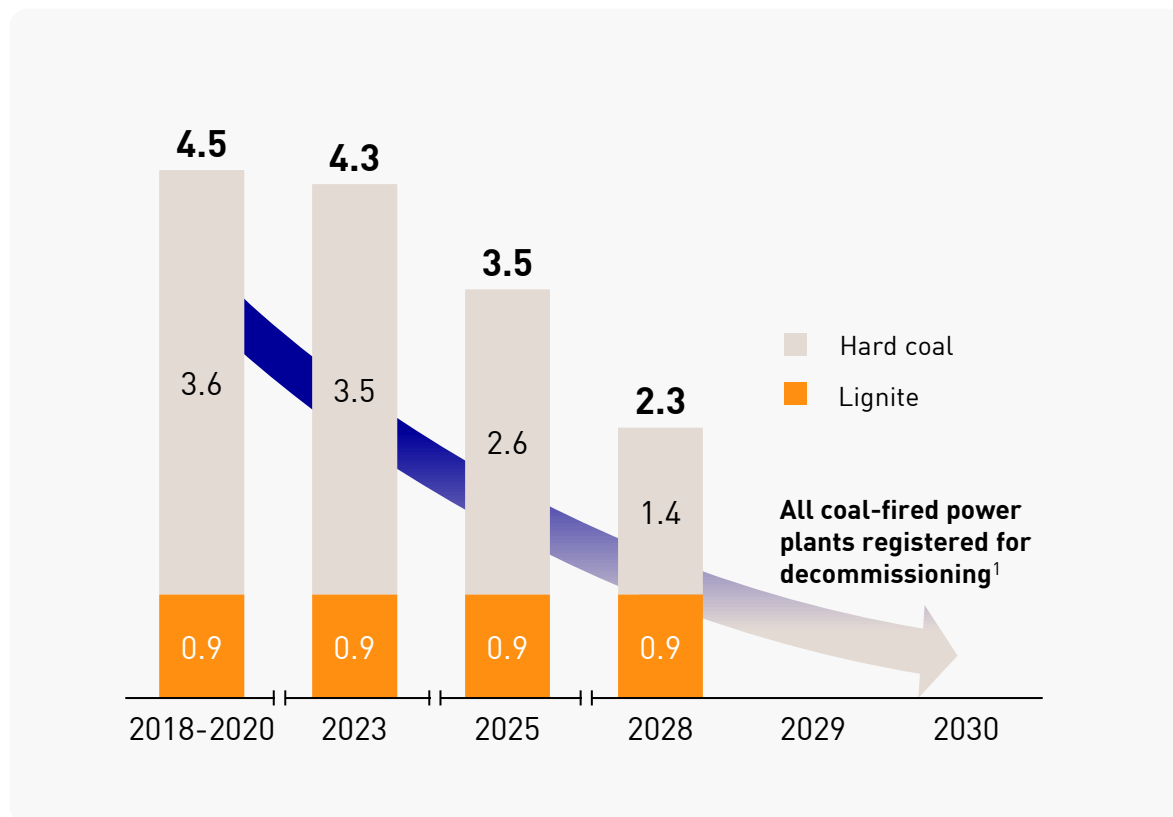


## Gross investments 2024-30

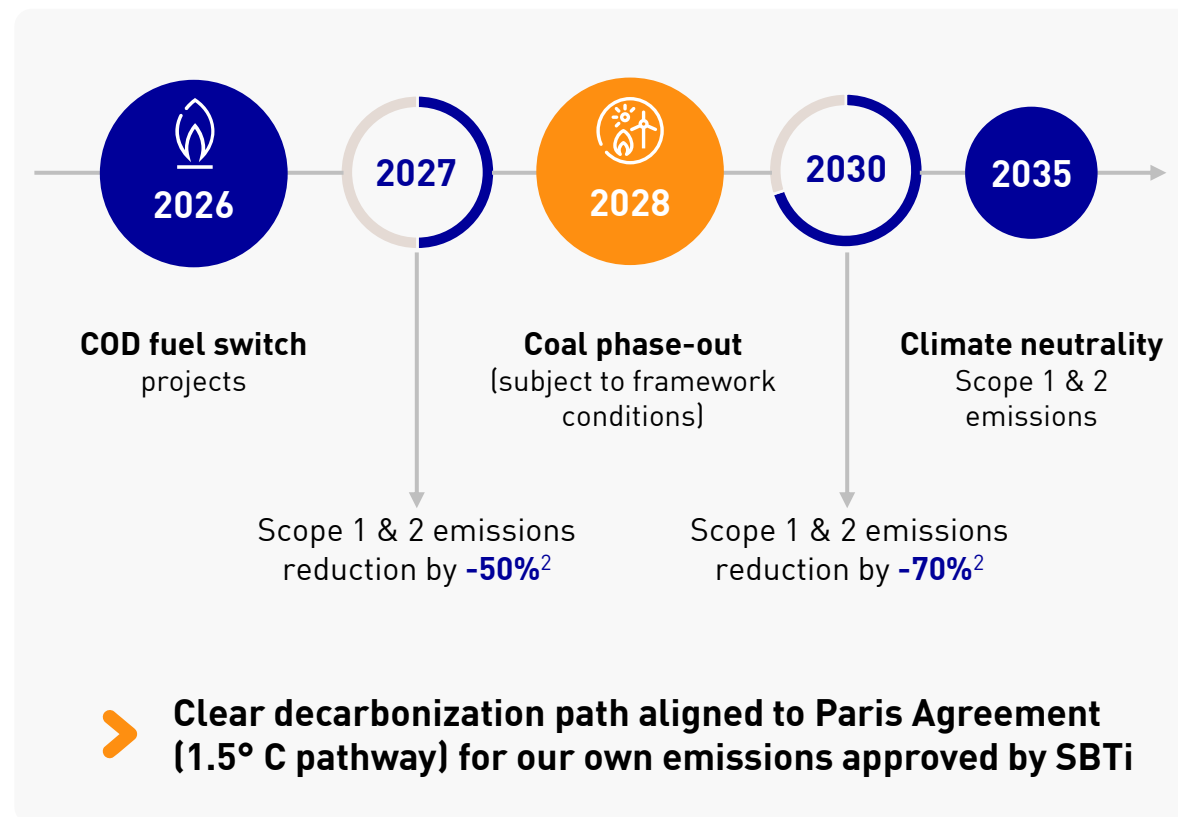


# Our continued progress in ESG

## Phase out coal by 2028 in line with our SBTi targets in GW



## Well on track with our climate neutrality roadmap



<sup>1</sup> Provided the energy transition progress allows a coal exit by 2028. <sup>2</sup> Compared to the base year 2018.

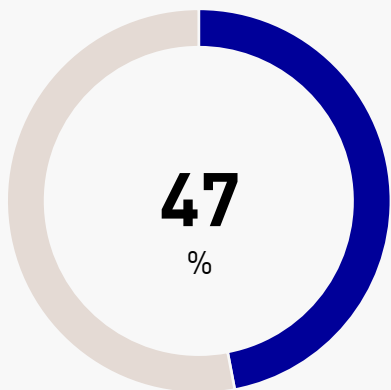




# Segment overview

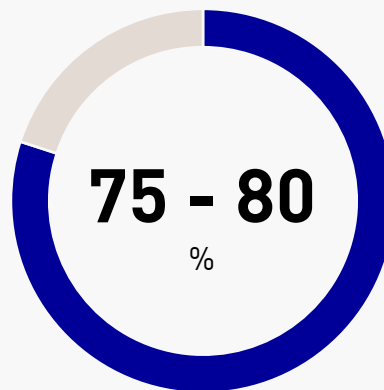
# Sustainable Generation Infrastructure

## Share of generation capacity accounted for by renewables 2023



in GW		2023
Thermal power plants		6.5
Renewable Energies		5.7
<b>Installed output</b>		<b>12.2</b>

## Share of generation capacity accounted for by renewables target 2030



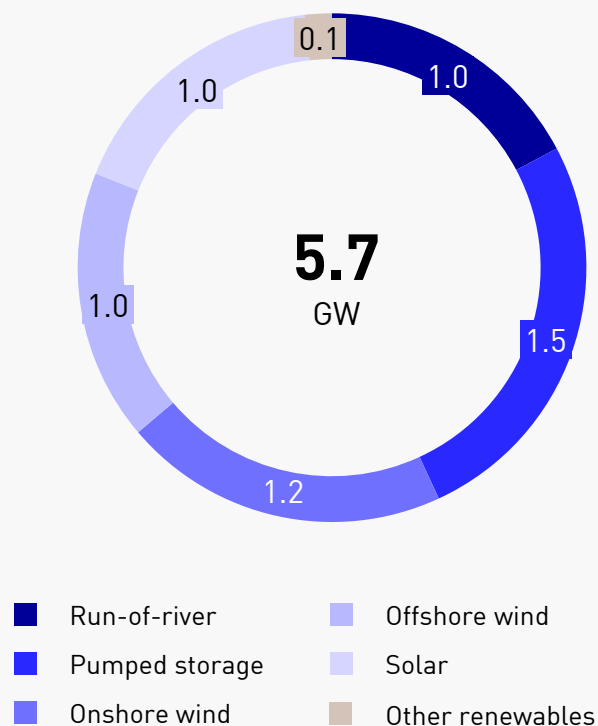
in GW		2023
Renewable Energies		10 - 11.5

## Energy trading

- EnBW follows a risk mitigating hedging strategy focused on reducing the earnings impact from price fluctuations
- Forward hedging up to 3 years in advance of our expected electricity generation, whilst also hedging the prices for necessary fuels and emission allowances
- Sales contracts closed on back-to-back basis
- 2024: already almost fully hedged, 2025: 60 - 90%, 2026: 20 - 50%

# Sustainable Generation Infrastructure Renewable energies

## Generation capacity renewable energies 2023



- **Adj. EBITDA:** €1.1 bn  
Share of total adj. EBITDA: 17%
- **Generation capacity:** 5.7 GW, share of 47%
- **Electricity generated:** 13 TWh, share of 48%
- **Investments:** €0.6 bn
- **Under construction:** 137 MW onshore and 320 MW solar in Germany, 960 MW offshore in Germany
- **Employees:** 1,309

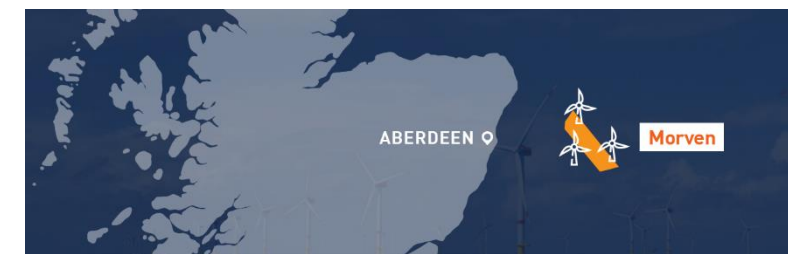
# Our lighthouse projects – offshore wind

 **He Dreiht**


<b>Location</b>	Germany, German Bight (North Sea)
<b>Foundation</b>	Fixed-bottom monopiles
<b>Type of turbine</b>	64 x Vestas V236 15 MW
<b>Total grid capacity</b>	900 MW grid connection (960 MW installed)
<b>Shareholders</b>	EnBW 50.1%; consortium of Allianz Capital Partners, AIP and Norges Bank Investment Management 49.9%
<b>Commissioning</b>	2025
<b>Remuneration</b>	Without EEG funding ~50% capacity secured via PPAs

 **Mona and Morgan**


<b>Location</b>	UK, 30 km from the coast of Britain, 22 km from Isle of Man
<b>Potential</b>	Potential of 3 GW leases – powering ~ 3.4 million UK homes
<b>Area</b>	Morgan: ~300 km <sup>2</sup> Mona: ~500 km <sup>2</sup>
<b>Water depth</b>	35 m
<b>Shareholders</b>	50% EnBW, 50% bp
<b>Commissioning</b>	Depending on grid connection, aiming at 2029/30
<b>Remuneration</b>	CfD, PPA and/or merchant offtake in 55 years operation time

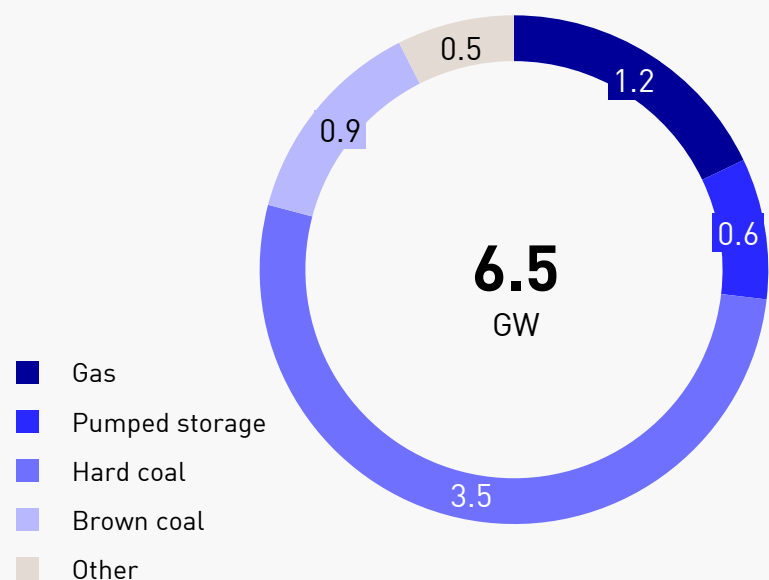
 **Morven**


<b>Location</b>	UK, ~60 km off the coast from Aberdeen
<b>Generation capacity in GW</b>	~2.9
<b>Area</b>	~860 km <sup>2</sup>
<b>Water depth</b>	65 - 75 m
<b>Shareholders</b>	50% EnBW, 50% bp
<b>Commissioning</b>	Depending on grid connection, aiming at 2035
<b>Remuneration</b>	CfD, PPA and/or merchant offtake in 55 years operation time

# Sustainable Generation Infrastructure

## Thermal Generation

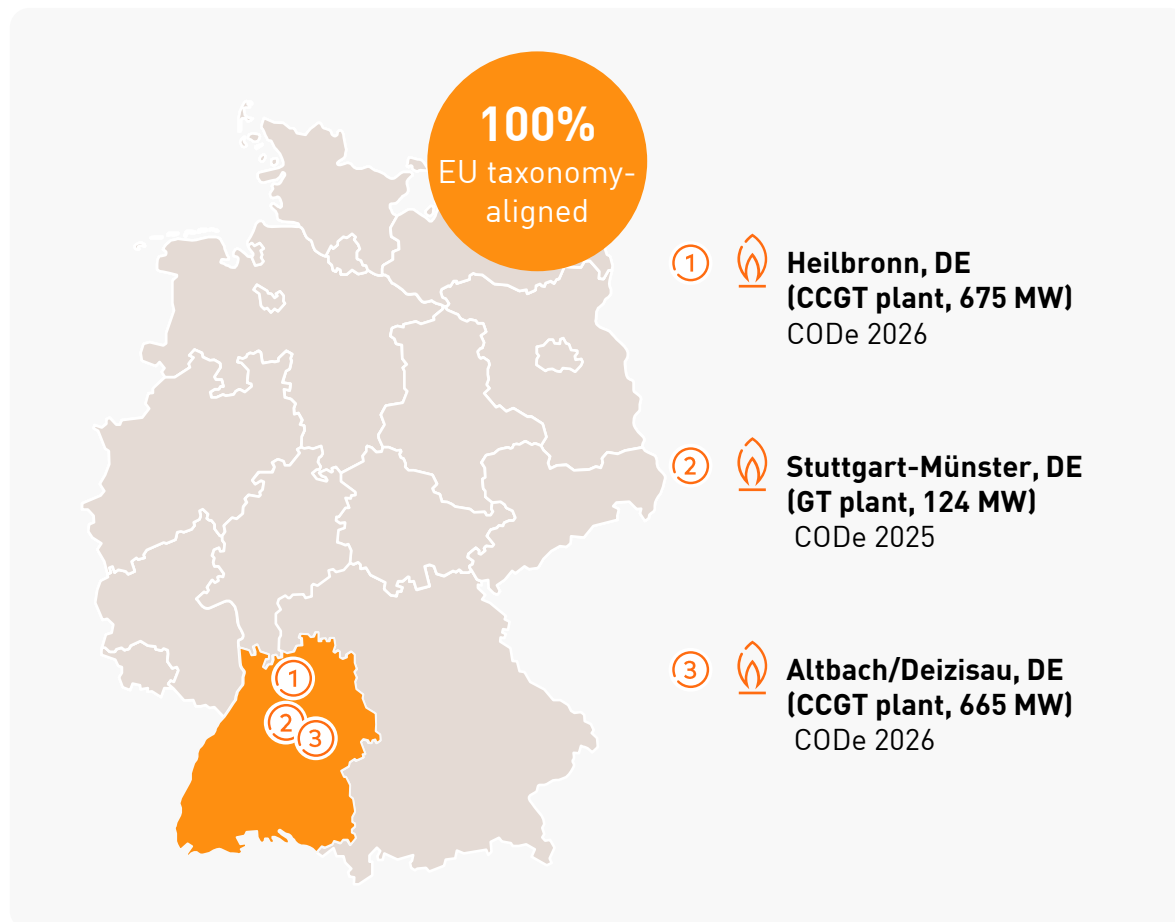
### Generation capacity thermal power plants 2023



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

- **Adj. EBITDA** (including trading): €3.6 bn  
Share of total adj. EBITDA (including trading): 56%
- **Generation capacity:** 6.5 GW, share of 53%
- **Electricity generated:** 14 TWh, share of 52%
- **Investments:** €1.2 bn
- **Under construction:** 3 H<sub>2</sub>-ready dispatchable CCGTs, 1.5 GW in total (CODe 2025/26)
- **Employees:** 6,254

# Our lighthouse projects – fuel switch



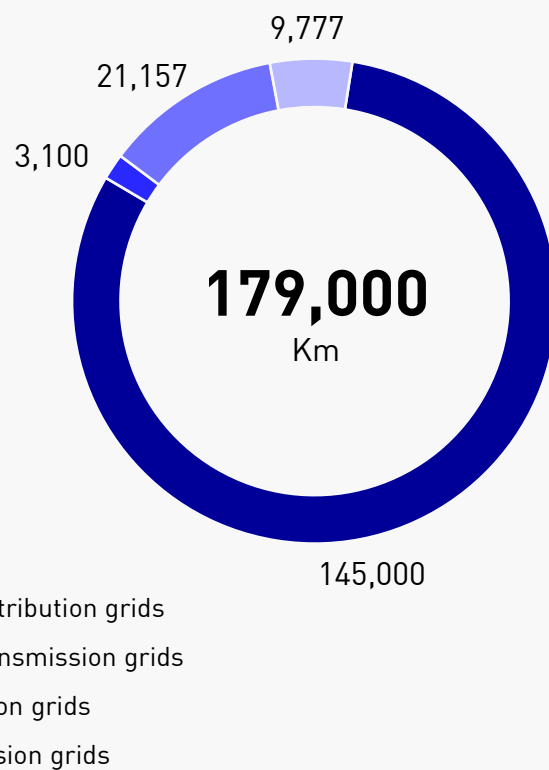
3 major fuel switch projects from coal to natural gas to climate neutral gases reduce CO<sub>2</sub> from dispatchable generation significantly

- FID March 2022
- All 3 projects under construction
- Cuts carbon emissions immediately by 55%
- Dispatchable power CCGT plants pave the way to exit coal
- Driven by heat energy transition, priority on locations with integrated district heat provision
- Keeps locations economically viable and contributes to security of supply
- Operation with climate-neutral gases from mid-2030s

# System Critical Infrastructure

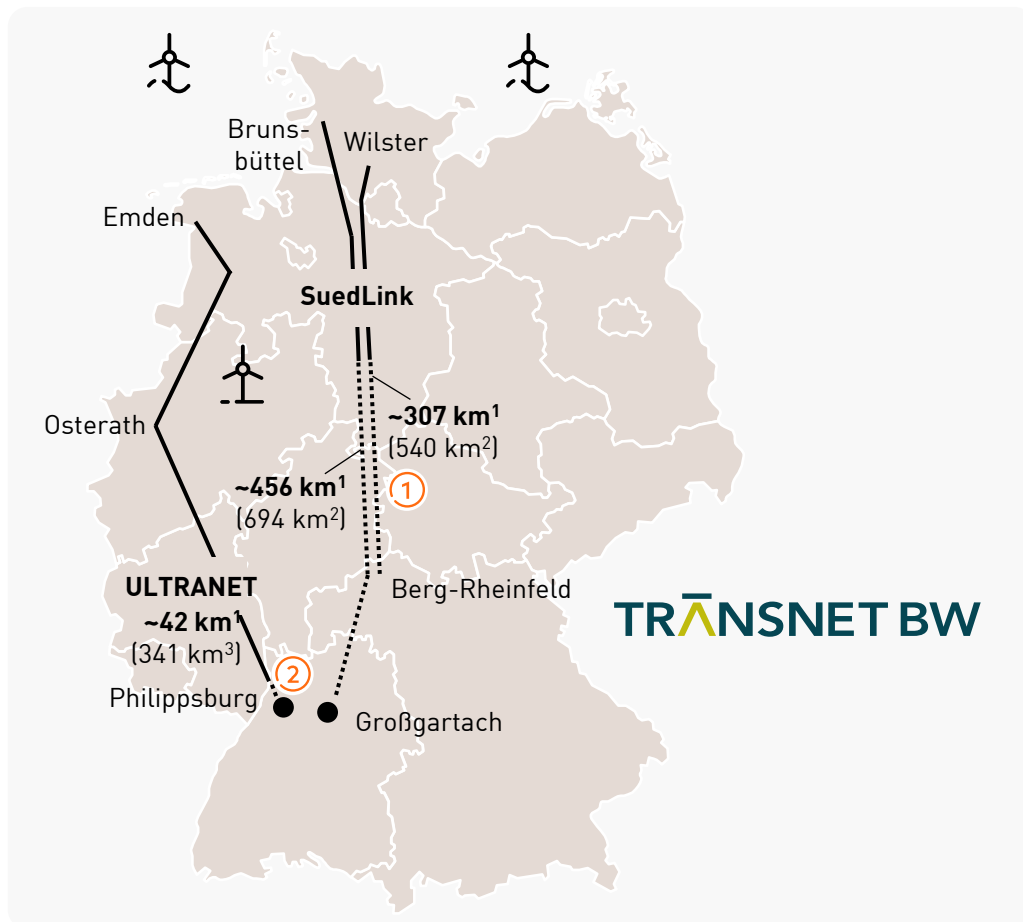
## Electricity and gas grids

### Grid lengths 2023



- **Adj. EBITDA:** €1.8 bn  
Share of total adj. EBITDA: 28%
- **Transmission volumes:** electricity 55.8 TWh, gas 29.1 TWh
- **Investments:** €2.7 bn
- **Sale of 49.9% minority stake in TransnetBW** to long-term partners
- **Large-scale TSO projects under construction:** Start of SuedLink converter in Leingarten; start for the southernmost section of ULTRANET project (both in Germany)
- **Employees:** 11,635

# Our lighthouse projects – electricity transmission grids



## Expansion of electricity transmission grids to ensure security of supply

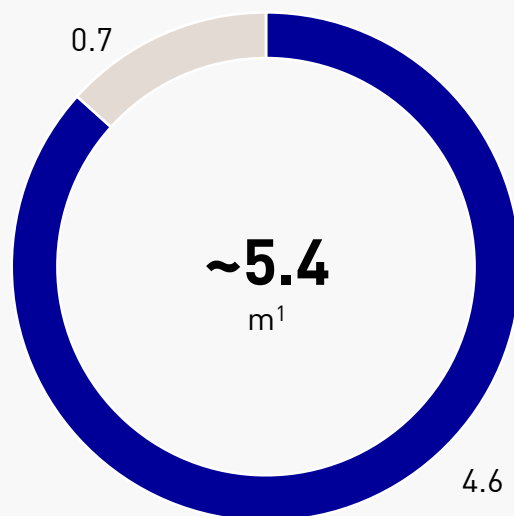
DC expansion	Grid section	Scheduled completion
<b>① SuedLink</b> <ul style="list-style-type: none"> <li>4 GW corridor</li> <li>Investment volume: &gt;€5 bn</li> <li>TransnetBW contribution: Converter, power lines</li> </ul>	~763 km <sup>1</sup>	2028
<b>② ULTRANET</b> <ul style="list-style-type: none"> <li>2 GW corridor</li> <li>Investment volume: 1.6 bn</li> <li>EnBW/TransnetBW contribution: Converter, power lines in Baden-Württemberg</li> </ul>	~42 km <sup>2</sup>	2026

<sup>1</sup> Share belonging to TransnetBW | <sup>2</sup> In cooperation with TenneT | <sup>3</sup> In cooperation with Amprion | AC: Alternating current | DC: Direct current.



# Sustainable engagement for our customers

## B2C electricity and gas customers



■ Electricity  
■ Gas

- **Adj. EBITDA:** €0.3 bn  
Share of total adj. EBITDA: 4%
- **B2B and B2C customers<sup>2</sup>:** 5.5 m
- **Leading charge point operator (CPO) and e-mobility provider (EMP) in Germany**  
EBITDA break even expectet 2024  
CPO: Biggest fast charging network in Germany with >4,200 fast charging points  
Aim: around 30,000 fast charging points in 2030 with annual invest of up to €0.2 bn  
EMP: Access to >600,000 charging points in 17 European countries  
EnBW mobility+ app downloaded >2.4 m times
- **Investments:** €0.4 bn, mainly in e-mobility
- **Employees:** 5,711

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# Funding strategy and credit strength

# Diversified funding strategy



## Funding volumes

€2.5 - 3 bn p.a.  
on average

- Refinancing of maturing liabilities
- Funding of corporate growth



## Tenors

2 - 30 years

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



## Green financing

Outstanding volume  
of €5.5 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% EU taxonomy aligned



## Currencies

EUR, CHF, USD, GBP  
& JPY outstanding

- Asset base related: main focus EUR but also CHF, USD & GBP
- Flexible use of opportunities



## Diversification

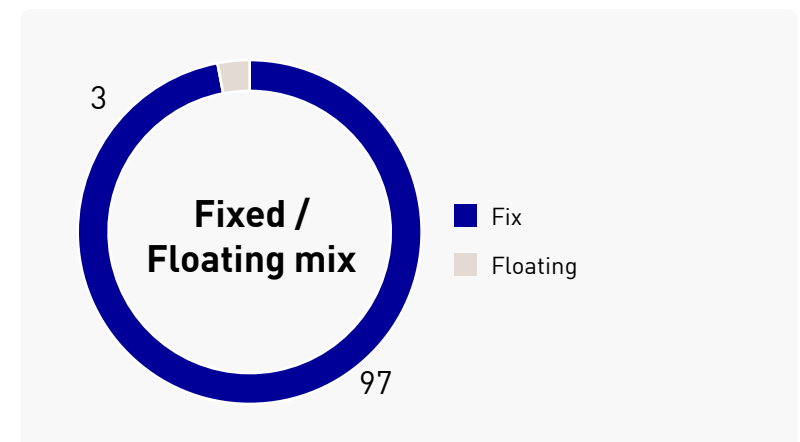
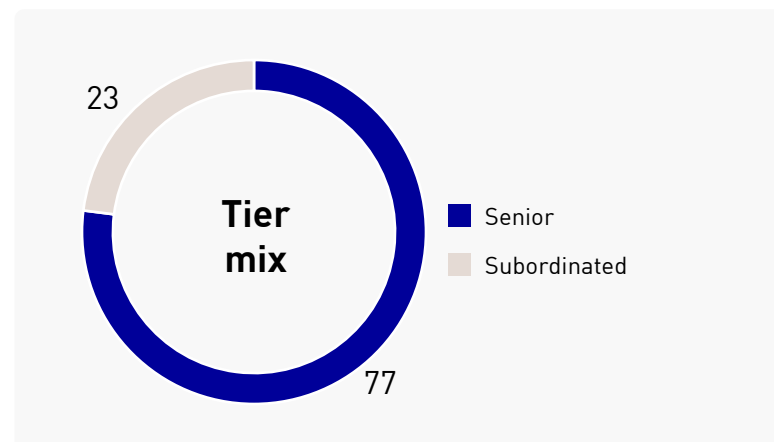
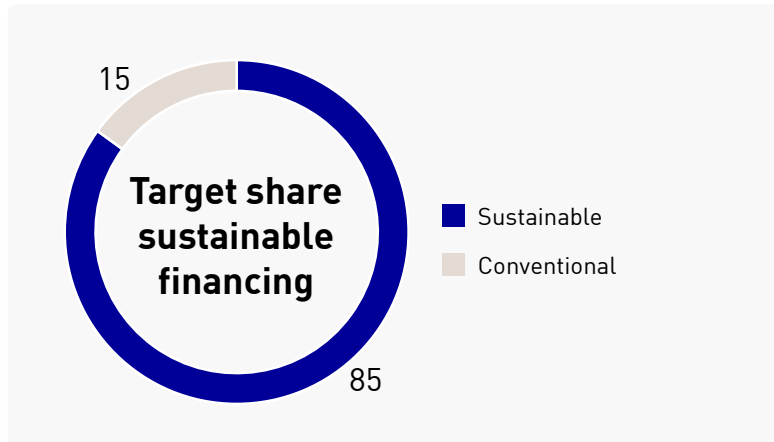
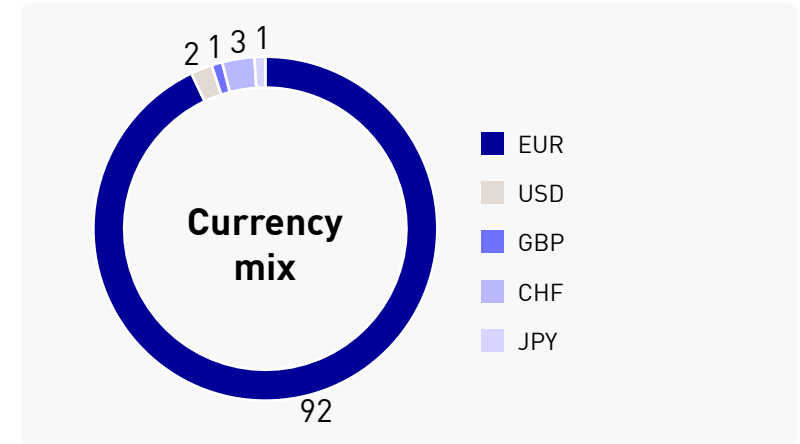
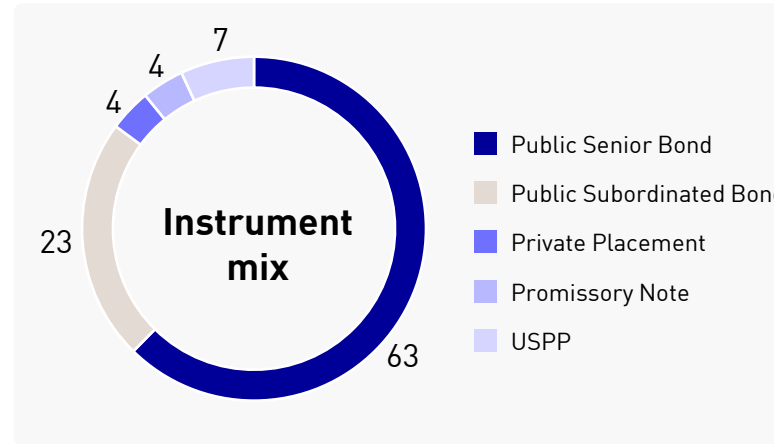
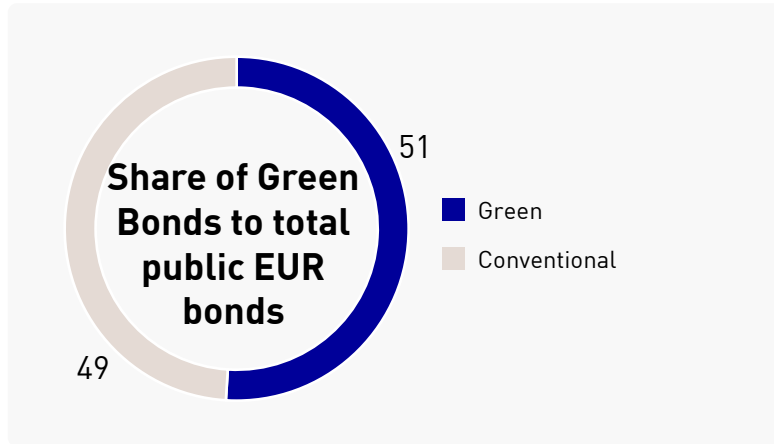
... in instruments,  
currencies & markets

- Bonds, promissory notes, USPP
- Exploring new markets to make use of existing opportunities
- Public offerings & Private placements

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

# EnBW is prepared to scale up in diversification

in %



<sup>1</sup> As of 27 March 2024.

# EnBW Green Financing Framework – in line with all relevant market standards

## Key facts

- Published in 2018 and most recently updated in 2023
- Alignment with **ICMA Green Bond Principles & LMA Green Loan Principles**
- Alignment with **EuGBS**
- **Second-party opinion** by ISS-Corporate



**EnBW Green Financing Framework**

## Use of proceeds

**100%**  
EU taxonomy-  
aligned

Green activity	Project categories	Contribution to EU taxonomy	UN SDGs
Renewable energies	<ul style="list-style-type: none"> <li>• Offshore wind</li> <li>• Onshore wind</li> <li>• Solar (PV)</li> </ul>	4.3 Electricity generation from wind power (NACE: D.35.11)	
Electricity Networks	<ul style="list-style-type: none"> <li>• Electricity distribution infrastructure</li> </ul>	4.9 Transmission and Distribution of Electricity (NACE: D.35.12, D.35.13)	
Energy efficiency	<ul style="list-style-type: none"> <li>• Smart meters</li> </ul>	7.5. Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings (NACE: D.35.13)	
Clean transportation	<ul style="list-style-type: none"> <li>• E-mobility charging infrastructure</li> </ul>	6.15 Infrastructure enabling low-carbon road transport and public transport (NACE: D.35.12, D.25.13, F.42.21)	

# Allocation of Eligible Green Assets to Green Bonds covers the entire value chain of being a fully integrated utility

## Offshore & Onshore wind



### Allocated to

- €500 m October 2018 Green Senior
- €1 bn August 2019 Green Subordinated
- €500 m June 2020 Green Subordinated
- €500 m August 2021 Green Subordinated
- €1 bn November 2022 Green Senior
- €1.5 bn November 2023 Green Senior

## Solar



### Allocated to

- €500 m October 2018 Green Senior
- €1 bn August 2019 Green Subordinated
- €500 m June 2020 Green Subordinated
- €500 m August 2021 Green Subordinated
- €1 bn November 2022 Green Senior
- €1.5 bn November 2023 Green Senior

## Electricity distribution infrastructure



### Allocated to

- €1 bn November 2022 Green Senior
- €1.5 bn November 2023 Green Senior

## EV charging infrastructure



### Allocated to

- €500 m October 2018 Green Senior
- €500 m August 2021 Green Subordinated
- €1 bn November 2022 Green Senior
- €1.5 bn November 2023 Green Senior

# Key credit strengths



## High share of low-risk business

- Target: >70% share of regulated grids and contracted or guaranteed renewables earnings
- Growing number of green PPAs



## Attractive investments in energy transition

- €40 bn 2024-30 gross investments: 60% in grids, 30% in renewables and low-carbon dispatchable generation, 10% e-mobility
- >85% taxonomy-aligned capex



## Strict balance sheet management and high credit ratings

- Commitment to solid investment grade ratings
- Debt repayment potential 41% in 2023; target of >15%
- High diversification of funding sources



## Robust capital market funding used for sustainable investments

- €2 bn Commercial Paper & €10 bn Debt Issuance Programme
- €5.6 bn bilateral bank lines & €1.5 bn syndicated loan facility
- €5.5 bn green bonds outstanding



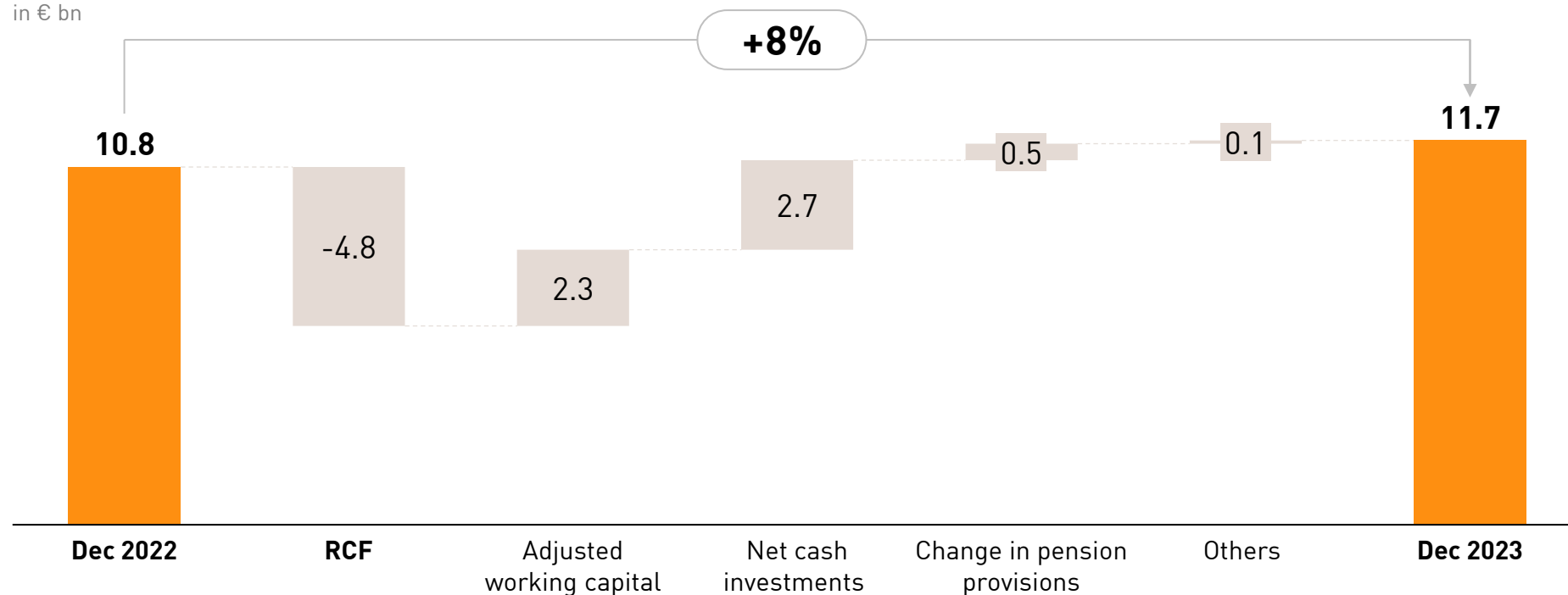
- 25 Net debt
- 26 Retained cash flow
- 27 Total investments
- 28 Financial calendar
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- 30 Disclaimer



# Slight increase in net debt due to investments, working capital and lower interest rate on pension provisions

## Net debt

in € bn



- Debt repayment potential target of **≥15%**
- Securing strong credit ratings **A-/Baa1**

**30%<sup>1</sup>**

RCF/ net debt

Debt repayment potential **+11% pt**

**41%**

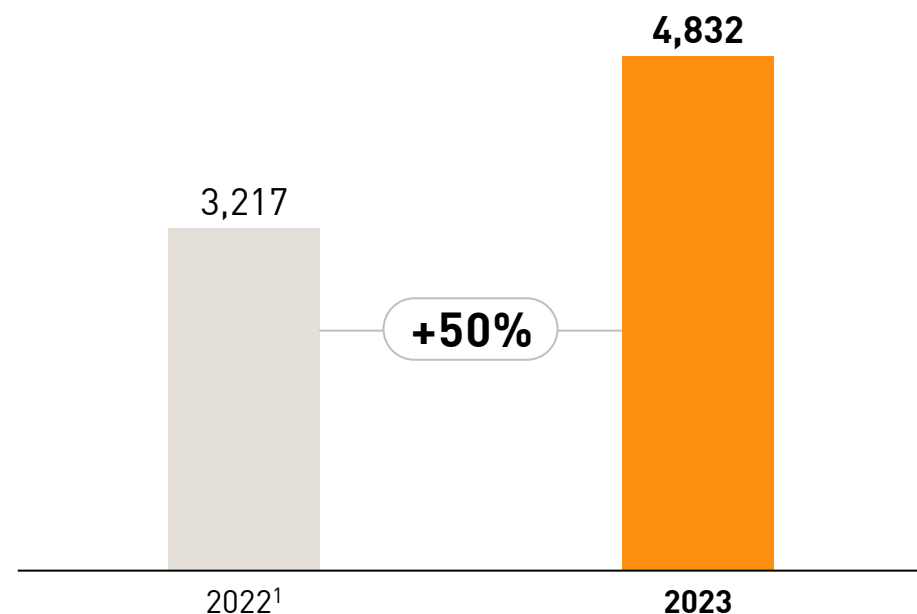
RCF/ net debt

<sup>1</sup> Previous year's figures restated.

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

## Retained cash flow

in € m



- ▲ Higher operating earnings
- ▼ Higher income taxes paid and dividends

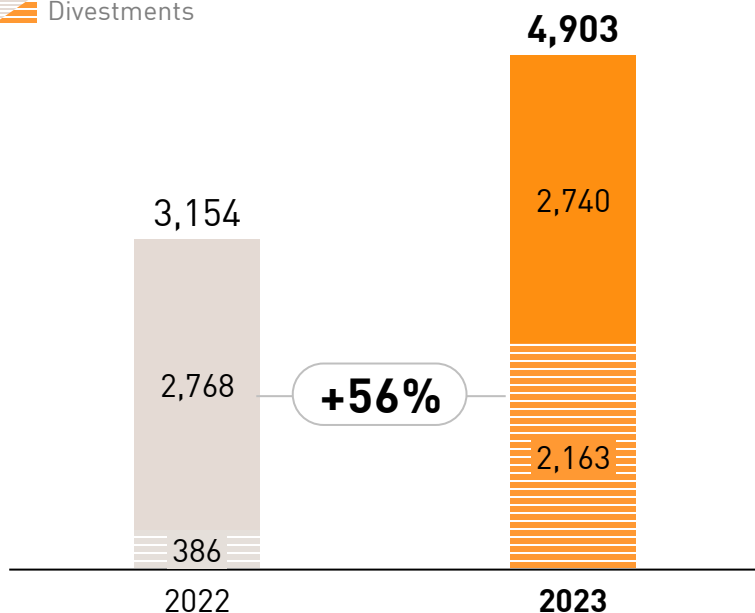
<sup>1</sup> Previous year's figures restated.

# Higher investments focused on energy transition

## Total investments 2023

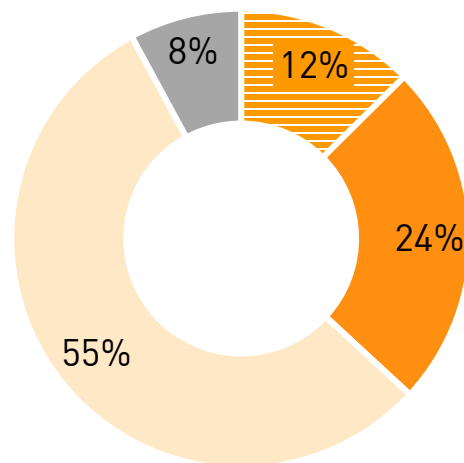
in € m

- Net cash investments
- Divestments



## Investments by segments<sup>1</sup>

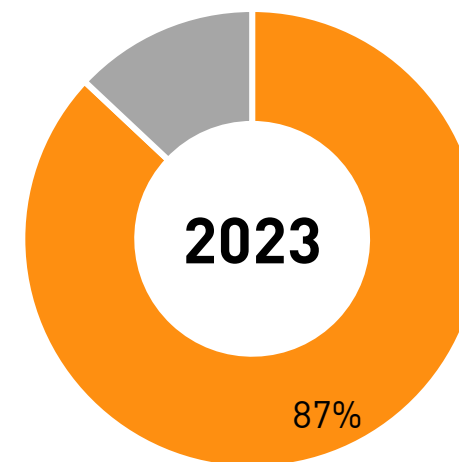
- Sustainable Generation Infrastructure
- Renewable Energies
- Thermal Generation and Trading
- System Critical Infrastructure
- Smart Infrastructure for Customers



**80% of total investments in 2023 in growth projects**

## Taxonomy-aligned capex<sup>2</sup>

- EU taxonomy-aligned



<sup>1</sup> May not add up to 100% due to others. <sup>2</sup> Taxonomy-aligned capex according to the EU taxonomy definition incl. expanded capex for our taxonomy-compliant at equity business activities.

# Financial calendar and important links

## Upcoming events



May 2024, 10:00 a.m. CEST

Annual General Meeting 2024



May 2024, 01:00 p.m. CEST

Publication of figures for 3M 2024

Investor and analyst conference call



August 2024, 01:00 p.m. CEST

Publication of figures for 6M 2024

Investor and analyst conference call



November 2024, 01:00 p.m. CET

Publication of figures for 9M 2024

Investor and analyst conference call

## Important links



[Integrated Annual Report 2023](#)



[Green Bond Impact Report 2023](#)



[Investor presentation](#)



[Factbook 2023](#)



[ESG figures 2023](#)



[Website](#)

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