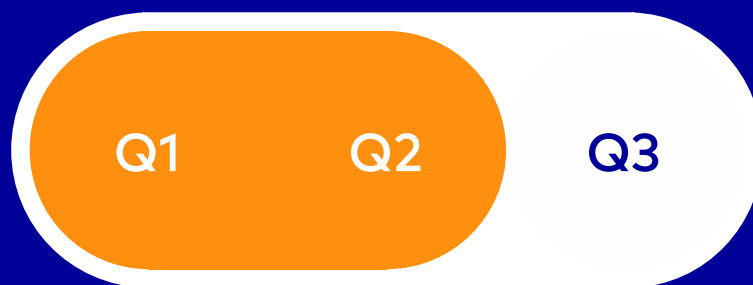


# Six-Monthly Financial Report January to June 2022



# Performance indicators of the EnBW Group

## Financial and strategic performance indicators

in € million	01/01– 30/06/2022	01/01– 30/06/2021	Change in %	01/01– 31/12/2021
External revenue	27,119.5	12,654.7	114.3	32,147.9
Adjusted EBITDA	1,424.2	1,479.4	-3.7	2,959.3
Share of adjusted EBITDA accounted for by Smart Infrastructure for Customers in € million/in % <sup>1</sup>	114.9/8.1	223.0/15.1	-48.5/-	344.0/11.6
Share of adjusted EBITDA accounted for by System Critical Infrastructure in € million/in % <sup>1</sup>	587.7/41.3	645.7/43.6	-9.0/-	1,263.0/42.7
Share of adjusted EBITDA accounted for by Sustainable Generation Infrastructure in € million/in % <sup>1</sup>	851.8/59.8	727.6/49.2	17.1/-	1,539.7/52.0
Share of adjusted EBITDA accounted for by Other/Consolidation in € million/in %	-130.2/-9.2	-116.9/-7.9	-11.4/-	-187.4/-6.3
EBITDA	1,642.3	1,167.2	40.7	2,803.5
Adjusted EBIT	647.2	731.7	-11.5	1,402.9
EBIT	769.5	-523.9	-	158.8
Adjusted Group net profit <sup>2</sup>	299.8	594.3	-49.6	1,203.2
Group net profit/loss <sup>2</sup>	563.9	-162.8	-	363.2
Earnings per share from Group net profit/loss (€) <sup>2</sup>	2.08	-0.60	-	1.34
Retained cash flow	792.0	835.7	-5.2	1,783.8
Net cash investment	1,092.9	860.6	27.0	2,471.2

in € million	30/06/2022	31/12/2021	Change in %
Net debt	7,531.2	8,786.1	-14.3

## Non-financial performance indicators<sup>3</sup>

	01/01– 30/06/2022	01/01– 30/06/2021	Change in %	01/01– 31/12/2021
<b>Customers and society goal dimension</b>				
EnBW/Yello Customer Satisfaction Index	139/166	127/161	9.4/3.1	127/159
SAIDI (electricity) in min./year	9	8	12.5	16
<b>Employees goal dimension</b>				
LTIF for companies controlled by the Group <sup>4,5</sup> /LTIF overall <sup>4</sup>	2.6/3.7	1.7/2.5	52.9/48.0	2.3/3.3

## Employees<sup>6,7</sup>

	30/06/2022	30/06/2021	Change in %	31/12/2021
Employees	26,312	24,894	5.7	26,064
Full-time equivalents <sup>8</sup>	24,710	23,369	5.7	24,519

1 The figures for the previous year have been restated.

2 In relation to the profit/loss attributable to the shareholders of EnBW AG.

3 The values for the key performance indicators Reputation Index, People Engagement Index (PEI), "Installed output of renewable energies (RE) in GW and the share of the generation capacity accounted for by RE in %" and CO<sub>2</sub> intensity are exclusively collected at the end of the year.

4 Variations in the group of consolidated companies (all companies with more than 100 employees, excluding external agency workers and contractors, are considered). Companies that were fully consolidated for the first time during the 2022 financial year were not included in the calculations for the LTIF performance indicators.

5 Except for companies in the area of waste management.

6 Number of employees excluding apprentices/trainees and inactive employees.

7 The number of employees for the ITOs (ONTRAS Gastransport, terranets bw and TransnetBW) is only updated at the end of the year; for intervals of less than a year, the number of employees from 31/12/2021 is carried forward.

8 Converted into full-time equivalents.

# Q2 2022 at a glance

- Adjusted EBITDA of €1,424.2 million slightly below level in previous year
- Integrated approach and diversified portfolio maintain stability in highly volatile market environment
- Net debt reduced by 14.3% to €7.5 billion
- Further high investment in areas with future potential, especially for development of the grid and expansion of renewable energies

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# Solar parks are on the rise

Solar parks are often an interesting investment model and sometimes “a sure thing” – a “g’mähtes Wiesle” as people say in southwest Germany. The ambitious climate targets set by the German government mean that there is huge demand for sites. The benefits for landowners are clear to see: The soil is preserved and the leased land returns a nice yield throughout the year without the landowner having to do any work.

**“I make a contribution to the Energiewende every single day.”**

A photovoltaic power plant on a 14-hectare site in Allmendingen in the Alb-Donau district, not far from Ulm, will soon be producing enough electricity to supply around 4,000 four-person households in the region all year round. The solar park will be connected to the grid in the fall – after just four months of installation work and an approval process that lasted 24 months.

Lea Müller-Trauth helped to develop the solar park in Allmendingen as the project manager. After completing her degree in the “Management of renewable energies,” she joined EnBW in 2014 as a product manager, became an advisor for renewable energies in 2016 and then a project manager just two years later. She contacts landowners, concludes contracts and convinces mayors and local councilors about projects in innumerable meetings – and she feels good about her work every single day: “I enjoy the work because I am able to make a contribution to the Energiewende.”

Lea also points out that her work is extremely varied. “I deal with very different types of people. I could be meeting a landowner in their stables in my rain boots or sitting down with an aristocrat in the office.” She explains that people have become more willing to lease their land over the last few years. “There is now a greater understanding that we all have to do something together.”



Achieving sustainability targets through PPAs



**Peter Heydecker**  
Head of Trading  
at EnBW

## "A real blessing for climate protection"

Peter Heydecker, Head of Trading at EnBW, believes that so-called power purchase agreements (PPAs) are likely to become one of the key instruments of the Energiewende. EnBW concluded the first long-term power purchase agreement in Germany in 2019 for a solar park constructed without the aid of subsidies, which also provided the basis for approving the financing of the project. Over a period of 15 years, EnBW will purchase 100% of the green electricity generated there as an intermediary between the operator and electricity users. Heydecker: "PPAs are driving forward the expansion of renewable energies and that makes them a real blessing for climate protection."

[To the article ↗](#)

### Photovoltaics in Germany in 2021



Source: Statista, July 2022



### Profitability of photovoltaic power plants

## "Solar parks remain profitable – despite increasing costs."

Thorsten Jörß, Head of Photovoltaic Project Development at EnBW, believes it is necessary to build more solar parks despite the current crisis situation and increasing costs. "The development process is so sustainable that it compensates for any price fluctuations." The improvements in technology and economies of scale in the production of solar modules have suppressed prices and tripled the kilowatt capacity since 2009 – and this has enabled EnBW to construct three large solar parks without state funding in Brandenburg that can supply enough electricity for more than 140,000 households. Mr. Jörß, what conditions are required to make the construction of a solar park without EEG funding profitable?

[To the article ↗](#)



**Timur Hauck**  
A qualified geocologist at EnBW

#### Solar parks promote biodiversity

**“Nature can be left to develop almost untouched at a solar park.”**

The sites are at least five hectares in size and leased for up to 30 years. They are used to plant strips of wild flowers and create natural spaces that can, for example, serve as breeding grounds for skylarks. “Solar parks are a real boon for nature and aid its recovery,” says Timur Hauck who holds a diploma in geocology. They also provide the ideal conditions for insects, small mammals and reptiles, and some solar parks are even used for grazing sheep. As every site is unique, a customized biodiversity concept is developed for each one by Timur Hauck in cooperation with experts and the authorities. And how does a solar park fit into the landscape, Mr. Hauck?

[To the article ↗](#)

#### Current debate

## How we handle the EU taxonomy

The EU taxonomy is currently the subject of much debate. EnBW evaluated the requirements at an early stage, already voluntarily applied some of the taxonomy rules in the 2020 reporting year and has been fully complying with them since 2021. Dr. Lothar Rieth, Head of Sustainability at EnBW, answers three questions on this subject.

[To the short interview ↗](#)



Interim Group management report

# Business activity and strategy

## Business activity

Our company is transforming itself from an integrated energy supply company into a sustainable and innovative infrastructure partner, also outside of the energy sector. **Sustainability** is an important element of our business model and our strategy – our EnBW Sustainability Agenda will act as a compass to clearly guide our future strategic alignment.

Our diversified and integrated business model gives us a **stable footing along the entire value added chain**. We generated more than 70% of our adjusted EBITDA in 2021 through our regulated grid business and through renewable energies. In a highly volatile market environment, our business model has **proved itself resilient**. It has maintained the stability of the company and demonstrated its robustness since the beginning of the coronavirus pandemic and also against the background of the current war between Russia and Ukraine.

Our roots lie in **Baden-Württemberg**, where we are positioned as a market leader. Alongside EnBW AG, we also rely here on Netze BW and other subsidiaries, who are active throughout the whole of **Germany** and in **selected markets abroad**. We are pushing forward the **expansion of renewable energies** through Valeco, the French project developer and operator of wind farms and solar parks. We are also represented by our subsidiaries Connected Wind Services (CWS) in Denmark and EnBW Sverige in Sweden. In Turkey, we work together in the renewable energies sector with our partner Borusan, and in Great Britain we have had bids, submitted together with our partner bp, accepted for the development of a total of three offshore wind farms with a capacity of 5.9 GW. The companies Energiedienst (ED) in Switzerland and Pražská energetika (PRE) in the Czech Republic, in both of which EnBW has held participating interests for many years, also have a strong focus on renewable energies. We are the market leader in Germany for the operation of **quick-charging infrastructure** with our subsidiary EnBW mobility+ and provide our customers with access to more than 300,000 charging points in numerous European countries via the EnBW mobility+ app. We are also the market leader for quick charging in Germany and are now expanding onto the Austrian market with SMATRICS EnBW. Our subsidiary SENEK, based in Leipzig, offers holistic energy solutions for customers to meet their own energy needs using solar electricity and home storage. We further expanded our portfolio in the **broadband business** across Germany with the telecommunications company Plusnet based in Cologne. Our subsidiary NetCom BW has its main focus in this sector in Baden-Württemberg.

Our business portfolio is split into **three segments** that encompass the **following activities**:

- The **Smart Infrastructure for Customers** segment comprises the sale of electricity and gas, energy industry services and energy solutions, provision and expansion of quick-charging infrastructure and digital solutions for electromobility, broadband activities in the telecommunications business and static storage systems in conjunction with photovoltaics.
- The transmission and distribution of electricity and gas are the main components of the **System Critical Infrastructure segment**. Our activities in this segment are designed to guarantee the security of supply and system stability. The provision of grid-related services and the supply of water are other activities in this segment.
- The **Sustainable Generation Infrastructure** segment encompasses our activities in the areas of renewable energies and conventional generation, district heating and waste management / environmental services. In order to guarantee the security of supply, we maintain the power plants that have been transferred to the grid reserve. In addition, this segment includes the storage of gas and trading of electricity, CO<sub>2</sub> allowances and fuels, as well as the direct distribution of renewable energy power plants.

Detailed information on our business model can be found in the Integrated Annual Report 2021 from [p. 31<sup>7</sup> onwards](#).

There was a reallocation of responsibilities at Board of Management level as of 1 May 2022. In addition to her previous remits, Colette Rückert-Hennen has taken over responsibility for Sales, Marketing and Operations. The Chief Executive Officer, Dr. Frank Mastiaux, will leave the company at the end of his second term at the end of September 2022. His successor Andreas Schell will take over his new responsibilities during the course of the fourth quarter.

#### Allocation of responsibilities at Board of Management level (as of 01/05/2022)

Dr. Frank Mastiaux Chairman	Thomas Kusterer Finance	Colette Rückert-Hennen Sales and Human Resources	Dr. Georg Stamatelopoulos Sustainable Generation Infrastructure	Dirk Güsewell System Critical Infrastructure
<ul style="list-style-type: none"> <li>Corporate development</li> <li>Sustainability</li> <li>Strategy and energy economy</li> <li>Communications / policy</li> <li>IT and Digital Office</li> <li>Corporate security</li> </ul>	<ul style="list-style-type: none"> <li>Accounting and tax</li> <li>Controlling</li> <li>Finance</li> <li>Digital finance and transformation</li> <li>Investor Relations</li> <li>M&amp;A</li> <li>Risk management/ICS</li> <li>Equity investment management</li> <li>Performance in growth</li> <li>Purchasing</li> <li>Risk management for trading</li> </ul>	<ul style="list-style-type: none"> <li>Personnel</li> <li>HR strategy</li> <li>Sales, marketing and operations</li> <li>Transformation (Next Level EnBW)</li> <li>Law</li> <li>Auditing</li> <li>Regulatory management</li> <li>Compliance management and data protection</li> <li>Boards and shareholder relationships</li> <li>Occupational medicine and health management</li> <li>Real estate management</li> </ul>	<ul style="list-style-type: none"> <li>Conventional generation / nuclear</li> <li>Renewable generation</li> <li>Coordination technology</li> <li>Waste management / environmental services</li> <li>Decentralized energy services</li> <li>Occupational safety, environmental protection and crisis management</li> <li>Research and development</li> <li>Trading</li> </ul>	<ul style="list-style-type: none"> <li>DSO<sup>1</sup> electricity / gas</li> <li>TSO<sup>2</sup> electricity / gas</li> <li>Grid technology</li> <li>Telecommunications</li> <li>Gas value chain</li> <li>Innovation management and system critical infrastructure (development projects)</li> </ul>

<sup>1</sup> Distribution system operator.

<sup>2</sup> Transmission system operator.

## Strategy

Under the motto “Making and shaping the infrastructure world of tomorrow,” our **EnBW 2025 strategy** will increasingly place the company’s focus onto the infrastructure aspects of existing business fields. Furthermore, we will use our core expertise to exploit new growth opportunities above and beyond the energy sector. We are transforming ourselves into a **sustainable and innovative infrastructure provider** for our customers and other stakeholders.

Even against the background of the **war between Russia and Ukraine**, we remain committed to our strategic alignment and our climate neutrality targets. With a focus on infrastructure aspects, we fundamentally believe that our strategy has been validated as critical infrastructure has grown significantly in importance. In view of the dynamic market environment, we are nevertheless closely monitoring any impact on our business model and strategy. We established the “Security of Supply/Ukraine” task force immediately after the outbreak of war to continuously monitor developments and introduce appropriate measures across all departments. For example, we are pushing forward the further diversification of our procurement portfolio (p. 15 ff.<sup>7</sup>). Other impacts that the war between Russia and Ukraine has had on our company are presented in detail in the chapters “General conditions” (p. 18 ff.<sup>7</sup>) and “Report on opportunities and risks” (p. 44 ff.<sup>7</sup>).

The central goal of the EnBW 2025 strategy is to **increase adjusted EBITDA** to €3.2 billion. The aim is for all three strategic business fields to make a significant contribution to this increase in earnings.

We are planning **net investment** of around €12 billion in total between 2021 and 2025. In accordance with the EnBW 2025 growth strategy, 80% of our net investment will be accounted for by growth projects. The main focus of this investment will be the expansion of the grids, especially the central SuedLink and ULTRANET projects of our grid subsidiary TransnetBW for the future energy supply in Germany, further development of smart infrastructure for customers, for example, in the areas of broadband, telecommunications and electromobility, and the expansion of renewable energies, such as the planned realization of the EnBW He Dreih offshore wind farm. The total generation capacity of our wind power plants is due to increase to 4.0 GW by 2025 and our portfolio of photovoltaic projects to 1.2 GW.



More detailed information on the **EnBW Sustainability Agenda** can be found on our website.

[Online ↗](#)

Sustainability is closely linked to the core business at EnBW and has thus been consistently taken into account in the development of the company for many years. Our long-term business success is oriented towards achieving economic, ecological and social goals. In 2022, we began the implementation of the **EnBW Sustainability Agenda**. This was developed in a multistage process that incorporated both our stakeholder groups and also our corporate values. The 15 measures and flagship projects developed as part of the EnBW Sustainability Agenda will make an important contribution to the long-term success of our business and anchor sustainability in our activities and solutions. They will thus make a noticeable contribution to value added and help to minimize the risks facing our company. We have classified these measures according to **four strategic themes**:

#### Strategic themes and measures for the EnBW Sustainability Agenda

##### New energy and climate neutrality

- 1 Expansion of renewable energies to 6.5–7.5 GW by 2025 and taking biodiversity criteria into account in major projects
- 2 Using science-based targets to validate the climate neutrality target for 2035
- 3 H<sub>2</sub>-readiness for grid infrastructure

##### Culture of sustainability

- 8 Board of Management and management remuneration with a clear focus on sustainability criteria
- 9 Financing via green bonds and enhancing our leading role in the sector for the EU taxonomy
- 10 Expanding our sustainability audits to include CO<sub>2</sub> evaluations in the investment process
- 11 Expanding our evaluation of risks and opportunities to include climate risks
- 12 Expanding the sustainable HR strategy

##### Infrastructure transition

- 4 Eco-efficient quick-charging parks and climate-neutral corporate mobility
- 5 Wider range of solutions for a sustainable Energiewende and mobility transition
- 6 Environmentally sustainable and socially inclusive residential districts and real estate
- 7 Promoting forms of business, working and mobility that are fit for the future by laying new fiber-optic cables in rural areas

##### Protecting the natural environment

- 13 Anchoring sustainability criteria in purchasing
- 14 Increasing the use of green materials and the efficient use of resources, reducing harmful emissions and water consumption
- 15 Protection of employees and local residents

Further information on **SBTi** can be found here.

[Online ↗](#)

A central focus of the EnBW Sustainability Agenda is the development and implementation of the **climate neutrality target**. We want to reduce our greenhouse gas emissions in the emission categories Scope 1 and 2 to zero by 2035. In the 2021 financial year, we announced our intention to develop science-based targets by joining the **Science Based Targets initiative (SBTi)**. We will thus be able to define our target of climate neutrality with respect to Scope 1 and 2 emissions in more concrete terms and expand it to also include a target for Scope 3 emissions. This will ultimately allow us to examine whether in our decision-making processes our entire value added chain conforms with the goals of the Paris Agreement.

An important milestone in our **climate neutrality strategy** will be halving our CO<sub>2</sub> emissions by 2030, based on the reference year of 2018. To this end, we will reduce our coal-based generation capacity of 4.6 GW (2018) by around 2.5 GW by 2030. In parallel, we are examining the possibility of a fuel switch from coal to more climate-friendly gas, and then in a second stage to climate-neutral gases such as biogas or (green) hydrogen.

A detailed presentation of the EnBW Group strategy can be found in the Integrated Annual Report 2021 from p. 40 onwards<sup>7</sup>.

# In dialog with our stakeholders

## Shares and capital market

The two major shareholders of EnBW AG, the Federal State of Baden-Württemberg (indirectly via NECKARPRI-Beteiligungsgesellschaft mbH) and OEW Energie-Beteiligungs GmbH, each hold 46.75% of the share capital in the company.

The overall shareholder structure as of 30 June 2022 breaks down as follows:

### Shareholders of EnBW

#### Shares in %<sup>1</sup>

OEW Energie-Beteiligungs GmbH	46.75
NECKARPRI-Beteiligungsgesellschaft mbH	46.75
Badische Energieaktionärs-Vereinigung	2.45
Gemeindeelektrizitätsverband Schwarzwald-Donau	0.97
Neckar-Energieverband (NEV)	0.63
EnBW Energie Baden-Württemberg AG	2.08
Other shareholders	0.39

<sup>1</sup> The figures do not add up to 100% due to rounding differences.

The shareholder structure of EnBW AG remains very stable. There are very limited trading volumes in the shares as a result. According to Xetra, the stock market price stood at €90.00 on 30 June 2022.

We engage in continuous and open dialog with capital market participants in order to ensure that investors, analysts and rating agencies maintain their trust in the company.

As a result of the ongoing coronavirus pandemic, the Board of Management and Supervisory Board decided, using section 1 (1), (2) and (6) of the German law on Covid-19 measures as a basis, to also hold the ordinary Annual General Meeting 2022 in virtual form. The virtual Annual General Meeting was held on 5 May 2022.

The annual Investor Update in April 2022 was also held in virtual form. In the course of this non-deal road show, we held discussions with around 30 investors from Germany, France, Great Britain and the Netherlands.

The virtual Group Bankers' Day was held at the end of June 2022 and was attended by around 60 participants from 30 different institutions. The agenda included three highly informative specialist presentations by Thomas Kusterer, Chief Financial Officer, Dr. Georg Stamatelopoulos, Chief Operating Officer Sustainable Generation Infrastructure, and Dirk Güsewell, Chief Operating Officer System Critical Infrastructure. Each presentation was followed by a Q&A session that was used by many of those attending. In addition, the participants had the opportunity to share information and join the discussions at various networking tables.

To accompany the publication of the Six-Monthly Financial Report on 12 August 2022, the Chief Financial Officer presented the figures to investors and analysts and answered their questions during a telephone conference.

## Society

We are committed to addressing the concerns and interests of society, with a focus on the target groups of end customers, business partners and local authorities. Support for superordinate social issues is concentrated on the **core areas** of popular sport, education, social issues, the environment, and art and culture.

Following the outbreak of the war in Ukraine, the main focus of our social engagement in the first half of 2022 was supporting relief efforts for the people in Ukraine and also for those refugees arriving in Germany. Immediately after the beginning of the war, we made a financial donation of €100,000 to "Aktion Deutschland Hilft" (Germany's Relief Coalition). The EnBW Food Truck provided food for refugees arriving in Berlin. Furthermore, we launched our own initiative called "**EnBW helps**" and employees have so far donated more than €120,000, which will help to fund, in particular, projects run by regional aid organizations. Numerous employees also coordinate their own volunteer initiatives on the EnBW Intranet. The company supports them as much as possible – for example, by allowing them to take up to five days of additional holidays for their volunteer work.

In addition, we are continuing our **coronavirus aid measures**. We have donated food worth a total of €60,000 to the food banks in Baden-Württemberg as they are receiving fewer and fewer donations due to the pandemic. At the same time, a growing number of people are visiting the food banks due to the rising cost of food, while the food banks themselves are suffering as a result of inflation. EnBW has also donated protective suits from its surplus stocks to the Zoological City Garden Karlsruhe and the Zoological Garden Halle.

The **EnBW "Making it happen" bus** is going on tour again in 2022. Up to ten employees from the bus help out at the respective facilities for one day and each winning project is also awarded up to €5,000 for the required materials. The EnBW Jury Prize was awarded this year to the Historic Hanging Gardens Foundation. In cooperation with the foundation, EnBW employees have built a roofed bakehouse and have worked to make the outdoor areas attractive and inviting. Four of the five winning projects had already been realized by the summer break.

We continue to support our employees as part of the "**Let's Volunteer**" initiative by selecting two employees who volunteer in their free time in a draw every month and donating €1,000 each to their charitable organizations.















In the area of **art and culture**, we are sponsoring the "Crochet Coral Reef" exhibition by the Wertheim sisters. The exhibition is an artistic response to the destruction of the Great Barrier Reef on the northeast coast of Australia. It involves crocheted sculptures depicting coral forests, anemones and reef landscapes. Over 4,000 people helped to crochet the more than 40,000 corals – a collaborative effort that delivers a strong statement for environmental and climate protection from all the individuals involved. The "Baden-Baden Satellite Reef" that was created as part of the campaign will also be exhibited at the EnBW sites in Stuttgart and Karlsruhe.

We have been offering a multistage **career integration program** to refugees and migrants since 2016, in which 50 people are currently serving a technical apprenticeship. A total of 24 participants have now successfully completed their training as either an industrial mechanic, electronics technician, plant mechanic or mechatronics engineer and 22 of them have been awarded a permanent contract. Against the backdrop of the war being waged against Ukraine by Russia, the program is of course also open to refugees from Ukraine. As part of our social engagement activities, we will continue the career integration program over the next few years and also continue to use it as an additional tool for recruiting young talent.

More information on the **EnBW "Making it happen" bus** can be found here.

[Online ↗](#)

## Selected activities in dialog with our stakeholders

Stakeholder	Opportunity for dialog	Main themes	Further information
 <b>Shareholders/ capital market</b>	Telephone conference with investors and analysts	Quarterly presentation and Q&A session on the development of the company	<a href="http://www.enbw.com/telefonkonferenz">www.enbw.com/telefonkonferenz</a>
	Annual General Meeting	Dialog with shareholders	<a href="http://hv.enbw.com">http://hv.enbw.com</a>
	Group Bankers' Day	Information on the business strategy and market environment	
	Investor update and road show	Meetings on corporate strategy and development	<a href="http://www.enbw.com/investoren-update">www.enbw.com/investoren-update</a>
 <b>Society</b>	Relief efforts for Ukraine	Emergency aid, EnBW helps! fundraising campaign, donations of goods and medicines, EnBW Food Truck, places to stay for refugees	<a href="#">page 10</a> <sup>↗</sup>
	Participation in "The new Stöckach"	Continued dialog with citizens in formats such as themed talks, dialog workshops and cooperation with the University of Stuttgart	<a href="#">page 37</a> <sup>↗</sup> <a href="http://www.der-neue-stoeckach.de">www.der-neue-stoeckach.de</a>
	Dialog with citizens	Events to inform and enable the participation of citizens in fuel switch projects, expansion projects for wind/PV and the dismantling of nuclear power plants	<a href="http://www.enbw.com/buergerbeteiligung">www.enbw.com/buergerbeteiligung</a>
	Engagement in Junge Stiftung	Networking meetings, Energy Campus idea competition, energy reporters	<a href="http://www.energie-klimaschutz.de/junge-stiftung">www.energie-klimaschutz.de/junge-stiftung</a>
	EnBW start-up grants and Innovation Challenge	Supporting entrepreneurs and young start-ups in the further development of business models	<a href="http://www.enpulse.io">www.enpulse.io</a>
 <b>Local authorities/ public utilities</b>	German Innovation Prize	Awards for outstanding, future-oriented innovations, EnBW as a patron for start-ups	<a href="http://www.enbw.com/deutscher-innovationspreis">www.enbw.com/deutscher-innovationspreis</a>
	Engagement in art and culture	Exhibition "Crochet for the World's Oceans" from the Museum Frieder Burda and four installations from ZKM on show at EnBW	<a href="http://www.enbw.com/kunst">www.enbw.com/kunst</a>
	Tours and information events	In-person or virtual power plant tours with dialog on current energy themes	<a href="http://www.enbw.com/besichtigungen">www.enbw.com/besichtigungen</a>
	Local authority events	Local authority knowledge week, advice forums, regional and general advisory board meetings, two events on the theme of gas shortages	<a href="http://www.enbw.com/kommunen">www.enbw.com/kommunen</a> <a href="http://www.netze-bw.de/kommunalplattform">www.netze-bw.de/kommunalplattform</a> <a href="http://www.enbw.com/wissenscampus">www.enbw.com/wissenscampus</a>
	Energy Team Baden-Württemberg	Open communication and cooperation platform for supply companies in a competitive environment	<a href="http://www.energie-team.org">www.energie-team.org</a>
 <b>Customers</b>	Dialog and discussion with customers, networking events	Test customer panel, Energy Efficiency Network, SENEK with a new sustainable trade fair booth construction concept at Intersolar and the international Handwerksmesse	<a href="http://www.enbw.com/netzwerke">www.enbw.com/netzwerke</a>
	Customer blog, social media channels, newsletters, campaigns, podcasts and explanatory videos	Latest information on products, offers, services and the corporate culture	<a href="http://www.enbw.com/blog">www.enbw.com/blog</a>   <a href="http://www.enbw.com/hypernetz">www.enbw.com/hypernetz</a> <a href="http://www.yello.de">www.yello.de</a>    
 <b>Suppliers/ business partners</b>	Dialog on managing coal and gas procurement responsibly	In-depth discussions with coal producers through virtual dialog, dialog within the Bettercoal initiative	<a href="#">page 16 f.</a> <sup>↗</sup> <a href="http://www.enbw.com/kohlebeschaffung">www.enbw.com/kohlebeschaffung</a> <a href="http://www.bettercoal.org">www.bettercoal.org</a>
	Discussions and cooperation with suppliers	Central access to selected information and self-service access via the supplier portal	<a href="http://www.enbw.com/enbw-lieferantenportal">www.enbw.com/enbw-lieferantenportal</a>
 <b>Employees and applicants</b>	Employee communication and services	EnBW now, "EnBW News" app, social intranet, Yammer, BestWork, artificial intelligence theme week, "BikeCampaignWeek"	<a href="#">page 40 f.</a> <sup>↗</sup>
	Diversity campaigns	Girls' Day, EnBW Pride Months with lots of campaigns and participation in Christopher Street Day in Karlsruhe, Cologne and Stuttgart	
	Social engagement of employees	Support for "Let's Volunteer" initiative and the EnBW "Making it happen" bus	<a href="#">page 10</a> <sup>↗</sup> <a href="http://www.enbw.com/macherbus">www.enbw.com/macherbus</a>
	Opportunity for dialog with potential employees	Employer campaign "We are the E," company contact trade fairs, target group-specific recruitment campaigns, etc.	<a href="http://www.enbw.com/karriere">www.enbw.com/karriere</a> Instagram channel "EnBW Careers"  Instagram channel "Yello" 
 <b>Politics/ media</b>	Discussion events held by the Energy & Climate Protection Foundation	Debate evenings on energy and climate themes accompanied by podcast episodes and guest contributions on the online platform	<a href="http://www.energie-klimaschutz.de">www.energie-klimaschutz.de</a>
	Events and opportunities for dialog	Events held by the EnBW Energy and Business Club (EWC), discussion format and exchange of ideas with politicians from the German Bundestag, state parliament and EU, local authority forum	
	Active and transparent communication via the media	EnBW Newsroom, articles in daily newspapers and magazines and via social media channels, press conference for the annual results	<a href="http://www.enbw.com/newsroom">www.enbw.com/newsroom</a>  
 <b>Environmental associations, civil society organiza- tions</b>	Biodiversity: Funding program "Stimuli for Diversity"	Application phase completed for funding projects 2022 for the protection of amphibians and reptiles	<a href="http://www.enbw.com/biodiversitaet">www.enbw.com/biodiversitaet</a>
	EnBW sustainability dialog	Event with a top-class podium of experts with the motto "Acting together. Safely and sustainability"	<a href="http://www.enbw.com/nachhaltigkeit">www.enbw.com/nachhaltigkeit</a>
	Climate dialog	Event held twice a year both at a federal and state level to discuss climate protection and the Energiewende with environmental associations, unions, etc.	

# Research, development and innovation

## Research and development

The goal of our **research and development** is to identify technological trends at an early stage, assess their economic potential and build up expertise together with the business units. For this purpose, we carry out joint pilot and demonstration projects with partners or customers directly at the site of their subsequent application. This ensures that successful research projects deliver innovations for our company.

**There are high logistical costs associated with the servicing and maintenance of offshore wind turbines.** Since April 2022, we have been researching how transport drones can reduce the number of helicopter and ship deployments in conjunction with the German Aerospace Center (DLR). This three-year project is being funded by the Federal Ministry for Economic Affairs and Climate Action (BMWK). A comprehensive practical test has already been planned in the form of an Offshore Drone Challenge.

In various research projects, we are also investigating how we can provide our customers with carbon-neutral gaseous energy sources in the future. In Wyhlen, in the Upper Rhine region, we are planning to construct a 6 MW **electrolysis plant** that will be operated using electricity from hydropower. This project, which is headed by our subsidiary Energiedienst, is being funded by BMWK as a living lab. The first round of auctions for the electrolyzer ended in the first half of 2022. In the **H<sub>2</sub>ORIZON** project, our subsidiary ZEAG is generating hydrogen from wind power for various applications including, for example, the DLR rocket test stand in Lampoldshausen. This plant, which is being funded by the Federal State of Baden-Württemberg, was placed into regular operation in the second quarter of 2022.

In 2017, EnBW founded its subsidiary EnPV to commercialize the research results from a joint project with the University of Stuttgart. The aim of the project is to design the next generation of **high-performance non-toxic silicon solar cells** that can produce more electricity from sunlight, but can also be manufactured at the same cost as current mass-produced cells. In the first half of the year, sample cells were manufactured on an industrial machine by a research partner. Discussions have started with another partner within the photovoltaic industry for the production of the cells in Europe. A European partner was chosen due to their independence and stable supply chains.

In the **"Smart Home Charging" grid laboratory** operated by Netze BW, a scalable charging management system for private charging points that should help to relieve the burden on the grid is being developed in several stages at five different sites. The charging processes are managed using a smart metering system in combination with a control box and it is hoped that this system will become standard technology in future: In field tests, it was possible to reduce peak loads caused by charging electric vehicles by 30% to 48% with this technology, without inhibiting how customers normally use their electric cars. Following the completion of tests at the sites in Künzelsau and Wangen in July 2022, all tests for the "Smart Home Charging" grid laboratory have now been successfully completed.

Our site at the Port of Karlsruhe was connected to the public transport system with its own electric bus in 2021. The bus uses a new **wireless charging system**, which means it can charge both during the journey and when parked: Inductive coils are embedded in the road surface and transfer electrical energy to the drive battery in the bus when a receiver coil in the bus passes over the coils in the road. The system has been in operation since August 2021 and we were able to keep on improving the infrastructure in the road and bus until the summer of 2022. We aim to utilize the experience gained in this project for another research project in the Zollernalb district in the summer of 2023 – with a significantly longer charging route. Work on this new project, which is being funded by the Federal State of Baden-Württemberg, began in the summer.

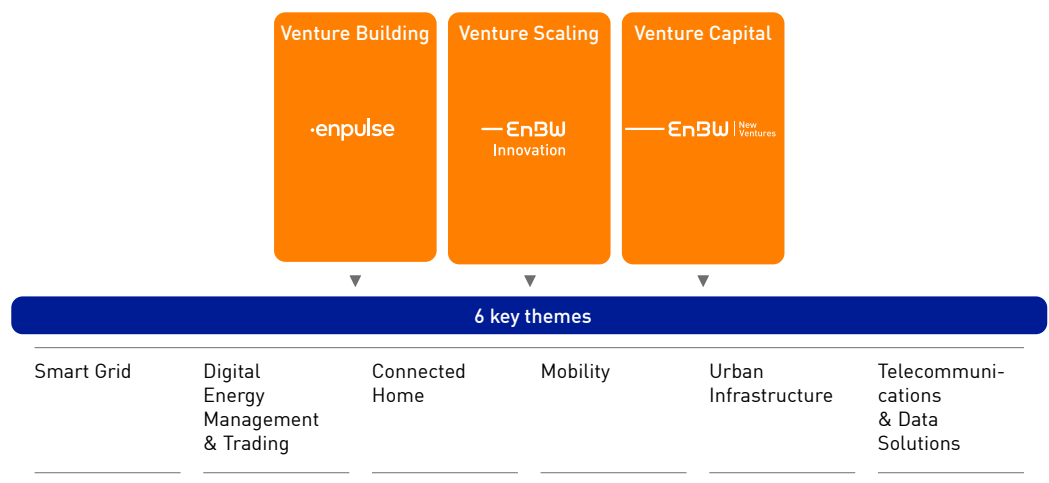
The lithium required for batteries in electric vehicles can also be sourced in Germany by extracting it from thermal water. In cooperation with a French partner, we were able to extract **lithium from thermal water** at our geothermal plant in Bruchsal in June 2022. We are now planning to carry out tests to identify the best chemical process for the selective extraction of lithium at our own pilot plant that was constructed in the first half of the year with funding from BMWK at the power plant in Bruchsal.



## Innovation

One fundamental aim of our business activities since 2014 has been to develop innovations that push forward the Energiewende. In the first half of 2022, we developed a new innovation strategy to promote innovative ideas in a more targeted manner in cooperation with committed company founders, investors and employees. At the same time, we aim to tap into new business fields for EnBW. We are focusing, on the one hand, on strengthening entrepreneurial independence and spinning off business models as start-ups as early as possible. New business models are thus no longer developed as previously within the Group but primarily outside of it. This allows innovations to emerge more quickly and then develop in the best way possible. On the other hand, we also focus on start-ups outside of the EnBW Group in order to push forward existing innovations and establish a strong network of partners. Overall, we are concentrating our activities on **six key themes**: Smart Grid, Digital Energy Management & Trading, Connected Home, Mobility, Urban Infrastructure and Telecommunications & Data Solutions.

### Three pillars of the innovation strategy



### The new innovation strategy is based on three central pillars:

Further information on **EnPulse** can be found here.

[Online ↗](#)

**Venture building: EnPulse** was founded by EnBW as an independent company in May 2022 and will take over all of the early phase activities from EnBW Innovation in future. It develops new business models within the six key themes. It will have a broad range of tasks, from analyzing trends and developing and testing initial business ideas through to the foundation of start-ups. EnPulse will also be responsible for awarding grants to start-ups. These grants are aimed at young people with entrepreneurial ambitions and will support them in the further development of their business model for between six and twelve months by providing both expertise and up to €120,000 in start-up capital. EnPulse also continues to hold the Innovation Challenge – an idea competition for university graduates, which takes place twice a year.

**Venture scaling: EnBW Innovation** supports young companies that have successfully entered the market so that they can continue to grow. It assists these companies with financing and also helps them to develop their growth strategy by acting as a strategic sparring partner, while its specialist trainers use their experience to provide them with inspiration in their marketing, sales, operations and organizational development. The aim is to support start-ups as they scale up their business model and open up new segments, countries and fields of application. As of 30 June 2022, the EnBW Innovation portfolio is valued at more than €70 million.

In the first half of 2022, EnBW Innovation **successfully spun off EnBW Cyber Security, SMIGHT and ChargeHere** as independent companies as part of its venture scaling activities. We have responded to the growing demand for security solutions for IT (information technology) and OT (operative technology) by founding the company EnBW Cyber Security GmbH. The company, based in Karlsruhe, helps companies and authorities to find and implement the right security strategy. The start-up SMIGHT was spun off in June 2022. Using its own patented sensor technology, it has been collecting real-time data from local grids for around two years, and thus contributing to the efficient operation

of the grids. SMIGHT has already become a leading provider of IoT (Internet of Things) grid solutions and has around 35,000 installed measurement points. The start-up ChargeHere, which was also founded as a spin-off in June 2022, offers charging solutions for the electrification of company fleets. Companies can use ChargeSolar to optimize consumption of their own solar electricity and to charge their e-cars.

The **investment team at ENV** has received **multiple awards** from Global Corporate Venturing.

[Online ↗](#)

Link to the **second award**.

[Online ↗](#)

**Venture capital:** Alongside the strategic investments made as part of venture building and venture scaling activities, **EnBW New Ventures (ENV)** is responsible for financing external start-ups. It supports entrepreneurs as they develop sustainable solutions for smart infrastructure and has an investment volume of €100 million. ENV also offers these start-ups access to professional investor expertise and a network of customers and suppliers in the energy and infrastructure sectors. ENV is aiming to secure minority shareholdings in up to 20 start-ups, with an investment period of four to eight years in each case. It has so far invested in a total of 15 start-ups and realized two successful exits, while EnBW has also acquired a majority stake in one of the companies. Its evergreen business model means that any proceeds from the sale of shares in start-ups can be reinvested in new companies.

ENV has announced **three new investments** so far this year. These include the start-up **Easelink**, which aims to simplify the charging of e-vehicles and automate conductive charging. In addition, ENV has invested in **Intigrity**. This start-up has developed a global cybersecurity platform that companies can use to provide bug bounties (competitions to identify programming bugs). Bug bounties offer an incentive to a community of more than 50,000 hackers to uncover any vulnerabilities and find bugs. Another investment made in the first half of 2022 was in **CYCLE**. This company provides delivery companies with electric bikes via an all-inclusive care-free subscription service.

# Procurement

## Efficient and sustainable procurement processes

The purchasing department at EnBW views itself as a **partner for the success of the company**. It optimizes the cooperation between business, suppliers and the market from a commercial viewpoint while maintaining high quality standards. Digitalization also helps to make procurement processes more efficient. Central purchasing strives to achieve sustainable procurement, taking into account the requirements of national laws, EU law and the Group's internal guidelines. As a result, it makes an important contribution to the competitiveness of the company and to minimizing risks.

The first half of 2022 was characterized by **supply bottlenecks** and a **high level of uncertainty** on the market. This was mainly because of the war between Russia and Ukraine. However, prices were already at a high level before the start of the war due to the ongoing coronavirus pandemic and the resulting interruptions to supply chains, as well as the sharp increase in demand in the area of sustainable generation infrastructure. The delivery times for some products have also been significantly longer than normal. In response to these challenges, we had already examined the entire procurement portfolio at the beginning of 2022 for risk exposure due to price increases and supply disruptions, even before the outbreak of the war.

Since the beginning of the **war between Russia and Ukraine**, higher energy and logistics costs have resulted in price increases in all areas. Russia was also an important trading partner for the energy industry for certain raw materials and (intermediate) products. The sanctions against Russia have led to further shortages in supply and thus higher prices. The raw materials affected that are most important to our business are steel, aluminum, nickel, titanium, copper and products derived from gas such as ammonia. However, the supply chain has been able to reposition itself in some areas already; for example, the price of steel recently fell again to a level similar to that before the war. The procurement of electricity cables remains a challenge and is associated with significantly higher costs.

Our first response to the war was to take a fresh look at the regional distribution of our supply chains. All of the sanctions against Russia have been, and will be, implemented swiftly. In order to reduce our risk exposure, we entered into dialog with our suppliers at an early stage to find alternative sources for important raw materials and in particular, we carried out an analysis of the global steel market. We are also identifying new suppliers in order to expand our portfolio. In order to actively minimize risks, we have expanded our reporting to cover risks in the supply chain and their possible impact on our business. This will be used as the basis for selecting suitable measures to reduce risks in cooperation with those responsible for the business areas.

Having a large number of suppliers and service providers plays an important role in our efforts to achieve a leading position on the energy market and to avoid dependencies on individual suppliers. **Supplier management** promotes successful cooperation with our suppliers because it makes the performance of suppliers transparent and also makes continuous optimization in partnership possible. The careful selection of our business partners is embedded in our risk management system and supports the observance of legal regulations and internally defined quality standards. Especially with regard to the selective internationalization of the business, central purchasing at EnBW AG is also developing an integrated **supply chain management system** in close cooperation with the business and functional units.

Sustainable procurement begins with the careful selection of business partners. Central purchasing at EnBW AG uses a standardized **prequalification process** for this purpose. Suppliers are required to provide a self-assessment via a supplier portal on whether they have sustainable measures in place in the areas of environmental management, occupational health and safety, the respect for human rights, the fight against corruption, data protection and quality management. This self-assessment was completed by almost 90% of our suppliers by the middle of 2022 (measured by procurement volume). During the course of the year, this self-assessment will be expanded to include questions on the impact of the war between Russia and Ukraine and acceptance of the **Supplier Code of Conduct (SCoC)** (p. 16<sup>7</sup>).

The **Supplier Code of Conduct** forms the basis for our cooperation with our suppliers. The PDF is available to download here.

[Online ↗](#)

Respecting human rights and protecting the environment are key pillars of our corporate culture. In cooperation with our business partners, we aim to improve the situation with respect to sustainability and transparency across the entire supply chain. We are thus planning to make our procurement process even more sustainable in the future – giving consideration especially to social and ecological aspects. This is also reflected in our EnBW Sustainability Agenda (p. 8<sup>7</sup>), in which **anchoring sustainability criteria in the purchasing process** is defined as one of the key measures within the strategic theme of “Protecting the natural environment.” As part of a sustainable procurement project, a **Supplier Code of Conduct (SCoC)** was developed in 2020. It was introduced in 2021 as a shared set of values and an important criterion for the selection and development of our suppliers. In addition, we analyze and evaluate sustainability risks and potential opportunities for improving our sustainability both on the procurement markets and in relation to our suppliers. Where necessary, we agree measures to improve sustainability with our suppliers and evaluate their effectiveness together, which enables us to identify and reduce social and ecological risks. As a result, we already comply with requirements of the German Supply Chain Due Diligence Act that comes into force on 1 January 2023. We will also use the carbon footprint and other sustainability criteria as measurable decision-making criteria for the award of all relevant contracts. Our SCoC obligates suppliers to formulate and document well-defined CO<sub>2</sub> reduction targets covering both direct and indirect emissions.

Various automation and digitalization initiatives have been introduced in central purchasing at EnBW AG with the aim of simplifying our processes even further and, in particular, ensuring that any recurring procurement activities are carried out with the minimal amount of effort. As part of a Group-wide transformation project, a **new purchasing system called Ivalua** was successfully introduced in December 2021 and makes the cooperation between suppliers, specialist departments and central purchasing considerably easier. In addition, prequalification and supplier evaluation procedures, the ordering process and self-service applications have been greatly simplified and made much more intuitive.

## Responsible raw materials procurement in the coal sector

Responsible raw materials procurement, especially in the coal sector, is extremely important to EnBW. We had already begun to further diversify our procurement portfolio at the end of 2021 in order to reduce our dependence on deliveries of Russian coal. This will make an important contribution to ensuring that there will be no supply shortages in winter 2022/2023 despite the EU's ban on importing Russian coal. The logistics chain from the seaports to the power plants poses a potential major bottleneck in providing the power plants with a constant supply of coal because the significantly lower volumes of coal delivered in the last few years have led to a reduction in handling, storage and transport capacities.

Until the sanctions come into force in August 2022, only the outstanding deliveries from old contracts with Russian coal producers will be delivered to EnBW. In 2022, we **did not conclude any new contracts with Russian coal producers**.

### Origin of coal supplies to EnBW power plants

in million t	01/01– 30/06/2022	01/01– 30/06/2021	Change in %
Russia	1.54	1.57	-1.9
Colombia	0.47	0.01	–
USA	0.17	0.18	-5.6
Others	0.06	0.00	–
<b>Total</b>	<b>2.24</b>	<b>1.76</b>	<b>27.3</b>

Further information on our **coal procurement** can be found on our website.

[Online ↗](#)

Russian coal will thus be replaced mainly by coal from Colombia and the USA. Around two thirds of the contractually agreed deliveries of coal will be sourced from Colombia and one third from the USA. In order to further diversify our procurement portfolio, we are currently examining other procurement options, especially in South Africa.

The reason for the significant **increase in deliveries** was higher coal-fired electricity generation and restocking of the coal inventories in the second quarter of 2022.

The **EnBW rules of conduct** can be downloaded in PDF format here.

[Online ↗](#)

Further information on the international business initiative **Bettercoal** can be found here.

[Online ↗](#)

The sustainability performance of our current and potential coal suppliers is examined and evaluated using the **EnBW rules of conduct** that govern the responsible procurement of hard coal and other raw materials. We determine any future action based on the supplier evaluations. Furthermore, we pay close attention to the latest studies carried out by competitors and international initiatives, as well as specific information and contributions from civil society organizations. We will continue to maintain our high standards, especially as we implement our current diversification measures.

We have been a member of the corporate initiative **Bettercoal** since July 2020. The independent audits carried out by Bettercoal also flow into our process for auditing business partners. We are primarily active within Bettercoal in the Colombian working group because this is where the main coal deliveries will be sourced in the second half of 2022. The Russian working group was disbanded immediately after the start of the war between Russia and Ukraine. We also use Bettercoal as a platform for exchanging information with our producers and with other stakeholders from civil society, as well as with experts on individual countries and human rights. As part of this business initiative, further dialog is planned with relevant stakeholders in Colombia and also with other strategically important procurement countries in the second half of 2022.

Our rules of conduct in combination with internal implementation guidelines form the foundations for our business activities. In the sustainability clause that is part of all of our direct contracts with coal producers, we obligate our business partners to observe these rules of conduct. When new contracts are due to be concluded, the results of the analyses in the sustainability index are regularly presented to an internal **committee for the responsible procurement of hard coal and other raw materials (AVB)** with participation from all relevant specialist areas (especially credit risk trading, compliance, environment and sustainability). If any deviations from the minimum standards are identified for existing supply contracts, corrective measures are initially developed in cooperation with the producers and their implementation is monitored.

In the first half of 2022, we carried out a new sustainability assessment of all current and potential coal producers from the USA and Colombia. We have also assessed different coal producers from other countries, such as South Africa.

## Responsible raw materials procurement in the gas sector

In the first half of 2022, EnBW mainly sourced its natural gas via supply contracts with companies in Norway and Russia as well as via the European wholesale market. We have two gas supply contracts via VNG Handel & Vertrieb GmbH (VNG H&V) that are affected by the restrictions in supply from Russia. For one of the two contracts, the suppliers and VNG H&V hold differing opinions about supply obligations against the background of Russian countersanctions. The second supply contract expires at the end of 2022. Independently of the current situation, we have been strengthening our efforts to **diversify our sources of gas to a much greater extent**. To diversify our sources of gas in the long term, we concluded two long-term purchase agreements for liquefied natural gas (LNG) with Venture Global LNG in June. We have agreed the delivery of a total of 1.5 million tonnes per annum (MTPA) from 2026 onwards, half of which will be sourced from the Plaquemines export facility and half from the Calcasieu Pass 2 export facility of Venture Global LNG. We terminated a contract with the Russian supplier Novatek prematurely in April 2022 by mutual agreement.

In order to achieve our target of climate neutrality by 2035, we are working intensively on switching over our power plants initially from coal to more climate-friendly natural gas (fuel switch) and then to climate-neutral gas such as biogas or (green) hydrogen in the long term. Natural gas plays an important role as a **transition technology** – either in the form of liquefied natural gas (LNG) or grid-based natural gas. Against this background, we have transferred our due diligence measures for the responsible procurement of coal over to the procurement of natural gas. The main focus will be a comprehensive audit of all the direct LNG suppliers before they are approved as a business partner for EnBW. In addition, AVB is being expanded to include relevant specialist areas within the company that deal with gas procurement.



# General conditions

## Macroeconomic trends

### Economies

The global economic recovery in 2021 has slowed considerably since the turn of the year. Alongside the war in Ukraine, the main reason for this development was the strict zero-Covid policy in China, which has exacerbated global supply shortages. Rising inflation has also dampened private consumption. Furthermore, macroeconomic production has been weakened by the ongoing pandemic to varying extents depending on the region.

The effects of the pandemic thus continue to cause uncertainty with respect to economic projections. This is also true of the still unpredictable developments in the war in Ukraine. The Kiel Institute for the World Economy (IfW Kiel) anticipates an increase in global production of 3.0% for the whole of 2022, although this is predicated on a slight decrease in prices for raw materials.

### Development of interest rates

Rising fears of inflation already led to higher interest rates at the beginning of 2022. Supply chains were continuing to stabilize and national economies started to open up again after the lockdowns due to the coronavirus pandemic, which gave reason for a positive outlook. However, the situation changed fundamentally following the start of the war between Russia and Ukraine. Inflation in Germany rose to over 8% as a result of increasing energy prices and the central banks were compelled to tighten their loose monetary policies. The result was an almost historic rise in interest rates. The interest rate on German ten-year government bonds rose sharply from March to the middle of June from just below 0% to around 1.8%, while the interest rate on United States ten-year government bonds doubled in the same period from 1.7% to 3.4%. The increase in the key interest rates also led to an increase in short-term interest rates. Fears of a recession emerged at the end of the second quarter after the US Federal Reserve changed its primary goal from supporting the economy to fighting inflation. This led to a fall in interest rates whereby, for example, the interest rate on German ten-year government bonds fell to around 1.3% by the end of June 2022 and then below 1% by the beginning of August. On the one hand, this trend in interest rates has a positive effect on the valuation of our long-term provisions, while on the other hand, it increases the financing costs for future capital market transactions.

## Cross-segment framework conditions

### Coronavirus pandemic

Case numbers rose to new record levels at the beginning of the year driven by the Omicron wave. In Germany, the seven-day incidence reached over 1,900 cases per 100,000 residents at the end of March. The figure fell to below 250 at the beginning of June due to, among other things, seasonal effects but then rose again to over 700 in July as a result of what is being described in the media as the "Covid summer wave." The impact on the energy sector has remained manageable. Total electricity consumption in the first quarter of 2022 was at about the same level as in the previous year.

### War between Russia and Ukraine

Russian troops invaded Ukraine on 24 February 2022. The war in Ukraine has since raged with increasing intensity and destruction. NATO and EU states have imposed a comprehensive range of sanctions on Russia. One of the sanctions agreed as a compromise between the EU states and their leaders was an oil embargo against Russia. At a summit on Ukraine held in Brussels on 30 May 2022, the EU agreed to ban more than two-thirds of Russian oil imports into the EU by the end of the year.

There were also significant declines in the supply of gas from Russia. The Nord Stream 1 pipeline was only operating at 40% of its normal capacity from the middle of June 2022. The Federal Ministry for Economic Affairs and Climate Action (BMWK) subsequently announced that it was moving to

the alert level of the Emergency Plan for Gas. Both the early warning level that was announced at the end of March 2022. The new alert level does not foresee any state interventions in the gas market as yet. However, the German government is introducing a series of measures to guarantee the security of supply. These include the provision of a credit line of €15 billion for Trading Hub Europe – which is responsible for the German market area – to ensure that the gas storage facilities are filled. Another step is to reduce the consumption of gas in Germany. Gas is currently available on the market and the gas storage facilities are being filled.

Following annual maintenance work in July, gas supplies via Nord Stream 1 resumed again on 21 July. However, the amount of gas flowing through the pipeline was cut to 20% of capacity after just a few days. To ensure that the storage facilities are filled, a ministerial ordinance has been issued to increase the legally prescribed fill levels. The storage facilities must now be 75% full by 1 September 2022. The minimum fill level was also increased to 85% by 1 October and 95% by 1 November. If Russia further limits its supply of gas, the German government believes that it will be almost impossible to achieve the legally prescribed fill level of 95% by 1 November 2022 without additional measures.

The Energy Security Act allows energy supply companies to pass on high purchase prices for natural gas to their customers during the alert level by raising consumer prices to an appropriate level. This mechanism has not yet been implemented by the German government. The Federal Network Agency must first determine that the total gas imports into Germany have reduced significantly. A corresponding announcement in the German Federal Gazette will also be required. Instead, the German government has decided to pass on the costs using a new gas levy. The planned levy on all gas customers is set to come into force from 1 October and the precise size is due to be announced on the Internet on 15 August. In view of the gas shortage, it is even more important to save energy. To this end, Federal Minister for Economic Affairs Robert Habeck launched an energy saving campaign at the Energy Efficiency Summit in Berlin.

### Climate protection

Due to the looming threat of a gas shortage, the German government announced that it will activate additional coal-fired power plants for the generation of electricity. The Act on Maintaining the Readiness of Substitute Power Plants for Reducing Gas Consumption in the Electricity Sector has been passed for this purpose and aims above all to replace gas power plants with the available capacities in the coal-fired power plants. It focuses on the deployment of coal-fired power plants that are currently available only to a limited extent, are due to be decommissioned in the near future or are deployed in the grid reserve.

Despite the fact that these coal-fired power plants will now be relied on to an increasing extent, there has still been significant progress made in legislating for more climate protection. The Federal Cabinet passed a series of draft laws as part of its so-called Easter Package on 6 April 2022. This package will amend a total of 28 laws and ordinances. One component of the Easter Package is the “EEG Article Act” – a law to introduce immediate measures to accelerate the expansion of renewable energies and other measures in the electricity sector. This law contains new regulations including the Renewable Energy Act 2023 (EEG 2023), the Heat and Power Co-Generation Act 2023 (KWKG 2023) and the Energy Levies Act (EnUG). Another main component of the Easter package is the “EnWG/BBPlG Article Act” that will amend energy industry law with respect to the Climate Protection Action Program and modify regulations governing end customer deliveries. This comprises, among other things, amendments to the German Energy Industry Act (EnWG), the Federal Requirement Plan Act (BBPlG), the Grid Expansion Acceleration Act for the Transmission Grid (NABEG) and the Act against Restraints of Competition (GWB). Another component of the Easter Package that should be mentioned is the reform of the Offshore Wind Energy Act (WindSeeG). This increases the expansion targets for the uptake of offshore wind energy, adds additional auctions for sites that have not been pre-developed and introduces a transition to Contracts for Difference (CfD), which means bidders must submit their bids for a fixed price. Depending on the market price for electricity, the bidder will either receive the difference to the fixed price in the bid as a subsidy or must pay the difference to the fixed price using retained profits.

According to BMWK, the coalition government plans to introduce several other amendments. It will support these with formulation aids for, e.g., on the “reform of the GEG” (German Buildings Energy Act) and for a draft Onshore Wind Energy Act including a “Wind Farm Site Requirements Act.”

In addition, BMWK is also working on the so-called Summer Package that was originally supposed to focus on the following areas: further amendments to EEG 2023, follow-up amendments for a solar acceleration package, quicker planning and approval processes for onshore wind energy together with a target area of land designated for onshore wind energy and a reform of the GEG (including the introduction of energy standards for new buildings). The German government has already brought forward some parts of the Summer Package in the formulation aids for the Easter Package described above. Whether the planned further reforms and amendments will be presented in advance as regulatory proposals during the course of the summer is currently unclear and will be dependent on some unpredictable factors. These include, in particular, how the war between Russia and Ukraine progresses and a possible embargo on Russian natural gas.

### European energy policy

In the first half of 2022, there were some substantive negotiations at an EU level for the “Fit for 55” legislative package from July 2021. In it the EU Commission defines ambitious, interlinked proposals, such as the target of climate neutrality by 2050 and an emissions reduction target of –55% by 2030. Another focus was the decarbonization of the gas sector with the first discussions on a new legislative package. In December 2021, the EU Commission presented a series of legislative proposals that will create the framework for the decarbonization of the EU gas market by facilitating the uptake of renewable and low-carbon gases, including hydrogen. The political agenda also focused on rising energy prices and the increasingly difficult situation with respect to the security of gas supplies resulting from the war between Russia and Ukraine as well possible sanctions.

The EU Commission presented a large package of measures called “REPowerEU” that aims to accelerate the expansion of renewable energies, improve energy efficiency and diversify sources of gas to make the EU almost completely independent of energy imports from Russia by around 2027. It also announced a swift assessment of the medium to long-term design of the electricity market. As part of an urgent referral process, obligatory regulations for the management of gas storage facilities together with related solidarity agreements have been put in place in preparation for possible shortages in the winter months. The EU Commission is currently developing additional criteria for contingency plans for cutting the use of gas in the gas sector.

The European Parliament and Council of Europe have also reached agreement on most of the “Fit for 55” package. Among other things, the revision of the current Emissions Trading System (ETS) Directive and the introduction of a separate ETS for the heating and transport sectors, tighter carbon emissions limits for passenger car fleets, the development of infrastructure for alternative fuels, the Renewable Energy Directive and the Energy Efficiency Directive have been largely agreed. The revised targets for expanding renewable energies and increasing energy efficiency proposed by the EU Commission as part of the REPowerEU package will only be discussed in detail during the subsequent compromise negotiations. In view of the current political and economic conditions, we generally welcome the fact that the level of ambition has largely remained the same.

Position proposals on the gas package presented in the middle of December 2021 have been put forward to the European Parliament. These at least correct some unbundling rules with respect to the future hydrogen infrastructure, which were especially critical in the view of EnBW. It is expected that the proposals will only be examined in detail, particularly by the Council of Europe, in the second half of the year.

In the area of the EU Taxonomy Regulation, the most intensive discussions have continued to focus on the criteria in the complementary delegated act for electricity generation from natural gas and nuclear energy on a transitional basis. We believe that the requirements placed on gas power plants in the proposal issued by the EU Commission in February 2022 are very ambitious, and in some cases too ambitious, from a technological and economic perspective to enable a swift transition to a hydrogen economy.

Further information on our **experiences with applying the EU sustainable finance taxonomy** can be found here.

[Online ↗](#)

## Smart Infrastructure for Customers segment

High wholesale market prices for electricity and gas have placed smaller suppliers, in particular, under pressure. Consequently, some companies canceled their supply contracts with their customers or were forced to declare themselves insolvent. Consistently high prices for electricity and gas across the whole market are leading to increasing prices for customers. Despite the reduction in the EEG cost allocations from 6.5 ct to 3.7 ct, this meant that the price of electricity for an average household increased in the first half of the year from 32.16 ct/kWh in 2021 to 37.14 ct/kWh (as of July 2022). The increase in the price of gas for retail customers was significantly higher and the average price rose from 7.06 ct/kWh in 2021 to 13.77 ct/kWh (as of April 2022). As a result of our long-term procurement strategy, we were less affected by rising prices at first. However, we have been forced to raise our prices for household electricity from 1 October 2022 due to the massive increase in costs on the energy market.

Despite the coronavirus pandemic, the **home electricity storage market** already grew by 48% in 2021 compared to the previous year. Further growth is also being seen in 2022. The boom in small photovoltaic power plants continued in the first months of the year and the demand for photovoltaic home storage systems has also increased further in its wake. EUPD Research anticipates that more than 200,000 home storage systems will be installed for the first time in 2022. Some 87% of new rooftop systems are now combined with a photovoltaic home storage system. We are one of the leading providers of home photovoltaics storage systems via our subsidiary SENEC and are thus participating in this growth.

There continues to be very dynamic growth in the **registration of new electric vehicles**. Despite a fall in the total number of new registrations of about 15%, the Federal Motor Transport Authority reported that around 167,000 electric cars were registered between January and June 2022, which was approximately 13% more battery electric vehicles than in the same period of the previous year. The share of the total number of new registrations accounted for by purely electric vehicles increased to 14%. A similarly high proportion of the overall market was accounted for by plug-in hybrid vehicles, with around 139,000 newly registered vehicles. These growth rates were mainly due to the higher environmental bonus for car purchases that has been available over the last year and the wider selection of electric vehicle models. This growth will also be supported by the target of 15 million electric cars by 2030 that is defined in the coalition agreement concluded by the German government. EnBW mobility+ is helping to ensure there is sufficient charging infrastructure to handle this growth as it already operates the largest quick-charging network in Germany, is investing in further expansion, and also provides drivers with the opportunity to charge their vehicles throughout large areas of Europe using the mobility+ app.

## System Critical Infrastructure segment

In July 2022, the Federal Network Agency approved the draft framework scenario submitted by the four transmission grid operators for the **Network Development Plan (NDP) Electricity 2037/2045 (2023)**. It contains three scenarios for 2037 and for the first time also includes an outlook for a "climate-neutral grid in 2045" to support a climate-neutral Germany. It not only factors in the phaseout of coal and nuclear energy but also the national hydrogen strategy, the highly ambitious policies for the expansion of renewable energies and an increasingly integrated internal energy market in Europe. The three scenarios are based on different levels of hydrogen uptake and electrification. The installed renewable energy generation capacities of between 520 GW and 620 GW planned by the year 2045 – of which just less than two thirds will be accounted for by photovoltaics and just over one third by wind power – will mean that the growth rate has to increase fivefold in comparison to the reference year of 2020. This expansion is needed to cover the gross electricity consumption in 2045, which is expected to double to around 1,000 TWh.

Our transmission grid operator TransnetBW is participating in two **major projects to push forward the development of high-voltage DC transmission lines (HVDC)** to transport wind energy in future from the north of Germany to the centers of consumption in the south. The Federal Network Agency (BNetzA) confirmed in June 2022 that it had received all of the required plans and documentation for the most southern section of the ULTRANET project between North Rhine-Westphalia and Philippsburg. Any impacted persons are able to submit their objections up to the end of August

during the ongoing consultation process. Two HVDC lines from Schleswig-Holstein to Bavaria and Baden-Württemberg are being realized in cooperation with TenneT in the SuedLink project. In June 2022, BNetzA confirmed it had received all of the required plans and documentation for the first of a total of eight sections to be constructed by TransnetBW.

There is a huge need to expand the electricity grid and optimize the processes involved in operating the grids even further in order to achieve the target of climate neutrality. To this end, the grid companies in the EnBW Group are developing a series of **digitalization measures**. A recent example is the innovation project “PV Shift” that was started by TransnetBW in June 2022 to test how PV home storage systems can help stabilize the grid. In cooperation with the home storage system manufacturer Tesla, TransnetBW is testing the impact of charging electric cars with photovoltaic electricity at flexible times. A smart management system can utilize the generated photovoltaic electricity to reduce grid congestion (positive redispatch) by exploiting the time available between the electricity being generated and the user requiring it. This results in additional financial incentives for owners of the home storage systems. The economic potential is believed to be in the three-digit million euro range in Baden-Württemberg alone.

The draft **Network Development Plan (NDP) Gas 2022–2032** was due to be published by the gas transmission system operators (FNB) in July 2022 but has now been delayed. The current geopolitical situation has had a significant impact on the conditions faced by the gas industry in Germany and this has led to the FNB publishing a preliminary version of the NDP Gas 2022–2032. It does not take the new framework conditions fully into account but does model the first variations of the scenario to secure the supply of gas using LNG that foresee the partial replacement of Russian gas through the diversification of gas supplies together with the resulting changes in load flows. This preliminary version will be revised following a new decision on parts of the framework scenario by BNetzA and will contain an additional variant in which Russian natural gas is completely replaced by LNG imports. A hydrogen variant, which is designed to demonstrate how the existing natural gas grid in Germany can be used to develop an infrastructure for hydrogen, is also part of the preliminary version.

## Sustainable Generation Infrastructure segment

### Installed net output for electricity generation from renewable energies in Germany<sup>1</sup>

in GW	2022	2021	2020	2019	2018
Solar	61.94	58.98	54.07	49.10	45.31
Onshore wind	56.93	56.27	54.84	53.19	52.45
Biomass	9.50	9.41	8.25	8.46	8.11
Offshore wind	7.77	7.77	7.74	7.53	6.40
Hydropower <sup>2</sup>	5.50	5.50	5.50	5.50	5.50
Gas	32.09	31.68	30.50	30.07	30.13
Hard coal	19.04	19.91	23.71	22.67	23.82
Brown coal	18.90	19.96	20.25	20.90	20.90
Nuclear power	4.06	8.11	8.11	9.52	9.52
Oil	4.72	4.68	4.38	4.38	4.38
<b>Total</b>	<b>220.45</b>	<b>222.27</b>	<b>217.35</b>	<b>211.32</b>	<b>206.52</b>

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

<sup>2</sup> Correction to the value for hydropower from 4.86 GW to 5.50 GW by EnBW. Source: Fraunhofer ISE (www.energy-charts.de) | As of 30 / 06 / 2022

## Renewable energies

### Germany

The proportion of total electricity generation accounted for by renewable energies was around 47% in the first half of 2022 and thus significantly higher than in the same period of the previous year (41%). More favorable wind conditions and a higher installed photovoltaic capacity were the main reasons for this increase.



As part of the German government's so-called Easter Package with its planned reform of the Renewable Energies Act, which has now been agreed by the Federal Cabinet, the target for the share of the gross electricity consumption accounted for by renewable energies in 2030 has been raised to 80%. It has been necessary to define significant increases in annual growth rates in order to achieve this target. The aim is now to increase the annual growth rate for onshore wind power to 10 GW, while annual growth in photovoltaics of 22 GW is planned from 2026 onwards. As part of the reform of the Offshore Wind Energy Act, the targets for offshore wind energy have been increased to 30 GW by 2030, 40 GW by 2035 and 70 GW by 2045.

#### **Onshore wind**

New onshore wind farms with a total capacity of around 1 GW were placed into operation in Germany in the first half of 2022. In the second auction held on 1 May 2022, the available capacities were not covered by the submitted bids. This is because the approval process remains difficult.

#### **Offshore wind**

In the first half of 2022, Germany did not place any new offshore wind farms into operation and did not hold any further auctions for new projects. The envisaged amendments to the Offshore Wind Energy Act indicate that the upcoming auctions will be very competitive.

#### **Photovoltaics**

New photovoltaic power plants with an output of around 3 GW were connected to the grid in the first half of the year. In the three rounds of auctions held during the year, bids for projects with a total capacity of 2 GW were accepted. The auctions for rooftop power plants in April and for open-field power plants in June were significantly undersubscribed, which indicates that there are currently not enough approved projects available on the market.

#### **France**

We develop and realize wind energy and PV projects on the French market through our subsidiary Valeco – a project developer and operator in the renewable energies sector. We expect continued dynamic growth in France, in both the wind power and photovoltaic sectors, despite the fact that the development time for new wind projects is also increasing in France. The framework conditions in France guarantee continued and reliable funding for renewable energies.

#### **Great Britain**

The results of an auction for offshore wind rights in Scotland were announced at the beginning of 2022. We had our joint bid submitted together with our partner bp accepted for the rights to develop offshore wind farms with a capacity of up to 2.9 GW. The "Morven" wind farm will generate enough wind power to supply more than three million households on aggregate.

#### **Sweden**

The Swedish market offers favorable physical conditions and a still growing and competitive market environment for renewable energies. The further expansion of onshore wind plays an important role in the Swedish generation market. Photovoltaics are becoming a more attractive proposition, especially in southern Sweden. Offshore wind power will also play an increasing role in the Swedish energy mix in future, both as an important source of electricity and also in combination with the targets for integrating hydrogen into the industrial and transport sectors.

We have been continuously expanding our wind power portfolio in Sweden over the last year by entering into partnerships in the project development phase. The generation portfolio was expanded to around 120 MW and the project pipeline to around 370 MW.

#### **Turkey**

Turkey continues to have great untapped potential with respect to renewable energies, primarily in the areas of onshore wind and photovoltaics. We believe that the Turkish market remains an attractive proposition for the future, although we are monitoring the current political and economic developments in Turkey very closely. In July 2022, the German-Turkish joint venture Borusan EnBW Enerji, in which the partners EnBW and Borusan each hold a 50% stake, placed one of the largest wind farms in Turkey into operation. This wind farm has an output of 138 MW and with it EnBW and Borusan now have a total of around 720 MW of power plants in operation in Turkey.

## Conventional generation: market and fuel prices

### Development of prices for electricity (EPEX), base load product

in €/MWh <sup>1</sup>	Average H1 2022	Average H1 2021
Spot	185.80	54.96
Rolling front year price	229.54	68.15

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

### Development of prices for natural gas on the TTF (Dutch wholesale market)

in €/MWh <sup>1</sup>	Average H1 2022	Average H1 2021
Spot	98.14	21.87
Rolling front year price	69.86	18.84

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

### Electricity wholesale market

In the first half of 2022, the average spot market price of approximately €186/MWh was more than €130/MWh higher than in the first half of 2021. The average price on the forward market was also significantly higher than the average price in the previous year. These price increases were mainly due to higher prices for gas, coal and CO<sub>2</sub> allowances. In addition, coal power plants were deployed to a much greater extent than normal due to the high price of gas. The future development of electricity prices will depend on the development of fuel and CO<sub>2</sub> prices and trends in the electricity generation mix. As well as the future development of energy and climate policies, what happens in the war between Russia and Ukraine and the sanctions imposed on Russia will have a major influence on the electricity market.

### Gas market

Prices increased considerably in comparison to the previous year. Repeated reductions in the quantities supplied by Russia were the main reason for this development. There were huge increases in spot market prices for a short period of time immediately after the start of the war in Ukraine at the end of February 2022. Russian gas continued to flow initially despite the war, which calmed the market to some extent. Gazprom had already only been delivering gas that had been purchased under long-term supply contracts since last winter and had halted gas sales via the electronic sales platform (ESP). This resulted in a measurable reduction in exports. At the beginning of April 2022, Gazprom Germania (renamed as SEFE Securing Energy for Europe on 20 June 2022) was placed under government control after Gazprom made changes to ownership. Supplies to Europe were reduced again after Russia then imposed sanctions on Gazprom Germania, several of its subsidiaries and the export pipeline through Poland in the middle of May 2022. Russia's demands that future gas payments must be made in rubles from April/May 2022 led to Russia cutting the supply to Poland, Bulgaria, Finland, Denmark, the Netherlands and the company Shell. This also reduced supplies of Russian gas to Europe even further and once again put pressure on prices. Ukraine was forced to trigger a "force majeure" clause due to the acts of war at the beginning of May 2022 and suspend approximately a third of the potential Russian export capacity via Ukraine. This means that it will be impossible for Ukraine to honor its contracts due to circumstances beyond its control ("force majeure"). Gazprom reduced the capacity of the Nord Stream 1 pipeline by two thirds in the middle of June 2022. This reduction was the main reason for Germany moving to warning level 2 of the Emergency Plan for Gas. Overall, this led to significant price increases from the middle of June 2022 onwards. Russia resumed its supply of gas to Europe via Nord Stream 1 after the completion of maintenance work and gas has been flowing again since 21 July. However, gas is only flowing through the pipeline at 20% of its maximum capacity.

The lack of gas from Russia was compensated for to some extent by much higher production in Norway. LNG deliveries to northwest Europe also increased considerably in the first half of the year. However, imports have fallen slightly since the summer because there are insufficient pipelines to transport the gas from the LNG terminals to several gas storage facilities.

Gas storage levels in northwest Europe were comparatively low at the end of last winter. The storage facilities are being filled at a relatively fast rate as of the beginning of the summer. The EU has also passed a law requiring a fill level of 80% by 1 November 2022. Some countries have increased this target even further, such as the 95% level prescribed by Germany.

There is currently a huge level of uncertainty with respect to the supply of Russian gas in the future. If Russia reduces its gas exports even further, it will be more and more difficult to maintain the gas supply next winter. Restrictions on gas consumption at power plants, in industry and in households may also be necessary. In addition, the gas warning level in Germany could be raised to level 3, meaning that responsibility for gas distribution would be handed to the Federal Network Agency. Large volumes of LNG will continue to be needed in northwest Europe to replace Russian gas. Additional LNG import capacities will become available over the winter, especially in the Netherlands and Germany. This could improve the situation. It is important to continue to fill the gas storage facilities over the summer in order to secure the supplies for next winter. However, every further reduction in the supply of Russian gas will make it more difficult to fill the gas storage facilities sufficiently.

**Development of prices on the oil markets**

in US\$/bbl	Average H1 2022	Average H1 2021
Crude oil (Brent) front month (daily quotes)	104.99	65.23
Crude oil (Brent), rolling front year price (daily quotes)	88.91	60.55

**Development of prices on the coal markets**

in US\$/t	Average H1 2022	Average H1 2021
Coal – API #2 rolling front year price	187.31	73.83
Coal – API #2 spot market price	284.64	78.71

**Development of prices for emission allowances/daily quotes**

in €/t CO <sub>2</sub>	Average H1 2022	Average H1 2021
EUA – rolling front year price	83.50	43.96

**Oil market**

Oil prices stood at US\$79/bbl at the beginning of the year and rose almost continuously from the beginning of January to 8 June 2022. The war in Ukraine led to a sharp spike in prices of up to US\$128/bbl at the end of February. Oil prices subsequently fell again – due in part to continuing oil exports from Russia. After a market correction, expectations of rising oil prices resumed. Existing sanctions by Western states on Russian oil exports and the threat of further sanctions resulted in an ongoing physical shortage of crude oil and especially in climbing prices for oil products. As the coronavirus pandemic eased, global demand for oil products rose again sharply, while supply was not able to keep up with demand. Although the OPEC+ group repeatedly increased oil production, more and more member states were simply not able to fulfill their production quotas. High oil prices combined with the increases in interest rates made by many central banks increased the fears of recession among market participants from the middle of June 2022 onwards. Prices have fallen again slightly as a result. The oil market will still be subject to considerable uncertainty in the future due to the geopolitical crisis, supply shortages and macroeconomic risks.

**Coal market**

Coal prices increased initially up to the end of February 2022, due mainly to supply issues. Russia and South Africa reported problems with their domestic logistics that had a negative effect on export volumes. The Indonesian government also imposed a coal export ban in January 2022. Prices then increased significantly following Russia's invasion of Ukraine. There were sharp increases in spot prices up to the beginning of March 2022 with prices reaching US\$417/t because of market fears that Russia would fail to deliver its coal. As Russia continued to deliver coal to Europe, however, prices fell at first before continuing to rise again. A new all-time high of US\$424/t was finally reached on 23 June 2022. Strong increases in gas prices on the TTF, and in German electricity prices, a very high dark clean spread and a bidding war for the limited volumes of high-calorific non-Russian coal that were still available after the EU banned trading of Russian coal on the spot market were the main factors causing rising prices. In the near future, the coal market will be influenced – in the same way as other raw materials markets – by extreme uncertainty with respect to Russian energy exports.

**CO<sub>2</sub> allowances**

In the first half of 2022, prices for EUA certificates at first rose continuously from around €80/t CO<sub>2</sub> to over €96/t CO<sub>2</sub> and were significantly higher than those in the same period of the previous year. Following the start of the war between Russia and Ukraine, prices fell significantly to below €60/t CO<sub>2</sub>. They then recovered over time and have been between €80/t CO<sub>2</sub> and €90/t CO<sub>2</sub> since the middle of April 2022. The main drivers of prices for EUA certificates in the first half of 2022 were, on the one hand, high emissions in the electricity sector and, on the other hand, the risk of lower emissions in the industrial sector caused by high gas prices and a possible physical shortage of gas during the coming winter.

As a result of the further reductions in supply imposed by the market stability reserve (MSR) and the tightening of the climate targets for 2030, further price increases are expected in the long term.

**Nuclear power**

Germany has decided to phase out nuclear power by 2022. This decision has been reaffirmed in the current coalition agreement. We responded to this decision at an early stage with a comprehensive dismantling strategy that is being rigorously implemented by our subsidiary EnBW Kernkraft (EnKK). EnKK is the licensed operator of our five nuclear power plants and is also responsible for their dismantling. The dismantling work has been underway in Obrigheim since 2008, at the blocks Neckarwestheim I and Philippsburg 1 since 2017 and at Philippsburg 2 since 2020. In accordance with the German Atomic Power Act (AtG), we are only permitted to generate electricity at the fifth power plant – Block II in Neckarwestheim – until the end of 2022 at the latest. EnKK has also already applied for approval to dismantle this power plant so that work can be started as soon as possible after it is finally shut down.

# The EnBW Group

## Finance and strategy goal dimensions

### Changes to the segment reporting

Due to a change in the allocation of business activities to the different Board of Management remits, there has been a change in the composition of our segments. The area of contracting was previously allocated to the Smart Infrastructure for Customers segment but is now part of the Sustainable Generation Infrastructure segment. Innovation activities were previously reported under the Smart Infrastructure for Customers segment but will be presented under the System Critical Infrastructure segment from 2022 onwards. The figures for the comparative periods have been restated in each case.

## Results of operations

### Electricity and gas sales slightly below level in previous year

#### Electricity sales volume (without System Critical Infrastructure)

in billions of kWh <sup>1</sup>	Smart Infrastructure for Customers		Sustainable Generation Infrastructure		Total (without System Critical Infrastructure)		Change in %
	01/01–30/06/2022	01/01–30/06/2021	01/01–30/06/2022	01/01–30/06/2021	01/01–30/06/2022	01/01–30/06/2021	
Retail and commercial customers (B2C)	7.4	7.5	0.0	0.0	7.4	7.5	-1.3
Business and industrial customers (B2B)	12.3	11.1	0.2	0.0	12.5	11.1	12.6
Trade	0.0	0.0	35.6	38.4	35.6	38.4	-7.3
<b>Total</b>	<b>19.7</b>	<b>18.6</b>	<b>35.8</b>	<b>38.4</b>	<b>55.5</b>	<b>57.0</b>	<b>-2.6</b>

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

Electricity sales in the first half of 2022 were slightly below the level in the previous year. In a currently challenging market environment, electricity sales to retail and commercial customers (B2C) remained at the same level as in the previous year. In contrast, sales to business and industrial customers (B2B) increased. Sales in the trading sector fell moderately compared to the previous year.

#### Gas sales volume (without System Critical Infrastructure)

in billions of kWh	Smart Infrastructure for Customers		Sustainable Generation Infrastructure		Total (without System Critical Infrastructure)		Change in %
	01/01–30/06/2022	01/01–30/06/2021	01/01–30/06/2022	01/01–30/06/2021	01/01–30/06/2022	01/01–30/06/2021	
Retail and commercial customers (B2C)	9.5	11.3	0.0	0.0	9.5	11.3	-15.9
Business and industrial customers (B2B)	83.9	140.0	0.0	0.0	83.9	140.0	-40.1
Trade	1.1	0.3	150.7	102.1	151.8	102.4	48.2
<b>Total</b>	<b>94.5</b>	<b>151.6</b>	<b>150.7</b>	<b>102.1</b>	<b>245.2</b>	<b>253.7</b>	<b>-3.4</b>

In the first half of 2022, there was a slight fall in gas sales in comparison to the same period of the previous year. Adjusted for the effects of changes in the consolidated companies, gas sales were 2.9% higher than the figure in the previous year. Gas sales to retail and commercial customers (B2C) fell due to the weather and the currently challenging market environment. The decrease in sales to business and industrial customers (B2B) in comparison to the previous year was mainly attributable to the cessation of business at Gas-Union. Sales in the trading sector increased significantly due to expanded trading activities, including in the area of LNG.

## External revenue higher than previous year

### External revenue by segment

in € million <sup>1,2</sup>	01/01–30/06/2022	01/01–30/06/2021	Change in %	01/01–31/12/2021
Smart Infrastructure for Customers	9,527.3	6,380.1	49.3	13,923.6
System Critical Infrastructure	3,121.3	1,895.4	64.7	4,412.6
Sustainable Generation Infrastructure	14,465.5	4,374.8	–	13,804.0
Other/Consolidation	5.4	4.4	22.7	7.7
<b>Total</b>	<b>27,119.5</b>	<b>12,654.7</b>	<b>114.3</b>	<b>32,147.9</b>

1 After deduction of electricity and energy taxes.

2 The figures for the previous year have been restated.

Adjusted for the effects of the changes in the consolidated companies, external revenue was 116.9% higher than the level in the previous year.

**Smart Infrastructure for Customers:** Revenue in the Smart Infrastructure for Customers segment increased significantly in the first half of 2022 in comparison to the same period of the previous year. Adjusted for the effects of the changes in the consolidated companies, revenue was 47.2% higher than the level in the previous year. This was primarily due to higher prices, especially for gas.

**System Critical Infrastructure:** Revenue in the System Critical Infrastructure segment increased considerably in the first half of 2022 in comparison to the same period of the previous year. Adjusted for the effects of the changes in the consolidated companies, revenue was 64.4% higher than in the previous year. This increase in revenue was primarily due to higher income from the settlement of redispatch measures with other transmission system operators that has no impact on the result.

**Sustainable Generation Infrastructure:** In the Sustainable Generation Infrastructure segment, revenue increased in comparison to the previous year, mainly due to higher prices and an increase in trading activities as a result of growing volatility on the electricity and gas markets. The increase in revenue was accompanied by a corresponding rise in the cost of materials. Adjusted for the effects of the changes in the consolidated companies, revenue was 250.7% higher than in the previous year.

### Material developments in the income statement

The increase of €14,464.8 million in revenue in comparison to the previous year to €27,119.5 million was primarily attributable to higher sales prices in the electricity and gas sectors. The cost of materials was €14,253.7 million higher than the figure in the previous year for the same reason. Other operating income increased by €4,219.8 million in comparison to the previous year. This was attributable to higher income from derivatives, reversals of provisions for onerous contracts as a result of, among other things, the early termination of an electricity procurement agreement and reversals of impairment losses on our conventional generation plants. There was also a corresponding increase in other operating expenses of €3,923.3 million, which was also a result of the higher valuation of derivatives in comparison to the previous year. Impairments fell by €818.3 million compared to the previous year. This was mainly attributable to the impairment losses on conventional power plants in the same period of the previous year and lower impairment losses on offshore wind farms.

The investment result in the reporting period stood at €141.6 million, which was €83.0 million higher than the figure of €58.6 million in the previous year. This increase was primarily the result of higher income from the dedicated financial assets. The financial result deteriorated in the reporting period in comparison to the same period of the previous year by €119.5 million to €36.6 million (previous year: €156.1 million). The main reason for this development was a lower result from the market valuation of securities. This was offset to some extent by the increase in the interest rate for nuclear provisions.

Overall, earnings before tax (EBT) totaled €947.7 million in the first six months of the 2022 financial year, compared with €–309.2 million in the same period of the previous year.



## Earnings

The Group net profit/loss attributable to the shareholders of EnBW AG increased from €-162.8 million in the same period of the previous year by €726.7 million to €563.9 million in the reporting period. Earnings per share amounted to €2.08 in the reporting period compared to €-0.60 in the previous year.

### Adjusted earnings and non-operating result

The sum of the adjusted earnings figures and non-operating figures gives the figures on the income statement. The non-operating result includes effects that either cannot be predicted or cannot be directly influenced by EnBW and as such are not relevant to the ongoing management of the company. The effects are presented in the section "Non-operating EBITDA." The business activities relevant to the ongoing management of the company are of particular importance for internal management and for the external communication of the current and future earnings potential of EnBW. We use the adjusted EBITDA – earnings before the investment and financial results, income taxes and amortization, adjusted for non-operating effects – as the key reporting indicator for disclosing this information.

#### Adjusted EBITDA by segment

in € million <sup>1</sup>	01/01-30/06/2022	01/01-30/06/2021	Change in %	01/01-31/12/2021
Smart Infrastructure for Customers	114.9	223.0	-48.5	344.0
System Critical Infrastructure	587.7	645.7	-9.0	1,263.0
Sustainable Generation Infrastructure	851.8	727.6	17.1	1,539.7
Other/Consolidation	-130.2	-116.9	-11.4	-187.4
<b>Total</b>	<b>1,424.2</b>	<b>1,479.4</b>	<b>-3.7</b>	<b>2,959.3</b>

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

#### Share of adjusted EBITDA accounted for by the segments

in % <sup>1</sup>	01/01-30/06/2022	01/01-30/06/2021	01/01-31/12/2021
Smart Infrastructure for Customers	8.1	15.1	11.6
System Critical Infrastructure	41.3	43.6	42.7
Sustainable Generation Infrastructure	59.8	49.2	52.0
Other/Consolidation	-9.2	-7.9	-6.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

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

The adjusted EBITDA for the EnBW Group fell slightly in the first half of 2022 compared to the same period of the previous year [-3.7%]. Adjusted for the effects of changes in the consolidated companies, the adjusted EBITDA of the EnBW Group would have decreased by 5.2%.

**Smart Infrastructure for Customers:** The adjusted EBITDA in the Smart Infrastructure for Customers segment fell significantly in the first half of 2022 by 48.5% in comparison to the same period of the previous year. Adjusted for the effects of changes in the consolidated companies, earnings fell by 53.4%. This fall in earnings was due to higher energy procurement costs.

**System Critical Infrastructure:** In the System Critical Infrastructure segment, the adjusted EBITDA decreased in the first half of 2022 by 9.0% in comparison to the same period of the previous year. Adjusted for the effects of the changes in the consolidated companies, the decrease was 9.2%. The reason for this fall in earnings was the considerably higher expenses for the grid reserve including redispatch to maintain the security of supply, as there was a large increase in both the number of deployments and prices.

**Sustainable Generation Infrastructure:** The adjusted EBITDA in the Sustainable Generation Infrastructure segment increased in the first half of 2022 by 17.1% in comparison to the same period of the previous year. Adjusted for the effects of changes in the consolidated companies, earnings increased by 17.2%.

**Adjusted EBITDA Sustainable Generation Infrastructure**

in € million <sup>1</sup>	01/01– 30/06/2022	01/01– 30/06/2021	Change in %
Renewable Energies	546.9	382.1	43.1
Thermal Generation and Trading	304.9	345.5	-11.8
<b>Sustainable Generation Infrastructure</b>	<b>851.8</b>	<b>727.6</b>	<b>17.1</b>

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

In the Renewable Energies area, the adjusted EBITDA increased by 43.1% to €546.9 million. Better wind conditions, higher market prices and the addition of new solar parks contributed to this increase in earnings. In the area of Thermal Generation and Trading, adjusted EBITDA fell slightly in the first half of 2022 in comparison to the same period of the previous year. High market prices largely compensated for the negative effects of the war between Russia and Ukraine, such as cuts to gas supplies and the need to procure replacement gas as a result.

**Non-operating EBITDA**

in € million	01/01– 30/06/2022	01/01– 30/06/2021	Change in %
Income/expenses relating to nuclear power	-307.0	27.8	-
Result from disposals	18.0	-4.8	-
Reversals of/additions to the provisions for onerous contracts relating to electricity and gas procurement agreements	211.8	-301.4	-
Income from reversals of impairment losses	235.7	0.0	-
Restructuring	-13.3	-14.2	-6.3
Other non-operating result	72.9	-19.6	-
<b>Non-operating EBITDA</b>	<b>218.1</b>	<b>-312.2</b>	<b>-</b>

The increase in non-operating EBITDA was primarily attributable to the reversal of provisions for onerous contracts and income from reversals of impairment losses on our conventional generation plants. The reversal of provisions for onerous contracts was related to the early termination of an electricity procurement agreement and an improvement in profitability of coal power plants in the liquid period, which was also the reason for the reversals of impairment losses on conventional power plants. Valuation effects from derivatives also had a positive effect on the other non-operating result. This was offset to some extent by higher expenses relating to nuclear power, mainly attributable to the formation of decommissioning provisions, and increases in provisions for onerous contracts.

**Group net profit/loss**

in € million	01/01– 30/06/2022			01/01– 30/06/2021		
	Total	Non-operating	Adjusted	Total	Non-operating	Adjusted
<b>EBITDA</b>	<b>1,642.3</b>	<b>218.1</b>	<b>1,424.2</b>	<b>1,167.2</b>	<b>-312.2</b>	<b>1,479.4</b>
Amortization and depreciation	-872.8	-95.8	-777.0	-1,691.1	-943.4	-747.7
<b>EBIT</b>	<b>769.5</b>	<b>122.3</b>	<b>647.2</b>	<b>-523.9</b>	<b>-1,255.6</b>	<b>731.7</b>
Investment result	141.6	-19.6	161.2	58.6	-8.7	67.3
Financial result	36.6	295.0	-258.4	156.1	6.3	149.8
<b>EBT</b>	<b>947.7</b>	<b>397.7</b>	<b>550.0</b>	<b>-309.2</b>	<b>-1,258.0</b>	<b>948.8</b>
Income tax	-274.8	-151.8	-123.0	136.5	364.5	-228.0
<b>Group net profit/loss</b>	<b>672.9</b>	<b>245.9</b>	<b>427.0</b>	<b>-172.7</b>	<b>-893.5</b>	<b>720.8</b>
of which profit/loss shares attributable to non-controlling interests	(109.0)	(-18.2)	(127.2)	(-9.9)	(-136.4)	(126.5)
of which profit/loss shares attributable to the shareholders of EnBW AG	(563.9)	(264.1)	(299.8)	(-162.8)	(-757.1)	(594.3)

The increase in Group net profit in the reporting period in comparison to the same period of the previous year is mainly due to impairment losses that were recognized in the area of conventional generation totaling €0.7 billion in the same period of the previous year, which were reversed in the reporting period. In addition, impairment losses recognized on offshore wind farms were lower than in the previous year. Reversal of provisions for onerous contracts in the current reporting period

also led to an increase; there were additions to the provisions for onerous contracts in the same period of the previous year. Please refer to the section “Non-operating EBITDA” for more information on the reasons for these impairment losses.

This was offset to some extent by the decrease in the financial result, which was primarily due to a lower result from the market valuations of securities. It was not possible to compensate for this decrease with income from the increase in the interest rate for nuclear provisions and higher income from the dedicated financial assets. Income taxes change according to the development of EBT.

## Financial position

### Financing

Alongside the internal financing capability and our own funds, we have the following financing instruments at our disposal to cover the financing needs of the operating business (as of 30 June 2022):

- Debt Issuance Program (DIP), via which bonds are issued: €~4.7 billion of €10.0 billion drawn. On 14 April 2022, we increased the volume of the DIP to €10.0 billion so that we are flexibly positioned to handle the planned investment for our EnBW 2025 strategy over the coming years.
- Subordinated bonds: €~2.5 billion
- Commercial paper (CP) program: €~0.8 billion of €2.0 billion drawn
- Sustainability-linked syndicated credit facility: €1.5 billion undrawn, with a term until the end of June 2027 after successfully utilizing the second extension option for an additional year. €1.5 billion of this credit facility was utilized at the beginning of March and then repaid in full on 11 April 2022.
- Another temporary credit line with a volume of €1.5 billion was agreed with several banks on 12 April 2022 to provide an additional liquidity buffer in 2022 against the background of the current market environment.
- Committed bilateral credit lines: €~0.1 billion of €~2.9 billion drawn. This includes the credit line that was concluded with KfW by VNG on 5 April 2022 with a volume of €660 million and a term until April 2023. This credit line has not been utilized at any time. It will exclusively provide additional financial security in response to the potential risk of extreme developments on the market that cannot be excluded due to the impact the war between Russia and Ukraine may have on the energy markets. We also have uncommitted credit lines with a volume of €~1.5 billion that can be utilized in agreement with our banks, of which €~0.1 billion has been drawn.
- Project financing and loans from the European Investment Bank (EIB)
- In addition, subsidiaries have other financing activities in the form of bank loans and Schuldschein loans.

### Flexible uptake of different financing instruments

We have sufficient and flexible access to the capital market at all times. EnBW continues to have a well-balanced maturity profile. As part of our financing strategy, we constantly assess capital market trends with regard to the current interest rate environment and to any potentially favorable refinancing opportunities.

The euro subordinated bond with a volume of €725 million and the US dollar subordinated bond with a volume of US\$300 million were redeemed at the earliest possible date on 5 January 2022 in accordance with their terms at their principal amounts plus interest accrued.

On 6 July 2022, EnBW successfully issued its first Schuldschein loan in a volatile market environment after several weeks of marketing activities. The volume of €500 million significantly exceeded the target volume of €300 million stated on the term sheet. It was possible to fix the price of all tranches at the lower end of the indicated range. The Schuldschein loan has enabled us to successfully diversify the financing sources available to the Group and further expand our investor base, with over 50 participating German and international investors.

## Rating and rating trends

We aim to hold solid investment-grade ratings. EnBW currently has the following issuer ratings:

- Moody's: Baa1/stable
- Standard & Poor's (S&P): A-/stable

On 5 July 2022, the rating agency Standard & Poor's confirmed its A- rating for EnBW AG. The outlook for the rating remains stable. The rating agency Moody's had already published its comprehensive credit update on EnBW AG on 4 July 2022, in which it also confirmed the Baa1 rating with a stable outlook. EnBW thus continues to have one of the strongest credit ratings among integrated energy supply companies in Europe. These ratings are in line with EnBW's objective of maintaining solid investment-grade ratings and also confirm the robustness of our integrated business model.

## Net debt

### Net debt

in € million	30/06/2022	31/12/2021	Change in %
Cash and cash equivalents available to the operating business	-5,031.6	-6,466.5	-22.2
Adjusted cash and cash equivalents available to the operating business <sup>1</sup>	(-3,857.1)	(-5,251.3)	(-26.5)
Current financial assets available to the operating business	-1,450.2	-934.5	55.2
Adjusted current financial assets available to the operating business <sup>1</sup>	(-190.2)	(-584.5)	(-67.5)
Long-term securities available to the operating business	-2.4	-2.1	14.3
Bonds	7,950.6	8,401.0	-5.4
Liabilities to banks	1,675.7	2,067.4	-18.9
Other financial liabilities	768.7	782.0	-1.7
Lease liabilities	891.4	884.5	0.8
Valuation effects from interest-induced hedging transactions	-24.7	-53.0	-53.4
Restatement of 50% of the nominal amount of the subordinated bonds <sup>2</sup>	-1,250.0	-1,746.3	-28.4
Other	-38.5	-31.4	22.6
<b>Net financial debt</b>	<b>3,489.0</b>	<b>2,901.1</b>	<b>20.3</b>
Adjusted net financial debt <sup>1</sup>	(5,923.5)	(4,466.3)	32.6
Provisions for pensions and similar obligations <sup>3</sup>	5,696.1	7,772.4	-26.7
Provisions relating to nuclear power	4,776.3	4,955.6	-3.6
Receivables relating to nuclear obligations	-363.0	-365.8	-0.8
<b>Net pension and nuclear obligations</b>	<b>10,109.4</b>	<b>12,362.2</b>	<b>-18.2</b>
Long-term securities and loans to cover the pension and nuclear obligations <sup>4</sup>	-5,625.8	-6,053.4	-7.1
Cash and cash equivalents to cover the pension and nuclear obligations	-211.3	-186.5	13.3
Current financial assets to cover the pension and nuclear obligations	-102.7	-97.3	5.5
Surplus cover from benefit entitlements	-104.4	-121.5	-14.1
Other	-23.0	-18.5	24.3
<b>Dedicated financial assets</b>	<b>-6,067.2</b>	<b>-6,477.2</b>	<b>-6.3</b>
<b>Net debt relating to pension and nuclear obligations</b>	<b>4,042.2</b>	<b>5,885.0</b>	<b>-31.3</b>
<b>Net debt</b>	<b>7,531.2</b>	<b>8,786.1</b>	<b>-14.3</b>
Adjusted net debt <sup>1</sup>	(9,965.7)	(10,351.3)	-3.7

<sup>1</sup> Adjusted for EEG funds of €2,434.5 million (previous year: €1,565.2 million).

<sup>2</sup> The structural characteristics of our subordinated bonds meet the criteria for half of the hybrid bonds to be classified as equity, and half as debt, by the rating agencies Moody's and Standard & Poor's.

<sup>3</sup> Less the market value of the plan assets (excluding the surplus cover from benefit entitlements) of €778.6 million (31/12/2021: €869.9 million).

<sup>4</sup> Includes equity investments held as financial assets.

As of 30 June 2022, net debt had fallen by €1,254.9 million compared to the figure posted at the end of 2021. This decrease was mainly due to the increase in the interest rate for pension provisions. This was offset to some extent by the repayment of a subordinated bond, half of which was classified as equity, and a fall in the market valuations of securities. In addition, cash and cash equivalents include EEG funds of €1,174.5 million (previous year: €1,215.2 million) and current financial assets include EEG funds of €1,260.0 million (previous year: €350.0 million).

### Investment analysis

#### Net cash investment

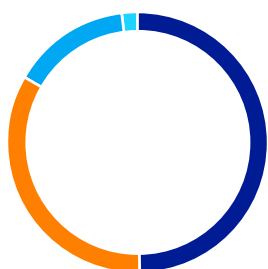
in € million <sup>1</sup>	01/01–30/06/2022	01/01–30/06/2021	Change in %	01/01–31/12/2021
Investments in growth projects <sup>2</sup>	784.6	786.3	-0.2	2,022.1
Investments in existing projects	284.4	292.3	-2.7	786.4
<b>Total gross investment</b>	<b>1,069.0</b>	<b>1,078.6</b>	<b>-0.9</b>	<b>2,808.5</b>
Divestitures <sup>3</sup>	-70.0	-9.9	-	-20.4
Participation models	165.2	-129.1	-	-147.9
Disposals of long-term loans	-0.1	-0.6	-83.3	-1.1
Other disposals and subsidies	-71.2	-78.4	-9.2	-167.9
<b>Total divestitures</b>	<b>23.9</b>	<b>-218.0</b>	<b>-</b>	<b>-337.3</b>
<b>Net (cash) investment</b>	<b>1,092.9</b>	<b>860.6</b>	<b>27.0</b>	<b>2,471.2</b>

1 Excluding investments held as financial assets.

2 Does not include cash and cash equivalents acquired with the acquisition of fully consolidated companies. These amounted to €0.0 million in the reporting period (01/01/2021–30/06/2021: €0.0 million, 01/01/2021–31/12/2021: €0.0 million).

3 Does not include cash and cash equivalents relinquished with the sale of fully consolidated companies. These amounted to €0.0 million in the reporting period (01/01/2021–30/06/2021: €0.0 million, 01/01/2021–31/12/2021: €0.0 million).

#### Investment by segment in %<sup>1</sup>



● 49.8 System Critical Infrastructure [2021: 46.9]

● 33.8 Sustainable Generation Infrastructure [2021: 42.0]

● 14.5 Smart Infrastructure [2021: 9.6]

● 1.9 Other [2021: 1.5]

1 The figures for the previous year have been restated.

#### Investments in Sustainable Generation Infrastructure

in % <sup>1</sup>	01/01–30/06/2022	01/01–30/06/2021
Renewable Energies	27.4	36.0
Thermal Generation and Trading	6.4	6.0
<b>Sustainable Generation Infrastructure</b>	<b>33.8</b>	<b>42.0</b>

1 The figures for the previous year have been restated.

Gross investment made by the EnBW Group in the first half of 2022 of €1,069.0 million was at about the same level as in the previous year (€1,078.6 million). Around 73.4% of overall gross investment was attributable to growth projects; the proportion of investment in existing facilities stood at 26.6%.

Gross investment in the **Smart Infrastructure for Customers** segment of €154.9 million was significantly higher than the level in the same period of the previous year (previous year restated: €103.7 million). The increase was mainly a result of a higher investment in the area of electromobility.

Gross investment in the **System Critical Infrastructure** segment of €532.7 million was higher than the level in the previous year of €505.4 million. In both half years, the investment was mainly linked to projects at our Group subsidiaries TransnetBW and terranets bw that are part of the network development plans. In addition, our grid companies invested in the expansion and renewal of the distribution grid.

There was gross investment of €361.4 million in the **Sustainable Generation Infrastructure** segment, which was lower than the level in the same period of the previous year (previous year restated: €452.7 million). €293.1 million of this investment was in the area of Renewable Energies, compared to €388.4 million in the same period of the previous year. The decrease was primarily attributable to the offshore wind power sector. In 2021, we secured the offshore wind rights to a site in the Irish Sea and paid the associated auction price. At the beginning of this year, our bid to secure the offshore wind rights to a site for the development of an offshore wind farm in the Scottish Sea was accepted. Investment in the Thermal Generation and Trading area stood at €68.3 million and was thus slightly higher than the level in the same period of the previous year (previous year restated: €64.3 million).

**Other gross investment** increased from €16.8 million in the same period of the previous year to €19.9 million in the first half of 2022.

Total divestitures were below the level in the same period of the previous year. The item divestitures includes the effect of our exit from the offshore wind power business in the USA. In contrast, there were cash outflows to minority shareholders as part of our participation models, especially in 2022, as a result of capital reductions at our offshore wind farms that are already in operation. Other disposals were at the same level as in the previous year.

## Liquidity analysis

### Condensed cash flow statement

in € million	01/01– 30/06/2022	01/01– 30/06/2021	Change in %	01/01– 31/12/2021
Cash flow from operating activities	1,419.4	3,149.9	-54.9	7,597.8
Cash flow from investing activities	-1,207.4	-1,032.8	16.9	-2,859.1
Cash flow from financing activities	-1,640.4	-257.9	-	600.1
<b>Net change in cash and cash equivalents</b>	<b>-1,428.4</b>	<b>1,859.2</b>	<b>-</b>	<b>5,338.8</b>
Change in cash and cash equivalents due to changes in the consolidated companies	-3.2	23.0	-	29.0
Net foreign exchange difference	21.4	12.0	78.3	32.4
Change in cash and cash equivalents due to risk provisions	0.0	-0.1	-	0.1
<b>Change in cash and cash equivalents</b>	<b>-1,410.3</b>	<b>1,894.1</b>	<b>-</b>	<b>5,400.4</b>

Despite an increase in cash-relevant EBITDA, cash flow from operating activities fell significantly in comparison to the same period of the previous year. This development was mainly due to an outflow of cash in the net current assets for reasons related to the reporting date. This was primarily attributable to the purchase of emissions allowances and increases in other inventories. In addition, lower deposits of collateral against the backdrop of current price fluctuations on the market led to a fall in the cash flow from operating activities in comparison to the previous year. This was offset to some extent by valuation effects and an increase in liabilities.

Cash flow from investing activities returned a higher outflow of cash in the reporting period compared to the same period of the previous year, which arose mainly from the portfolio management of securities and financial investments, as well as higher capital expenditure on intangible assets and property, plant and equipment. This was offset to some extent by lower cash payments for shares in entities accounted for using the equity method in comparison to the previous year. This was primarily attributable to the foundation of two companies in Great Britain and the associated bids for offshore wind rights for the construction of offshore wind farms in the previous year.

Cash flow from financing activities returned a substantially higher cash outflow than in the previous year. In the reporting period, this was primarily due to a significant increase in repayments of financial liabilities as part of liquidity management. In addition, higher dividends paid and higher capital reductions led to an increased outflow of cash. This was offset to some extent by a large increase in loans in particular.

The solvency of the EnBW Group was ensured as of the reporting date thanks to the company's internal financing capability and the external sources available for financing. The company's future solvency is secured by its solid financial position and results of operations.

### Retained cash flow

in € million	01/01– 30/06/2022	01/01– 30/06/2021	Change in %	01/01– 31/12/2021
<b>EBITDA</b>	<b>1,642.3</b>	<b>1,167.2</b>	<b>40.7</b>	<b>2,803.5</b>
Changes in provisions	-45.0	36.5	-	-103.9
Non-cash-relevant expenses/income	-285.3	-19.0	-	-396.3
Income tax paid	-101.9	-79.2	28.7	-200.6
Interest and dividends received	200.8	163.9	22.5	358.0
Interest paid for financing activities	-153.6	-195.5	-21.4	-314.5
Dedicated financial assets contribution	-42.9	49.0	-	184.8
<b>Funds from operations (FFO)</b>	<b>1,214.4</b>	<b>1,122.9</b>	<b>8.1</b>	<b>2,331.0</b>
Dividends paid	-422.4	-287.2	47.1	-547.2
<b>Retained cash flow</b>	<b>792.0</b>	<b>835.7</b>	<b>-5.2</b>	<b>1,783.8</b>



Funds from operations (FFO) were higher than the level in the previous year, which was mainly the result of the significantly higher EBITDA. In comparison to the previous year, this was offset to some extent by the reduction in provisions, which was due for the most part to the reversal of provisions for onerous contracts for electricity procurement agreements, as well as higher non-cash-relevant income.

Retained cash flow fell in the first half of 2022 compared to the same period of the previous year as a result of higher dividends paid. It is an expression of the internal financing capability of EnBW and reflects the funds that are available to the company for investment – after all stakeholder claims have been settled – without the need to raise additional debt.

## Net assets

### Condensed balance sheet

in € million	30/06/2022	31/12/2021	Change in %
Non-current assets	34,203.8	35,232.5	-2.9
Current assets	36,531.9	35,986.7	1.5
Assets held for sale	2.5	54.0	-95.4
<b>Assets</b>	<b>70,738.2</b>	<b>71,273.2</b>	<b>-0.8</b>
Equity	10,547.6	8,499.3	24.1
Non-current liabilities	25,484.2	28,531.0	-10.7
Current liabilities	34,706.4	34,242.9	1.4
<b>Equity and liabilities</b>	<b>70,738.2</b>	<b>71,273.2</b>	<b>-0.8</b>

As of 30 June 2022, total assets were 0.8% lower than the figure at the end of the previous year. Non-current assets decreased by €1,028.7 million, which was largely attributable to the fall in deferred tax assets due to temporary differences in the pension provisions. The increase of €545.2 million in current assets was mainly the result of an increase in inventories. This was offset to some extent by the decrease in cash and cash equivalents.

Equity increased by €2,048.3 million as of 30 June 2022. The primary reason for this development was a decrease in negative other comprehensive income due mainly to an increase in the discount rate for the pension provisions from 1.15% at the end of 2021 to 3.35% as of 30 June 2022. As a result of the increase in equity, the equity ratio rose from 11.9% at the end of 2021 to 14.9% on the reporting date.

Non-current liabilities decreased by €3,046.8 million, which was mainly the result of the fall in the pension provisions caused by the interest rate. Current liabilities increased by €463.5 million compared to the figure at the end of the previous year. The increase in trade payables exceeded here the decrease in short-term provisions and financial liabilities. Current provisions decreased due to the return of emission allowances in the second quarter. The decrease in current financial liabilities was a result of the repayment of subordinated bonds.

## Related parties

Relationships with related parties (entities and individuals) have not changed significantly in comparison to the reporting date of 31 December 2021.

## Customers and society goal dimension

We report on the non-financial goal dimensions of EnBW in the areas of customers and society, the environment and employees at the six-month stage on the basis of the key non-financial performance indicators presented in the Group management report 2021 (Integrated Annual Report 2021 from p. 92<sup>7</sup> onwards). Exceptions are the Reputation Index in the customers and society goal dimension, the key performance indicators of “installed output of renewable energies (RE) in GW and the share of the generation capacity accounted for by RE” in the environment goal dimension, as well as the CO<sub>2</sub> intensity, and the People Engagement Index (PEI) in the employees goal dimension. The values for these key indicators are exclusively collected at the end of the year.

### Customer proximity

“Infrastructure transition” is one of the strategic themes covered by our Sustainability Agenda. The measures bundled within this theme that directly address our customers are “eco-efficient quick-charging parks,” “development of the grid infrastructure,” “environmentally sustainable and socially inclusive residential districts and real estate” and “laying new fiber-optic cables in rural areas.” In the “Selected activities” section below, we present some of the projects that make a significant contribution to the “Infrastructure transition.”

### Customer Satisfaction Index

Our customers lie at the heart of our philosophy and actions. We aim to build long-term customer relationships by offering an intelligent combination of products and services, developing new product worlds, communicating transparently and delivering the highest-quality service possible. This will be achieved based on high customer satisfaction, which is measured in accordance with the requirements of the EnBW Group standard for market research and surveys. The Customer Satisfaction Indices for EnBW and Yello are compiled from customer surveys carried out by an external provider.

#### Key performance indicator

	01/01– 30/06/2022	01/01– 30/06/2021	Change in %	01/01– 31/12/2021
Customer Satisfaction Index for EnBW/Yello	<b>139/166</b>	127/161	9.4/3.1	127/159

The key performance indicator Customer Satisfaction Index at EnBW achieved a value of 139 in the first half of 2022, while the value for Yello was 166. The satisfaction of retail customers with EnBW and Yello was thus very good and outstanding, respectively, and at the higher end of our target corridor for the entire year.

In comparison to the value achieved by EnBW in the first half of 2021 (127), the Customer Satisfaction Index improved by 9.4%. EnBW’s long-term energy procurement strategy has made it possible to keep electricity prices for existing customers largely stable. In addition, intelligent supply management has made a positive contribution to this development in the first half of the year. To improve customer satisfaction, we are also expanding our range of new sustainable products and user-friendly digital services.

The overall satisfaction of Yello customers rose in comparison to the first half of 2021 (161) by 3.1% and is thus now at an outstanding level. This is due to the high number of people who would be willing to recommend the company to others, mainly because of the good service and attractive prices.

### Selected activities

**Green electricity** has become the standard in the product portfolio of EnBW and Yello. The proportion of the electricity supplied to new customers by EnBW and Yello that was accounted for by green energy increased from 96% in 2021 to almost 100% in the first half of 2022. Some 43% of the total customer base is now supplied with green electricity across both brands (EnBW excluding the basic supply of energy). Taking compensation measures into account, Yello and EnBW were thus able to save around 170,000 t of CO<sub>2</sub> emissions in the first half of 2022. At the beginning of the year, Yello

also launched its new brand identity with the theme of sustainability at its core, advertising it using the slogan “Good Energy” and a wide-reaching image campaign.

As we **expand the charging infrastructure for electromobility**, we are focusing on quick charging with capacities of up to 300 kW. This means that enough power for a range of up to 100 km can be charged in just five minutes. Our charging stations also supply 100% green electricity. We already operate the largest quick-charging network in Germany and place one new quick-charging station into operation on average every day. Alongside smaller sites, we are also installing large quick-charging parks with eight or more high-capacity charging points and quick-charging parks with solar roofs. We opened nine new roofed charging parks in the first half of 2022 alone.

In our role as an **electromobility provider**, we now offer our customers access to more than 300,000 charging points in 16 European countries via the EnBW HyperNetwork operated by our subsidiary **EnBW mobility+**. We added seven additional countries – Sweden, Denmark, Poland, the Czech Republic, Slovakia, Slovenia and Croatia – to the existing nine in our charging network for drivers of e-vehicles at the end of June 2022. The EnBW HyperNetwork and the EnBW mobility+ app also received numerous awards from various market experts in the first half of 2022, including being ranked as the winner more than once in consumer tests of charging networks and e-mobility apps.

Following the foundation of the joint venture SMATRICS EnBW in 2020, our subsidiary EnBW mobility+ acquired 25.1% of the shares in the VERBUND subsidiary **SMATRICS**, based in Austria, in the first half of 2022. This investment will enable us to work together more closely in wide-reaching product collaborations, especially in the area of fleet and business customers.

Our subsidiary **SENEC** is one of the top three providers of home storage systems for solar power plants in Germany and a specialist in equipping customers so that they are able to meet their own energy needs with solar electricity. In the first half of 2022, we sold more than 26,000 electricity storage systems in Germany, Italy and Australia. SENEK has thus passed the 100,000 unit mark and reached a new milestone. Following three incidents, SENEK temporarily placed its electricity storage systems into a regulated standby mode as a precaution in March 2022. SENEK then developed a new safety concept after thoroughly investigating the causes of the incidents: The new software SENEK.SmartGuard uses, amongst other things, artificial intelligence to continuously monitor operating data from the storage system and immediately report any anomalies. SENEK.SmartGuard will be provided free of charge to all new and existing customers. SENEK’s existing product range is designed for a storage capacity of up to 10 kWh, but higher capacities will be required in future as electromobility becomes more established. Our new storage system – the SENEK.Home 4 with a capacity of up to 25 kWh – fulfills these new requirements and will be available from Q4 onwards. In combination with the SENEK.Home 4 storage system, the newly launched SENEK wall boxes plus and premium are designed to deliver dynamic charging that is optimized for the use of solar power, even when there is little sunlight. The wall box premium can also record all vehicle charging processes very precisely in a form that can be submitted to, for example, an employer or the tax office.

In the area of **contracting**, we provide industry, the real estate sector and public clients with a sustainable and efficient energy infrastructure implemented directly at the customer’s site. We create customized energy concepts to provide energy while avoiding CO<sub>2</sub> emissions at the same time. Our energy management system is certified according to DIN EN ISO 50001 and we use it to manage the energy-saving operation and continuous optimization of our more than 220 plants with contracting agreements. In July 2022, we started the operating phase of a new heating supply for a communal area in Baden-Württemberg that will last for 20 years. The new heating plant will exclusively use pellets and German biogas; the supplied heat is thus sourced 100% from renewable energies.

Our company views itself as an experienced and capable **partner for local authorities and public utilities**. We have invested in many local authority companies across the whole of Baden-Württemberg and play an active role in networks for the exchange of information between our participating interests and other public utilities. Local authorities are also able to invest in Netze BW using our “**EnBW connects**” participation model. By 1 July 2022, a total of 214 local authorities had indirectly invested in Netze BW by acquiring shares in the local authority holding company Netze BW GmbH & Co. KG. Almost 14% of the shares in Netze BW are now held by local authorities. “EnBW connects” also gives local authorities the opportunity to get actively involved with current issues in the energy

industry. By remaining in regular, direct contact with the local authorities, and through the introduction of a new market cultivation program in the first half of 2022, Netze BW is now able to determine the needs of local authorities more accurately and further improve its range of services accordingly.

Using our **digital school services**, we help local authorities to upgrade their schools to the latest technological standards and provide them with the necessary infrastructure to make digital learning possible for all of their students. Based on the experience we gained from our long-standing involvement with 165 schools in Stuttgart, we are currently trialing our services in the towns of Munderkingen and Sindelfingen.

The main telecommunications activities at EnBW AG are bundled together in **EnBW Telekommunikation** with its subsidiaries NetCom BW and Plusnet. In the first half of 2022, **NetCom BW** continued to expand by acquiring the end customer business and grid operations of the company Telekommunikation Lindau in the Lake Constance region of Bavaria. It also signed a cooperation agreement with the City of Rottenburg am Neckar that will act as the basis for the self-financed expansion of the fiber-optic network. As part of the project, the company aims to connect up to 6,000 buildings directly to its fiber-optic network in the next few years. NetCom BW was able to conclude a total of 13 new cooperation agreements with local authorities in the first half of 2022 for the self-financed expansion of the fiber-optic network. The transformation from a so-called FTTC network, in which the fiber-optic cable connects up to the copper network, to a FTTB network, in which the fiber-optic cable is laid straight to the building, is a main focus of the corporate strategy followed by NetCom BW.

In the first half of 2022, **Plusnet** signed a total of six new cooperation agreements with local authorities in North Rhine-Westphalia, Rhineland-Palatinate and Hesse to expand the fiber-optic network into industrial parks. The network for the “Zum Scheider Feld” industrial park in Bergisch Gladbach was also commissioned in the middle of the year. In addition, Plusnet and NetCom BW were able to conclude a contract with DB broadband that will give both of our subsidiaries access to more than 20,000 km of dark fiber (unswitched fiber-optic line) owned by Deutsche Bahn.

We have responded to the growing demand for security solutions for IT (information technology) and OT (operative technology) by founding the company **EnBW Cyber Security** in May 2022. The company, based in Karlsruhe, analyzes IT and OT processes, as well as the architecture for critical and non-critical infrastructure. This wholly owned EnBW subsidiary helps companies and authorities to find and implement the right security strategy for them. The Baden-Württemberg Ministry of the Interior and the Baden-Wuerttemberg State Bureau of Investigation have been partners of EnBW Cyber Security since 2020. Business information science students specializing in cybersecurity at DHBW Heilbronn have also been partnering with the company since October 2021.

In the area of **sustainable districts**, we develop sustainable, holistic and, at the same time, cost-effective concepts for district infrastructure for cities, municipalities and project developers. This business area is responsible as the supplier for the general planning of the technical infrastructure with the aim of operating this infrastructure in the future. In addition, we are also integrating other innovative themes such as mobility concepts and digital parking-space management solutions into these districts. In the first half of 2022, we received the first orders for seven new projects covering around 2,400 residential units. The implementation contract for a commercial district in Ostfildern was also concluded in May 2022. It will be home to the largest borehole heat exchanger in Germany. In April 2022, the framework plan for “The new Stöckach” district was concluded. The four-hectare EnBW site in the east of Stuttgart will be home to up to 800 apartments, a primary school, a sports hall and daycare facilities for children. Citizens were invited to participate in a total of three events focusing on this district development project in the first half of 2022.

## Supply reliability

### SAIDI

#### Key performance indicator

	01/01- 30/06/2022	01/01- 30/06/2021	Change in %	01/01- 31/12/2021
SAIDI (electricity) in min./year <sup>1</sup>	9	8	12.5	16

<sup>1</sup> SAIDI (electricity) includes all unscheduled interruptions to supply that last more than three minutes for the end consumer.

The grid subsidiaries of EnBW have always achieved a high level of supply reliability throughout their grid area and for their customers. The corresponding key performance indicator SAIDI (Electricity), which states the average duration of supply interruptions per end consumer per year, stood at nine minutes in the first half of 2022, and thus increased slightly in comparison to the same period of the previous year. The sole reason for this increase was a massive power failure at our grid subsidiary PREdistribuce. This was caused by a fault at the upstream Czech transmission system operator ČEPS that was outside the sphere of influence of PREdistribuce.

Despite the current challenges on the market, the EnBW subsidiaries believe that they remain on course and are still striving to achieve a value of between 15 and 20 minutes per end consumer for the whole of 2022.

## Environment goal dimension

As a large energy company, we share responsibility for our environment and climate protection. Supplying our customers with energy causes emissions, above all through the operation of power plants, and uses natural resources and space. Environmental and climate protection form an integral part of our corporate strategy.

The long-term success of an energy supply company's activities hinges on acceptance by society. We strive to achieve a credible balance between respecting the environment and achieving corporate, political and social goals, and underpin this commitment with a diverse range of activities.

In 2021, we transferred our previous sustainability initiatives into a comprehensive and strategically oriented Sustainability Agenda, which we have now started to implement in our operating business in 2022. Our main aim is to make the company climate neutral with respect to its own CO<sub>2</sub> emissions by 2035. The path to achieving this goal will be marked by the switch from coal to gas, from gas to hydrogen and from hydrogen to green hydrogen – alongside the further expansion and multifaceted use of renewable energies.

## Installed output

The **installed output of renewable energies** at the EnBW Group stood at 5.1 GW at the end of 2021. Alongside hydropower, this included 976 MW of offshore wind power, 1,016 MW of onshore wind power and 498 MWp of photovoltaics. In the first half of 2022, the two major photovoltaic projects, Gottesgabe and Alttrebbin, each with a capacity of around 150 MWp, were commissioned. They can supply around 90,000 households with energy from renewable sources. In combination with the already existing Weesow-Willmersdorf solar park, these major projects create a solar cluster in Brandenburg with an output of about 500 MWp. We also placed other solar parks into operation in Baden-Württemberg in the first half of 2022. In June 2022, EnBW and Procon Solar also agreed the takeover of pre-developed photovoltaic projects in Brandenburg with a capacity of around 400 MW and an option for a further 400 MW. The contracts cover solar projects at various stages of development and are set to be undertaken in two stages. As of 1 July 2022, solar projects in the advanced stages of development with capacity of around 400 MW were initially transferred to EnBW. Further projects in the early stages of development with capacity of around 400 MW will optionally follow by the start of February 2023 at the latest. In the expansion of offshore wind power, we are now focusing on growth opportunities in Europe. Following our success in the auction for offshore wind rights off the coast of New York and New Jersey at the end of February 2022, we are withdrawing from our USA

Detailed information on the **environment goal dimension** can be found in our **Integrated Annual Report 2021**.

[Online ↗](#)

A detailed presentation of the **EnBW Sustainability Agenda** and our **climate neutrality strategy** can be found here.

[Online ↗](#)

business and transferring our offshore activities on the east and west coasts to our former partner TotalEnergies. We plan to construct the wind farm EnBW He Dreihl with a total output of 900 MW in the German North Sea. In January 2022, EnBW and bp had a bid accepted for the rights to develop a 2.9 GW offshore wind farm off the east coast of Scotland. The "Morven" wind farm is due to be built here from 2026/2027 and will generate enough wind power to supply more than three million households. Following successful auctions in 2021 and 2022, we are planning to construct a total of three offshore wind farms with an overall output of around 6 GW together with our partner bp. It is still proving difficult to expand our onshore portfolio due to, among other things, the lack of approved sites and protracted approval processes.

### Current selected activities

As part of its activities in the area of energy generation from hydropower, EnBW is currently trialing a new technology for **protecting fish**. A special turbine has been in operation since last year at the Hirschhorn power plant. It has modified rotor blades and operates at a lower speed, significantly reducing the potential hazards for fish. We also installed a device at the inlet to the power plant that is designed to influence the route taken by the fish as they migrate over the dam. We have been testing how both new systems work in practice since May 2022. A comprehensive monitoring process has been implemented to detect any injury or other possible damage to the fish. The monitoring phase will end in fall 2022. These studies should provide EnBW with important findings on the fish-friendly operation of a hydropower plant that can be transferred to other plants on the Neckar.

Intact forests and diverse green areas help to protect the climate. In the first half of 2022, we once again made **tree donations** and participated in **planting campaigns**. In cooperation with the German Forest Protection Association, EnBW ODR donated 900 Douglas firs to the district of Welzheim for the reforestation of their city forest. The EnBW contracting team also participated in a planting campaign at the Energy Center Waldbronn – three high-stem trees, 20 different woody plants and around 700 shrubs were planted around the site. The planted area has been designed so that it can be maintained in future without a great deal of effort and also to provide a habitat for endangered insects. This way, we contribute to the promotion of biodiversity and the preservation of species diversity.

Switching over to **environmentally friendly grid operation** makes a contribution to protecting the environment in Germany. In Neckarsulm, Netze BW installed two new transformers in June 2022 to supplement the three existing transformers at the site. This is the first time that a distribution grid operator in Germany has installed a high-voltage transformer that uses 100% recycled transformer oil for insulation. The financial cost of the recycled oil transformer is not significantly higher than a standard transformer. If the transformers in Neckarsulm perform as well as expected, there is nothing preventing the use of recycled oil transformers at other transformer stations operated by Netze BW in the future. ED Netze as well made a contribution to the sustainable development of the German electricity grid in the first half of 2022. The company constructed the first climate-friendly medium-voltage transformer in its grid area at the transformer station in Rheinfeldern-Herten. Dry air and a vacuum are used as insulating and switching media instead of the greenhouse gas sulfur hexafluoride. The conversion of this transformer station is a pioneering pilot project for ED Netze, helping it continue its work on making local transformer stations more climate-friendly.

The EnBW funding program "**Stimuli for Diversity**" has been successfully supporting social engagement in Baden-Württemberg for the protection of amphibians since 2011 and the protection of reptiles since 2016. EnBW launched the funding program together with the Baden-Württemberg State Institute for the Environment, Measurements and Nature Conservation (LUBW). It is part of the project "The economy and business for nature," which is a component of the state initiative "Active for biological diversity" that has been developed by the state government of Baden-Württemberg. The application period for the 2022 funding year ended in May 2022. Numerous well-founded project applications were received once again. The winning projects were selected by a specialist jury in July 2022. The selected projects will then be funded by us and realized between October and December 2022.

Find out more about our measures to **conserve biological diversity** and **protect nature and species on our website**.

[Online ↗](#)



## Employees goal dimension

### Selected activities

Our **HR strategy 2025** “People as the main focus” supports the implementation of the EnBW 2025 corporate strategy. Digitalization requires a willingness to change, technological expertise and modern working practices. Our managers should not just place expectations on their employees but also support them and lead their teams with conviction into a more complex world. Our HR policy will support employees in this process of change, for example by developing new forms for cooperation and for further training and education. In addition, we value the potential offered by the diversity of our employees. Our sustainable HR strategy is also one of the most important measures for the strategic theme “Culture of sustainability” in the EnBW Sustainability Agenda.

The HR strategy focuses on six key strategic themes: People-centered transformation, Employer brand & recruiting, Leadership & skills, Qualification@EnBW, Diversity@EnBW and HR processes, services & digitalization. We provided detailed information on these individual themes in our Integrated Annual Report 2021 from [p. 105](#)<sup>7</sup>.

As part of the “**BestWork**” initiative, we have been focusing on the question “How do we design the working world of the future?” since 2021. A special focus is being placed on rules for mobile working that take account of the best interests of employees and designing modern working worlds in the office that fulfill the requirements of a more flexible and hybrid way of working. The first stage of the Group-wide rollout of “BestWork” began at EnBW AG and some subsidiaries in November 2021 and was concluded in the first quarter of 2022. At the end of the first stage, every employee was able to decide whether they wanted to work more or less than 50% from home or on a mobile basis. This decision will be valid in the first instance until the end of 2023. Stage 2 of “BestWork” started in February 2022 with the motto “CooperationSpaces.” The aim of this stage is to adapt the workspaces and technical equipment so they are optimized towards the form of cooperation selected by each team and to agree the form of hybrid collaboration within the team. Stage 2 is due to end in 2023 when employees move into their newly designed workspaces. In this context, employees at EnBW AG and some subsidiaries are also being given the opportunity to work from another European country. They are permitted to work from abroad for a maximum of 30 calendar days at a time and for a maximum of 90 calendar days every 12 months. We anticipate that the comprehensive range of opportunities for mobile working will help to reduce CO<sub>2</sub> emissions caused by commuting to work and thus contribute to fulfilling the EnBW Sustainability Agenda.

We were able to make further improvements to our digital learning and development platform “**LernWerk**.” A prototype of the platform, which enables employees to organize their own personal development independently, was tested at the end of 2021 by more than 100 internal specialists and subject-matter experts. In the first quarter of 2022, the pilot phase of “LernWerk” was launched in two business areas. All employees who have access to the EnBW Intranet have also been able to use “LernWerk” since the middle of June. This amounts to more than 22,500 users.

In accordance with the **collective bargaining agreement** from 16 March 2021, a second wage increase of 1.6% came into force on 1 May 2022. The first wage increase of 2.1% was made on 1 March 2021. In addition, employees received a one-off tax-free payment based on the pay scale groupings. Higher pay grades received €350 and lower grades €700, while trainees received €200.

EnBW developed very positively from an economic perspective in the 2021 financial year. Against this background, it was decided that employees at the Group companies that have corresponding company agreements would receive a **profit sharing bonus** for 2021 in the amount of 114% of one month’s salary. The profit sharing bonus was paid out with the salary checks for April.

## Performance indicators for employees

### Employees<sup>1,2</sup>

	30/06/2022	31/12/2021 <sup>3</sup>	Change in %
Smart Infrastructure for Customers	5,121	5,227	-2.0
System Critical Infrastructure	11,095	10,866	2.1
Sustainable Generation Infrastructure	7,160	7,051	1.5
Other	2,936	2,920	0.5
<b>Total</b>	<b>26,312</b>	<b>26,064</b>	<b>1.0</b>
Number of full-time equivalents <sup>4</sup>	24,710	24,519	0.8

1 Number of employees excluding apprentices/trainees and inactive employees.

2 The number of employees for the ITOs (ONTRAS Gastransport, terranets bw and TransnetBW) is only updated at the end of the year; for intervals of less than a year, the number of employees from 31/12/2021 is carried forward.

3 Restated for the new segment structure valid from 2022.

4 Converted into full-time equivalents.

As of 30 June 2022, the EnBW Group had 26,312 employees, which was 248 more than at the end of 2021. This increase was primarily due to taking on new employees in strategic growth fields. In the System Critical Infrastructure segment, the number of employees increased as a result of the importance of the regulated business. The increase in the number of employees in the Sustainable Generation Infrastructure segment was due to expansion in the area of Renewable Energies and shifting the business unit EnBW Contracting between the segments. Digitalization and transformation processes as well as restructuring within the Group increased the number of employees in "Other." The fall in the number of employees in the Smart Infrastructure for Customers segment was primarily due to movement between the segments in the area of innovation, although this effect was offset to some extent by the recruitment of additional personnel for the expansion of broadband and the increased demand for energy and storage solutions.

## Occupational safety

### LTIF

#### Key performance indicator

	01/01– 30/06/2022	01/01– 30/06/2021	Change in %	01/01– 31/12/2021
LTIF for companies controlled by the Group <sup>1,2,3</sup>	2.6	1.7	52.9	2.3
LTIF overall <sup>1,2</sup>	3.7	2.5	48.0	3.3

1 LTIF indicates how many LTI occurred per one million working hours performed.

2 Variations in the group of consolidated companies (all companies with more than 100 employees, excluding external agency workers and contractors, are considered). Companies that were fully consolidated for the first time during the 2022 financial year were not included in the calculations for the LTIF performance indicators.

3 Except for companies in the area of waste management.

The key performance indicator LTIF (Lost Time Injury Frequency) for companies controlled by the Group increased significantly in the first six months of 2022 in comparison to the same period of the previous year – and increased slightly in comparison to the figure for the whole of 2021. This was mainly due to an increase in the LTIs (Lost Time Injuries) at five companies. The LTIF was compiled for the first time at two of these companies in the first half of 2022. At the same time, the average days of absence per accident fell by more than 50% and now stands at 9.6 (previous year: 21.1) at the companies controlled by the Group. This means that the severity of the accidents has markedly declined. The LTIF overall – including our subsidiaries in the area of waste management – increased in the reporting period by a similar proportion to the LTIF for companies controlled by the Group. The average days of absence per accident was 10.3 days and was thus also considerably below the value in the same period of the previous year (18.1).

Since most of the protective measures relating to the coronavirus ended in April 2022, we have been able to hold more in-person **training courses** on occupational safety. The ongoing pandemic was still taken into account when organizing these courses and they were thus held in small groups. We are continuously following the further development of the pandemic so that we will be able to take any decisions promptly, especially with respect to fall/winter 2022. This particularly applies to the

critical infrastructure sector, where we have already made preparations for dealing with various possible scenarios.

We are continuing to provide self-tests for our employees, but our company doctors are not currently giving any **coronavirus vaccines** to employees. Nevertheless, we are monitoring the recommendations made by the Standing Committee on Vaccination (STIKO) and will take all of the necessary measures to provide our employees with a second booster vaccination if and when it is also recommended by STIKO for people under 60 years old.

We also address the safety and protection of our employees in our EnBW Sustainability Agenda in the strategic theme "Protecting the natural environment." In order to help us avoid accidents and work-related illness and continuously improve safety in the workplace, we plan to introduce a **management system for health and safety in the workplace** based on ISO 45001 across the Group in the coming years. Clearly defined responsibilities and processes have already been laid down in the Group guidelines "Occupational health and safety protection." Some business units at EnBW have already been certified in accordance with ISO 45001.

## Forecast

In the following forecast we take a look at the expected development of EnBW in the current financial year. It should be noted that the war between Russia and Ukraine, high volatility on the markets and the looming threat of a gas shortage increase the level of uncertainty with which predictions about the future development of the company can be made.

### Adjusted EBITDA and the share of the adjusted EBITDA accounted for by the segments

Development in 2022 (adjusted EBITDA and the share of adjusted EBITDA accounted for by the segments) compared to the previous year

	Earnings performance (adjusted EBITDA) compared to the previous year			Development of the share of adjusted EBITDA for the EnBW Group accounted for by the segments	
	Forecast for 2022 according to IAR 2021	Current forecast for 2022	2021	2022	2021
Smart Infrastructure for Customers	€350 to €425 million	✓	€344.0 million	10 % to 15 %	11.6 %
System Critical Infrastructure	€1,225 to €1,325 million	↘	€1,263.0 million	35 % to 45 %	42.7 %
Sustainable Generation Infrastructure	€1,650 to €1,750 million	↗	€1,539.7 million	50 % to 60 %	52.0 %
Other/Consolidation			€-187.4 million		-6.3 %
<b>Total</b>	<b>€3,025 to €3,175 million</b>	✓	<b>€2,959.3 million</b>		<b>100.0 %</b>

Based on the result in the first half of 2022 in the System Critical Infrastructure segment, which was particularly impacted by increased prices on the markets as a result of high expenses for the grid reserve and redispatch to maintain the security of supply, we anticipate that the adjusted EBITDA will fall below the forecasted range for this segment presented in the 2021 Group management report. In the Sustainable Generation Infrastructure segment, we anticipate that the adjusted EBITDA will exceed the forecasted range for this segment presented in the 2021 Group management report because of the continuing high prices on the market. Due to the current level of uncertainty and volatility in both of the previously named segments, we have decided not to update the forecasted range. While high market prices have a negative impact on the expenses for the grid reserve and redispatch in the System Critical Infrastructure segment, they have a positive impact on our generation from renewable energies and conventional generation in the Sustainable Generation Infrastructure segment. As a result of this robust business model that covers all stages of the value chain, our earnings forecast for the Group for the whole of 2022 remains unchanged from that given in the 2021 Group management report. The forecast for the Smart Infrastructure for Customers segment also remains unchanged. The adjusted EBITDA for the EnBW Group will still be between €3.025 billion and €3.175 billion.

### Expected trends in non-financial key performance indicators

After the end of the first half of 2022, there are no significant changes to the non-financial performance indicators compared to the expectations formulated for the 2022 financial year in the Integrated Annual Report 2021 (Integrated Annual Report 2021, p. 125 ff.<sup>7</sup>).

## Opportunities and risks

In comparison to the report issued at the end of 2021 and the Quarterly Statement January to March 2022, the opportunities and risks faced by the EnBW Group remained stable until the middle of 2022 due to fact that any changes in risk were almost fully offset by changes in opportunities, despite the fact that the war between Russia and Ukraine is continuing to have a noticeable impact on our value added chain and on the individual segments. The opportunities and risks are evaluated using a set of different scenarios and probabilities of occurrence, which also cover, in particular, the possibility of a further reduction in, or even a complete halt to, gas deliveries from Russia. How this situation actually develops in the future could either increase or reduce the level of opportunity or risk presented here.

Furthermore, rising prices and limited availability of materials have exacerbated the risks faced in the individual segments. The growing threat of rising inflation, payment defaults and cyberattacks are also playing a role. On the other hand, the increase in the key interest rate and a resulting rise in interest rates will improve our financial and liquidity position. The volatile trading environment also presents both opportunities and risks. The individual opportunities and risks relevant to reporting are presented in the respective segments. No risks currently exist that might jeopardize the EnBW Group as a going concern. Using the report on risks in the 2021 Group management report as a basis, only the material opportunities or risks that have significantly changed, arisen or ceased to exist in the reporting period are described in this Six-Monthly Financial Report January to June 2022. A detailed presentation of the opportunity and risk position can be found in the Integrated Annual Report 2021 from p. 128<sup>7</sup> onwards.

### Classification of the level of opportunity/risk

	Adjusted EBITDA	Net debt
Low	< €100 million	< €350 million
Moderate	≥ €100 million to < €350 million	≥ €350 million to < €1,200 million
Significant	≥ €350 million to < €600 million	≥ €1,200 million to < €2,000 million
Material	≥ €600 million	≥ €2,000 million

### Cross-segment opportunities and risks

**Legislative and regulatory consequences:** There is currently a high level of regulatory and political uncertainty due to the war between Russia and Ukraine. This could have an impact on the Group, for example, in the implementation of the Energy Security Act (EnSiG). In particular, there is also uncertainty in the following areas: funding of renewable energies, expansion of the grid, the future of the gas infrastructure and expansion of electromobility. There are both risks and opportunities associated with any change to the legal regulations that have a bearing on EnBW. Due to the greater level of uncertainty, mainly as a result of the war between Russia and Ukraine (e.g., deficit in gas supplies, purchasing of replacement coal), the risks could increase. At the same time, there could also be opportunities if some processes are accelerated. Any financial impact is described for each of the potential individual risks that are explained in more detail below.

**State-sponsored cyberattacks due to the war between Russia and Ukraine:** The war is also being accompanied by attacks in cyberspace and there is a growing risk of state-sponsored cyberattacks. According to information obtained by the Federal Office for Information Security, the possibility of cyberattacks on critical infrastructure and suppliers could increase in the foreseeable future. On the reporting date, there was no indication that there would be more than a low to moderate level of risk in this area for 2022. This potential risk would have an impact on the key performance indicator adjusted EBITDA and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Discount rate applied to pension provisions:** There is generally opportunity and risk associated with any change in the discount rate applied to the pension provisions because the present value of the pension provisions falls when the discount rate increases and increases when the discount rate falls.

As of the reporting date of 30 June 2022, the discount rate was 3.35%, which was up 2.2 percentage points on the rate at the end of 2021 (1.15%). Against the background of the expected development of interest rates, we identify a moderate to material level of opportunity for 2022. This will have an impact on net debt and thus on the key performance indicator debt repayment potential.

**Margin/liquidity requirements:** The Group's liquidity planning is subject to an inherent degree of uncertainty, especially with respect to margin payments. Sharp increases in prices and high volatility in energy trading on the commodity markets (EEX/ICE) have led to high cash inflows and outflows as part of margining processes which are beyond the normal margin requirements. This effect is currently being exacerbated by the war between Russia and Ukraine, which has noticeably increased price movements and volatilities. There is a material level of opportunity and risk for 2022 with an impact on net debt and thus on the key performance indicator debt repayment potential, as well as on the key performance indicator value spread via capital employed.

## System Critical Infrastructure segment

**Possible consequences of the war between Russia and Ukraine on system critical infrastructure:** Russia's attack on Ukraine could have a material impact on the grid infrastructure, such as on the operation of the gas grid and on the supply chain (required raw materials and grid construction materials). There is a low level of risk in this area for 2022. This would have an impact on the key performance indicator adjusted EBITDA and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Additional expenses for the grid reserve and redispatch:** At TransnetBW, high market prices for fuels and electricity and increased load flows can result in increasing expenses for redispatching and the grid reserve. This development has also been exacerbated by the war between Russia and Ukraine. Any related increased expenses in 2022 will be recovered again from 2025. At the same time, these higher expenses will be offset to some extent by revenue from congestion management. There is a material level of risk with an impact on the key performance indicator adjusted EBITDA for 2022. This will have an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Year-end balance on the EEG bank account:** The EEG bank account is a separately managed bank account in accordance with section 5 of the German Compensation Mechanism Ordinance (AusglMechV) and is kept separate from other areas of activity. In accordance with AusglMechV, a deficit or surplus on the account balance can have a temporary positive or negative effect on the calculation of the net debt of EnBW, respectively. As of the reporting date of 30 June 2022, there was a surplus of €2,434.5 million on the EEG bank account of our subsidiary TransnetBW (reporting date of 31 December 2021: €1,565.2 million). The reduction in the EEG cost allocations to zero on 1 July 2022 is likely to lead to a fall in the balance on the EEG bank account. We expect the EEG account to develop positively throughout 2022 and have a positive bank balance at the end of the year. There is a material level of opportunity with an impact on net debt and thus on the key performance indicator debt repayment potential.

## Sustainable Generation Infrastructure segment

**Fluctuations in energy yield in the North Sea and Baltic Sea:** There are generally opportunities and risks for wind power plants due to fluctuations in the energy yield. As we expand our wind power plants and our wind farm portfolio continues to grow, the variation in the level of opportunity and risk will naturally increase. Findings on the development of wind conditions are continuously examined to identify the possible effects of these risks and they are taken into account in the planning. There is still a low level of opportunity and risk with an impact on the key performance indicator adjusted EBITDA for the remainder of 2022, and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.



**Possible consequences of the war between Russia and Ukraine in the trading sector:** The effects will have an impact on different areas of the trading sector. There are risks associated with replacement purchases due to price volatility and uncertainties with respect to potential compensatory mechanisms which will be subject to deductibles. These risks together with cuts in supply and possible changes in supply quotas are all especially relevant to VNG, which is impacted by two gas supply contracts. These risks can be mitigated to some extent by the instruments available in the Energy Security Act. In addition, there are risks involved with the transport, storage and distribution of natural gas. Furthermore, a ban on gas-fired generation stemming from the Substitute Power Plant Maintenance Act could pose a risk for power plant distribution. There is thus a material level of risk. If the impact on earnings does not reach the level anticipated in the Six-Monthly Financial Report, there is a moderate opportunity that some of the risk provisions can be reversed again. The potential damage lies in the low single-digit billion euro range and is mainly attributable to two gas supply contracts that are affected by the restrictions in supply. This would have an impact on the key performance indicator adjusted EBITDA and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Supply chain risks in generation and operation:** Due to the protracted pandemic, the effects of the war between Russia and Ukraine and increasing inflation, we expect unplanned price increases and exceptionally long delivery times in certain cases, especially for materials and supplies. There is a low level of risk with an impact on the key performance indicator adjusted EBITDA in 2022 and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Power plant optimization:** Following the conclusion of the hedging of generation activities, the Trading business unit will manage the further deployment of the power plants. This is being carried out as part of power plant optimization on the forward market, through the sale of system services and through placements on the spot and intraday trading platforms. We currently identify a high level of volatility due to prices on the market and thus a low to material level of opportunity for 2022, with an impact on the key performance indicator adjusted EBITDA and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Credit risk in energy trading:** There is a risk that trading partners will fail to fulfill their financial obligations or be unable to fulfill them on time. Our credit management department counters this risk by carefully monitoring credit lines, conducting stress tests and introducing measures to reduce its impact. There is a low to material level of risk with an impact on the key performance indicator adjusted EBITDA for 2022 and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Availability of power plants (previously: Availability and contribution margin losses in the power plant portfolio):** There is a general risk that exogenous and endogenous factors will have an influence on the planned availability of power plants. We are currently assessing how the heatwave and low water levels could impact the deployment of power plants and the supply of coal to various sites. We try to counter these risks using preventive measures. Depending on the duration of the interruption to the operation of the power plant and the prices on the energy trading market, this could have a positive or negative impact on the operating result. For the remainder of 2022, there is a moderate level of opportunity and material level of risk in this area. This will have an impact on the key performance indicator adjusted EBITDA and thus an indirect impact on the key performance indicator debt repayment potential via the retained cash flow and on the key performance indicator value spread via the adjusted EBIT.

**Dismantling of nuclear power plants:** For long-term major projects such as the remaining operation and dismantling of a nuclear power plant, there is a general risk that delays and additional costs may arise over the course of time due to changed framework conditions. Moreover, there is also an

opportunity to make lasting cost savings due to synergies over the course of time and due to learning effects for subsequent dismantling activities. During the project planning stage, opportunities and risks were identified that could result in reduced or additional costs, or adjustments to the term of the project. There is a low level of opportunity and risk for 2022 with an impact on net debt and thus on the key performance indicator debt repayment potential.

## Six-monthly consolidated financial statements

# Income statement

in € million	01/04–30/06/2022	01/04–30/06/2021	01/01–30/06/2022	01/01–30/06/2021
Revenue including electricity and energy taxes	13,519.5	5,951.6	27,403.8	12,939.5
Electricity and energy taxes	-124.5	-124.1	-284.3	-284.8
<b>Revenue</b>	<b>13,395.0</b>	<b>5,827.5</b>	<b>27,119.5</b>	<b>12,654.7</b>
Changes in inventories	20.2	4.5	56.7	34.4
Other own work capitalized	68.1	56.4	115.6	92.8
Other operating income <sup>1</sup>	2,895.0	474.5	4,905.1	685.3
Cost of materials	-12,211.0	-4,815.3	-24,389.9	-10,136.2
Personnel expenses	-635.9	-614.0	-1,242.0	-1,180.9
Impairment losses <sup>2</sup>	-20.2	3.5	-23.2	-6.7
Other operating expenses	-3,220.1	-580.2	-4,899.5	-976.2
<b>EBITDA</b>	<b>291.1</b>	<b>356.9</b>	<b>1,642.3</b>	<b>1,167.2</b>
Amortization and depreciation	-488.9	-1,322.1	-872.8	-1,691.1
<b>Earnings before interest and taxes (EBIT)</b>	<b>-197.8</b>	<b>-965.2</b>	<b>769.5</b>	<b>-523.9</b>
Investment result	75.3	30.1	141.6	58.6
of which net profit/loss from entities accounted for using the equity method	(-16.3)	(3.3)	(-2.4)	(21.7)
of which other profit/loss from investments	(91.6)	(26.8)	(144.0)	(36.9)
Financial result	79.4	101.1	36.6	156.1
of which finance income	(385.9)	(186.4)	(568.6)	(375.8)
of which finance costs	(-306.5)	(-85.3)	(-532.0)	(-219.7)
<b>Earnings before tax (EBT)</b>	<b>-43.1</b>	<b>-834.0</b>	<b>947.7</b>	<b>-309.2</b>
Income tax	-44.4	266.6	-274.8	136.5
<b>Group net profit/loss</b>	<b>-87.5</b>	<b>-567.4</b>	<b>672.9</b>	<b>-172.7</b>
of which profit/loss shares attributable to non-controlling interests	(-45.1)	(-83.5)	(109.0)	(-9.9)
of which profit/loss shares attributable to the shareholders of EnBW AG	(-42.4)	(-483.9)	(563.9)	(-162.8)
<b>EnBW AG shares outstanding (million), weighted average</b>	<b>270.855</b>	<b>270.855</b>	<b>270.855</b>	<b>270.855</b>
<b>Earnings per share from Group net profit/loss (€) <sup>3</sup></b>	<b>-0.16</b>	<b>-1.79</b>	<b>2.08</b>	<b>-0.60</b>

<sup>1</sup> Includes reversals of impairment losses of €235.8 million (30/06/2021: €26.9 million).

<sup>2</sup> According to IFRS 9.

<sup>3</sup> Diluted and basic; in relation to profit/loss attributable to the shareholders of EnBW AG.

# Statement of comprehensive income

in € million	01/04-30/06/2022	01/04-30/06/2021	01/01-30/06/2022	01/01-30/06/2021
<b>Group net profit/loss</b>	<b>-87.5</b>	<b>-567.4</b>	<b>672.9</b>	<b>-172.7</b>
Revaluation of pensions and similar obligations	1,248.2	13.0	2,085.8	679.8
Entities accounted for using the equity method	0.0	0.0	0.0	0.9
Income taxes on other comprehensive income	-367.2	-1.1	-536.8	-198.9
<b>Total of other comprehensive income and expenses without future reclassifications impacting earnings</b>	<b>881.0</b>	<b>11.9</b>	<b>1,549.0</b>	<b>481.8</b>
Currency translation differences	-0.3	27.7	30.0	33.5
Cash flow hedge	237.5	221.9	799.5	292.2
Financial assets at fair value in equity	-128.1	11.5	-233.0	-10.0
Entities accounted for using the equity method	1.0	-0.1	3.1	-0.4
Income taxes on other comprehensive income	-37.8	-69.6	-182.8	-82.1
<b>Total of other comprehensive income and expenses with future reclassifications impacting earnings</b>	<b>72.3</b>	<b>191.4</b>	<b>416.8</b>	<b>233.2</b>
<b>Total other comprehensive income</b>	<b>953.3</b>	<b>203.3</b>	<b>1,965.8</b>	<b>715.0</b>
<b>Total comprehensive income</b>	<b>865.8</b>	<b>-364.1</b>	<b>2,638.7</b>	<b>542.3</b>
of which profit/loss shares attributable to non-controlling interests	(-48.2)	(-55.1)	(201.4)	(24.1)
of which profit/loss shares attributable to the shareholders of EnBW AG	(914.0)	(-309.0)	(2,437.3)	(518.2)

# Balance sheet

in € million	30/06/2022	31/12/2021
<b>Assets</b>		
<b>Non-current assets</b>		
Intangible assets	3,408.8	3,417.0
Property, plant and equipment	20,777.9	20,364.4
Entities accounted for using the equity method	1,130.1	1,017.9
Other financial assets	6,518.3	6,744.3
Trade receivables	331.1	330.2
Other non-current assets	1,861.8	2,243.5
Deferred taxes	175.8	1,115.2
	<b>34,203.8</b>	<b>35,232.5</b>
<b>Current assets</b>		
Inventories	3,905.9	2,290.3
Financial assets	1,575.1	1,174.1
Trade receivables	6,360.3	5,952.5
Other current assets	19,447.8	19,916.7
Cash and cash equivalents	5,242.8	6,653.1
	<b>36,531.9</b>	<b>35,986.7</b>
<b>Assets held for sale</b>	2.5	54.0
	<b>36,534.4</b>	<b>36,040.7</b>
	<b>70,738.2</b>	<b>71,273.2</b>
<b>Equity and liabilities</b>		
<b>Equity</b>		
<b>Shares of the shareholders of EnBW AG</b>		
Subscribed capital	708.1	708.1
Capital reserve	774.2	774.2
Revenue reserves	6,008.1	5,742.1
Treasury shares	-204.1	-204.1
Other comprehensive income	-499.5	-2,372.9
	<b>6,786.8</b>	<b>4,647.4</b>
<b>Non-controlling interests</b>	3,760.8	3,851.9
	<b>10,547.6</b>	<b>8,499.3</b>
<b>Non-current liabilities</b>		
Provisions	11,481.1	14,089.5
Deferred taxes	955.5	1,018.3
Financial liabilities	9,082.7	9,182.5
Other liabilities and subsidies	3,964.9	4,240.7
	<b>25,484.2</b>	<b>28,531.0</b>
<b>Current liabilities</b>		
Provisions	1,850.4	2,676.5
Financial liabilities	1,312.2	2,067.9
Trade payables	8,338.3	6,475.8
Other liabilities and subsidies	23,205.5	23,022.7
	<b>34,706.4</b>	<b>34,242.9</b>
	<b>70,738.2</b>	<b>71,273.2</b>

# Cash flow statement

in € million	01/01– 30/06/2022	01/01– 30/06/2021
<b>1. Operating activities</b>		
Group net profit/loss	672.9	-172.8
Income tax	274.8	-136.3
Investment and financial result	-178.2	-214.8
Amortization and depreciation	872.8	1,691.1
EBITDA	1,642.3	1,167.2
Changes in provisions	-45.0	36.5
Result from disposals of assets	-18.0	4.2
Other non-cash-relevant expenses/income	-267.3	-23.2
Change in assets and liabilities from operating activities	209.3	2,044.4
Inventories	[-2,001.8]	[157.6]
Net balance of trade receivables and payables	[1,288.4]	[783.9]
Net balance of other assets and liabilities	[922.7]	[1,102.9]
Income tax paid	-101.9	-79.2
<b>Cash flow from operating activities</b>	<b>1,419.4</b>	<b>3,149.9</b>
<b>2. Investing activities</b>		
Capital expenditure on intangible assets and property, plant and equipment	-871.2	-760.7
Disposals of intangible assets and property, plant and equipment	30.6	45.4
Cash received from subsidies for construction costs and investments	40.6	33.0
Cash paid for the acquisition of companies and interests in entities accounted for using the equity method as well as in joint operations <sup>1</sup>	-98.9	-265.6
Cash received from the sale of companies and interests in entities accounted for using the equity method as well as in joint operations	24.7	0.8
Change in securities and financial investments	-534.0	-249.6
Interest received	61.9	91.9
Dividends received	138.9	72.0
<b>Cash flow from investing activities</b>	<b>-1,207.4</b>	<b>-1,032.8</b>
<b>3. Financing activities</b>		
Interest paid	-153.6	-195.5
Dividends paid	-422.4	-287.2
Cash received for changes in ownership interest without loss of control	0.0	127.3
Increase in financial liabilities	6,156.5	2,052.3
Repayment of financial liabilities	-6,972.5	-1,857.6
Repayment of lease liabilities	-92.6	-102.0
Cash received from capital increase of non-controlling interests	3.5	6.5
Cash paid for capital decrease of non-controlling interests	-159.3	-1.7
<b>Cash flow from financing activities</b>	<b>-1,640.4</b>	<b>-257.9</b>
<b>Net change in cash and cash equivalents</b>	<b>-1,428.4</b>	<b>1,859.2</b>
Change in cash and cash equivalents due to changes in the consolidated companies	-3.2	23.0
Net foreign exchange difference	21.4	12.0
Change in cash and cash equivalents due to risk provisions	0.0	-0.1
<b>Change in cash and cash equivalents</b>	<b>-1,410.3</b>	<b>1,894.1</b>
Cash and cash equivalents at the beginning of the period	6,653.1	1,252.7
<b>Cash and cash equivalents at the end of the period</b>	<b>5,242.8</b>	<b>3,146.8</b>

<sup>1</sup> In the same period of the previous year, this included payments related to bids for offshore wind rights. These will only lead to a change in the consolidated companies at a later date.



# Statement of changes in equity

in € million

	Other comprehensive income										
	Subscribed capital and capital reserve	Revenue reserves	Treasury shares	Revaluation of pensions and similar obligations	Currency translation differences	Cash flow hedge	Financial assets at fair value in equity	Entities accounted for using the equity method	Shares of the shareholders of EnBW AG	Non-controlling interests	Total
<b>As of 01/01/2021</b>	1,482.3	5,629.7	-204.1	-2,922.9	-23.7	-78.5	29.5	-4.7	3,907.6	3,861.2	<b>7,768.8</b>
Total other comprehensive income				476.5	28.0	181.0	-5.0	0.5	681.0	34.0	<b>715.0</b>
Group net loss		-162.8							-162.8	-9.9	<b>-172.7</b>
<b>Total comprehensive income</b>	<b>0.0</b>	<b>-162.8</b>	<b>0.0</b>	<b>476.5</b>	<b>28.0</b>	<b>181.0</b>	<b>-5.0</b>	<b>0.5</b>	<b>518.2</b>	<b>24.1</b>	<b>542.3</b>
Dividends		-270.9							-270.9	-35.3	<b>-306.2</b>
Other changes <sup>1</sup>		21.0							21.0	109.6	<b>130.6</b>
<b>As of 30/06/2021</b>	<b>1,482.3</b>	<b>5,217.0</b>	<b>-204.1</b>	<b>-2,446.4</b>	<b>4.3</b>	<b>102.5</b>	<b>24.5</b>	<b>-4.2</b>	<b>4,175.9</b>	<b>3,959.6</b>	<b>8,135.5</b>
<b>As of 01/01/2022</b>	<b>1,482.3</b>	<b>5,742.1</b>	<b>-204.1</b>	<b>-2,559.3</b>	<b>43.0</b>	<b>136.0</b>	<b>9.3</b>	<b>-1.9</b>	<b>4,647.4</b>	<b>3,851.9</b>	<b>8,499.3</b>
Total other comprehensive income				1,529.9	24.8	479.4	-163.8	3.1	1,873.4	92.4	<b>1,965.8</b>
Group net profit		563.9							563.9	109.0	<b>672.9</b>
<b>Total comprehensive income</b>	<b>0.0</b>	<b>563.9</b>		<b>1,529.9</b>	<b>24.8</b>	<b>479.4</b>	<b>-163.8</b>	<b>3.1</b>	<b>2,437.3</b>	<b>201.4</b>	<b>2,638.7</b>
Dividends		-297.9							-297.9	-145.0	<b>-442.9</b>
Other changes <sup>1</sup>		0.0							0.0	-147.5	<b>-147.5</b>
<b>As of 30/06/2022</b>	<b>1,482.3</b>	<b>6,008.1</b>	<b>-204.1</b>	<b>-1,029.4</b>	<b>67.8</b>	<b>615.4</b>	<b>-154.5</b>	<b>1.2</b>	<b>6,786.8</b>	<b>3,760.8</b>	<b>10,547.6</b>

<sup>1</sup> Of which changes in revenue reserves due to changes in ownership interest in subsidiaries without loss of control of €0.0 million (previous year: €21.0 million). Of which changes in non-controlling interests due to changes in ownership interest in subsidiaries without loss of control of €0.0 million (previous year: €93.3 million). Of which capital increases by minority shareholders of €3.5 million (previous year: €6.5 million). Of which capital reductions by minority shareholders of €159.3 million (previous year: €1.7 million).

# Notes and explanations

## General principles

The six-monthly financial statements of the EnBW Group are prepared according to the International Financial Reporting Standards (IFRS), the adoption of which is mandatory in the EU as of the reporting date. In addition, the related interpretations (IFRIC/SIC) are observed. Standards and interpretations that have not yet come into force have not been adopted.

The accounting policies applied for the six-monthly consolidated financial statements as of 30 June 2022, as well as the evaluation methods and input parameters for measuring fair value, are the same as those used for the consolidated financial statements as of 31 December 2021 with the exception of the new policies described below.

In accordance with IAS 34, the form of reporting chosen for the presentation of the consolidated financial statements of EnBW AG as of 30 June 2022 was shortened in comparison with that used for the consolidated financial statements as of 31 December 2021.

In addition to the income statement, the statement of comprehensive income, balance sheet, condensed cash flow statement and statement of changes in equity for the EnBW Group are presented separately. Rounding differences may occur due to the methods used to carry out the calculations.

## Changes in accounting policies

### First-time adoption of amended accounting standards

The International Accounting Standards Board (IASB) and the IFRS Interpretation Committee (IFRS IC) have adopted the following new standards and amendments to existing standards:

#### First-time adoption of amended accounting standards

Announcement	Title	Mandatory adoption for the EnBW Group	Expected impact on the EnBW consolidated financial statements
Amendments to IAS 16	Property, plant and equipment	1/1/2022	No material impact.
Amendments to IAS 37	Provisions, Contingent Liabilities and Contingent Assets	1/1/2022	No material impact.
Amendments to IFRS 3	Reference to the Conceptual Framework	1/1/2022	No material impact.
Amendments to IFRS 16	Covid-19-Related Rent Concessions beyond 30 June 2021	1/1/2022	No material impact.
Collective standard for the amendment of various IFRS	Improvements to the IFRS Cycle 2018–2020	1/1/2022	No material impact.

These new rules have no material impact on the EnBW consolidated financial statements.

### Effects of new accounting standards that are not yet mandatory

The IASB and IFRS IC have published the following standards and interpretations. Their application in the future is subject to their endorsement by the EU into European law.

**Effects of new accounting standards that are not yet mandatory**

Announcement	Title	Mandatory adoption for the EnBW Group	Expected impact on the EnBW consolidated financial statements
Amendments to IAS 1	Classification of Liabilities as Current or Non-current	1/1/2023	No material impact.
Amendments to IAS 1	Disclosure of Accounting Policies	1/1/2023	No material impact.
Amendments to IAS 8	Definition of Accounting Estimates	1/1/2023	No material impact.
Amendments to IAS 12	Income Taxes: Deferred Tax Related to Assets and Liabilities Arising from a Single Transaction	1/1/2023	No material impact.
Amendments to IFRS 17	Insurance Contracts and Amendments to IFRS 17	1/1/2023	No material impact.
Amendments to IFRS 17	Initial Application of IFRS 17 and IFRS 9 – Comparative Information	1/1/2023	No material impact.

**Exercise of judgment and estimates when applying accounting policies**

The increase in the interest rate for pension provisions from 1.15% at the end of 2021 to 3.35% as of 30 June 2022 reduced the value of the pension provisions. The provisions relating to nuclear power are reported in accordance with the tasks pursuant to section 5 (2) of the Ordinance on the Transparency of Dismantling Provisions. They are discounted at a risk-free interest rate of on average 1.03% (previous year: 0.01%), which reduces the nuclear provisions. This is offset to some extent by the higher rates of increase in prices. The rate of increase in prices for the short term was adjusted to 6.3% for 2022 and 3.0% for 2023, while for the long term it remained the same as in the previous year at 2.4%. Overall, the adjustments resulted in an immaterial reduction in the nuclear provisions.

In the second quarter, EnBW revised its expectations with respect to the medium and long-term price trends in the relevant procurement and sales markets. EnBW also revised its expectations with respect to energy industry conditions and anticipated price trends on relevant markets in response to the clearly defined and accelerated climate-protection policies introduced by the new German government elected in 2021, the implementation of the EU Green Deal through effective regulations and the changes in the gas market as a result of the war between Russia and Ukraine. The anticipated prices for gas, coal, CO<sub>2</sub> and electricity have increased as a result. It is possible that climate-protection policies could further reduce the service lives of conventional power plants. This would have an impact on the valuation of the power plants and the impending losses from long-term electricity procurement agreements. We refer you to the sections “Other operating income” and “Amortization and depreciation” for more information.

Due to the developments on the capital markets in the past few months, there was a substantial increase in capital costs in the System Critical Infrastructure segment. This had an impact on the value of the electricity and gas grids, as well as on goodwill. For further information, please refer to the details given in the section “Amortization and depreciation.”

The exercise of judgment and estimates when assessing the impact of the war between Russia and Ukraine and the associated substantial uncertainties are explained in the section “Impact of the war between Russia and Ukraine on interim financial reporting.”

**Impact of the war between Russia and Ukraine on interim financial reporting**

The war between Russia and Ukraine has caused uncertainty on the energy market. This has resulted in, among other things, rising prices on the gas and electricity markets and higher procurement costs. In addition, it has resulted in interruptions to the supply chain and rising inflation rates.

Due to the looming threat of a gas shortage, our coal-fired power plants have been deployed more frequently to ensure the security of supply. In combination with the current price trends, their profitability will improve in the short to medium-term. The described effects would have a particular impact on the items revenue, cost of materials and other operating expenses, as well as on income.

The ongoing developments are being continuously analyzed and evaluated with respect to their potential impact on the EnBW Group using various different scenarios.

VNG Handel & Vertrieb (VNG H&V) has two gas supply contracts with a total annual volume of 100 TWh that are affected by the restrictions in supply. With respect to the larger supply contract with an annual volume of 65 TWh, the importer and VNG H&V hold differing opinions about supply obligations against the background of Russian countersanctions. The costs of procuring replacement gas are currently being met on a provisional basis by the supplier and importer. Possibilities for reaching an agreement are now being sought with the support of the German government. In the view of VNG H&V, the new regulations in the reformed Energy Security Act (EnSiG), legal claims against the importer and the long-term value of the supply contract will reduce the potential damage should an agreement be reached. The second supply contract expires at the end of the year. Additional costs for the procurement of replacement gas have been incurred by VNG H&V since cuts in supply started in June 2022.

VNG H&V is using the instruments in the EnSiG to limit the potential damage caused by gas supply contracts with restrictions in supply. This includes the application of compensatory measures in EnSiG (including section 28) for the contract in which VNG H&V is itself the importer. It will be possible for importers to pass on the costs of procuring replacement gas to end customers within the German market in the form of a levy from 1 October 2022. The importers are responsible for a 10% deductible. A best estimate of the remaining expenses that VNG H&V is expected to incur are included in the six-monthly financial statements. A provision was formed for the costs resulting from restrictions in supply up to 30 June 2022, insofar as they had not yet been paid in the first half of the year. The costs resulting from restrictions in supply from 1 July 2022 onwards were taken into account in the amount of €351.4 million in the valuation of the fair value of the derivatives. Overall, a negative impact on earnings of €544.7 million was taken into account in the six-monthly financial statements.

In order to adequately reflect the indirect consequences of the war between Russia and Ukraine and the expected losses on financial instruments as a result, we have amended the impairment model for financial instruments to include an additional risk premium. We refer you to the explanations in “Notes relating to fair value” for more information.

Despite the volatile market conditions, we remain committed to our strategic alignment. Please refer to the management report for more information.

## Consolidated companies

All subsidiaries under the control of the Group are included in the consolidated financial statements in accordance with the full consolidation method. The equity method is used when there is a joint arrangement in the form of a joint venture or a significant influence may be exercised over the business policy of the associate, but the entity does not qualify as a subsidiary. Joint arrangements that are classified as joint operations are reported based on the proportion of the assets, liabilities, income and expenses that are attributable to the parent company in compliance with the respective applicable IFRS.

There are no reciprocal shareholdings in the EnBW Group as defined by section 19 (1) German Companies Act (AktG).

The consolidated companies are as follows:

#### Type of consolidation

Number of companies	30/06/2022	31/12/2021	30/06/2021
Fully consolidated companies	230	231	226
Entities accounted for using the equity method	27	25	23
Joint operations	3	3	3

## Revenue

Alongside revenue from contracts with customers, there is other revenue from ordinary business activities. This is how it breaks down:

in € million	01/01–30/06/2022	01/01–30/06/2021
Revenue from contracts with customers	26,935.7	12,486.2
Other revenue	183.8	168.5
<b>Total</b>	<b>27,119.5</b>	<b>12,654.7</b>

The increase of €14,464.8 million in revenue in comparison to the previous year to €27,119.5 million was primarily attributable to higher sales prices in the electricity and gas sectors.

The following tables break down the revenue according to region and products.

#### External revenue by region

01/01–30/06/2022 in € million	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Genera- tion Infrastructure	Other/ Consolidation	Total
Revenue from contracts with customers by region	9,527.3	2,938.6	14,464.4	5.4	26,935.7
Germany	(7,889.4)	(2,850.6)	(10,722.3)	(5.2)	(21,467.5)
European currency zone excluding Germany	(251.1)	(1.8)	(3,633.0)	(0.2)	(3,886.1)
Rest of Europe	(1,385.5)	(86.2)	(109.1)	(0.0)	(1,580.8)
Rest of world	(1.3)	(0.0)	(0.0)	(0.0)	(1.3)
Other revenue	0.0	182.7	1.1	0.0	183.8
<b>Total</b>	<b>9,527.3</b>	<b>3,121.3</b>	<b>14,465.5</b>	<b>5.4</b>	<b>27,119.5</b>

#### External revenue by region

01/01–30/06/2021 in € million <sup>1</sup>	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Genera- tion Infrastructure	Other/ Consolidation	Total
Revenue from contracts with customers by region	6,380.0	1,728.6	4,373.2	4.4	12,486.2
Germany	(5,644.8)	(1,646.0)	(2,523.4)	(4.4)	(9,818.6)
European currency zone excluding Germany	(65.0)	(1.9)	(1,777.3)	(0.0)	(1,844.2)
Rest of Europe	(669.7)	(80.7)	(72.5)	(0.0)	(822.9)
Rest of world	(0.5)	(0.0)	(0.0)	(0.0)	(0.5)
Other revenue	0.1	166.8	1.6	0.0	168.5
<b>Total</b>	<b>6,380.1</b>	<b>1,895.4</b>	<b>4,374.8</b>	<b>4.4</b>	<b>12,654.7</b>

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

**External revenue by product**

01/01-30/06/2022 in € million	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Genera- tion Infrastructure	Other/ Consolidation	Total
Revenue from contracts with customers by product	9,527.3	2,938.5	14,464.4	5.4	<b>26,935.6</b>
Electricity	(3,651.0)	(2,234.2)	(4,737.0)	(0.0)	<b>(10,622.2)</b>
Gas	(5,334.8)	(387.9)	(9,429.9)	(0.0)	<b>(15,152.6)</b>
Energy and environmental services/other	(541.5)	(316.4)	(297.5)	(5.4)	<b>(1,160.8)</b>
Other revenue	0.0	182.8	1.1	0.0	<b>183.9</b>
<b>Total</b>	<b>9,527.3</b>	<b>3,121.3</b>	<b>14,465.5</b>	<b>5.4</b>	<b>27,119.5</b>

**External revenue by product**

01/01-30/06/2021 in € million <sup>1</sup>	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Genera- tion Infrastructure	Other/ Consolidation	Total
Revenue from contracts with customers by product	6,380.1	1,728.6	4,373.1	4.4	<b>12,486.2</b>
Electricity	(2,720.1)	(1,105.5)	(2,330.9)	(0.0)	<b>(6,156.5)</b>
Gas	(3,348.4)	(354.6)	(1,790.7)	(0.0)	<b>(5,493.7)</b>
Energy and environmental services/other	(311.6)	(268.5)	(251.5)	(4.4)	<b>(836.0)</b>
Other revenue	0.1	166.8	1.6	0.0	<b>168.5</b>
<b>Total</b>	<b>6,380.2</b>	<b>1,895.4</b>	<b>4,374.7</b>	<b>4.4</b>	<b>12,654.7</b>

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

The restatement of the figures for the previous year relates to a change in the allocation of business activities to the different Board of Management remits, which has changed the composition of our segments as a result. This change has no effect on the result of the Group.

Revenues mainly arise from goods supplied or services that are rendered over a particular time period.

**Other operating income**

The reversals of impairment losses in the current financial year were mainly carried out on the cash-generating unit conventional power plants in the Sustainable Generation Infrastructure segment. The recoverable amount is around €-30 million. The reversal of impairment losses of €156.4 million was due to improved medium-term income forecasts as a result of the high gas and electricity prices at the present time. The regulations limiting gas-fired generation in the Substitute Power Plant Maintenance Act have also increased the anticipated deployment times for the coal-fired power plants.

In the Sustainable Generation Infrastructure segment, there were reversals of impairment losses on two offshore wind farms totaling €77.8 million. These reversals were due to changed expectations for the medium and long-term market conditions as a result of the impact current developments will have on the commodity markets and on climate protection. The recoverable amounts are around €0.9 billion.

For information on the method used to determine the recoverable amount, we refer you to the section "Amortization and depreciation" because this calculation method is used to determine both impairment losses and reversals of impairment losses.

The discount rates used for the valuations were between 4.6% and 5.8% after tax and between 6.6% and 8.2% before tax (2021 financial statements: between 5.0% and 5.9% after tax and between 7.1% and 8.4% before tax) for conventional generation plants, and between 3.2% and 5.6% after tax and between 4.6% and 8.1% before tax (2021 financial statements: between 3.0% and 5.1% after tax and between 4.4% and 7.4% before tax) for offshore wind farms.

## Amortization and depreciation

in € million	01/01– 30/06/2022	01/01– 30/06/2021
Amortization of intangible assets	140.5	183.4
Depreciation of property, plant and equipment	644.1	1,425.3
Depreciation of investment properties	0.5	0.2
Depreciation of right-of-use assets from leases	88.1	83.1
Reversals of investment cost subsidies	-0.4	-0.9
<b>Total</b>	<b>872.8</b>	<b>1,691.1</b>

The impairment losses on intangible assets and property, plant and equipment were €95.8 million (previous year: €943.4 million), of which €53.0 million (previous year: €92.2 million) were on intangible assets and €42.8 million (previous year: €851.1 million) on property, plant and equipment.

In the current financial year, impairment losses were mainly recognized on one offshore wind farm in the Sustainable Generation Infrastructure segment in the amount of €60.1 million. The main reasons for the impairment were higher capital costs and the successive shortening of the EEG-subsidized operating period, which overcompensate for the positive effects of the long-term earnings expectations. The recoverable amount was around €2.3 billion.

In the System Critical Infrastructure segment, there were impairment losses on goodwill of €32.2 million (previous year: €0.5 million), which were made in part to goodwill at ZEAG Energie AG System Critical Infrastructure and in part to goodwill at HEV Hohenloher Energie Versorgung GmbH System Critical Infrastructure. The remaining carrying amount of goodwill at ZEAG Energie AG System Critical Infrastructure is €14.5 million. The main reason for these impairment losses was the sharp increase in capital costs in this segment. The recoverable amounts are around €0.2 billion.

All of the recoverable amounts were calculated on the basis of the fair value less costs to sell and correspond to Level 3 of the IFRS 13 fair value hierarchy. Using business valuation models, the fair value is derived from the cash flow planning, based on, among other things, the medium-term planning approved by the Board of Management and valid as of the date of the impairment test as well as long-term market expectations beyond the detailed planning horizon. These plans are based on past experience and on estimates concerning future market development. In comparison to the impairment tests carried out for the 2021 financial statements, the valuations not only took into account discount rates but also expectations for the level of inflation. This led us to update the anticipated growth rates in the System Critical Infrastructure segment to 0.4%.

The discount rates used for the valuations were 3.3% after tax and 4.7% before tax (2021 financial statements: 2.3% after tax and 3.3% before tax) for transmission and distribution grids, and between 3.2% and 5.6% after tax and between 4.6% and 8.1% before tax (2021 financial statements: between 3.0% and 5.1% after tax and between 4.4% and 7.4% before tax) for offshore wind farms.

The impairment test of goodwill at Ontras Gastransport GmbH showed that the recoverable amount for the cash-generating unit exceeded the carrying amount by around €45 million. The recoverable amount would correspond to the carrying amount if the discount rate rose by 0.29%.

For the other impairment tests of goodwill in the System Critical Infrastructure segment, the total recoverable amount exceeded the total carrying amount by around €30 million. The total recoverable amount would correspond to the total carrying amount if the discount rate rose by 0.12%.

In the previous year, impairment losses were mainly recognized on conventional power plants in the Sustainable Generation Infrastructure segment. The recoverable amount was around €-0.3 billion. It was necessary to reduce our medium and long-term expectations for future cash inflows in the area of conventional generation due to tighter requirements with respect to climate protection and stricter climate legislation. This resulted in impairment losses of €0.6 billion.

In the Sustainable Generation Infrastructure segment, impairment losses totaling €0.2 million were also recognized on offshore wind farms. Alongside a change in the expected market conditions, these impairments were also necessary due to new findings with respect to offshore wind conditions



and due to the successive shortening of future EEG-subsidized operating time. The recoverable amounts were around €3.4 billion.

In addition, it was necessary to recognize an impairment loss of €0.1 billion on a recoverable amount of around €0.3 billion for a gas power plant in the Sustainable Generation Infrastructure segment. The reason for this impairment was also a change in the market conditions.

The recoverable amounts were also calculated in the previous year on the basis of the fair value less costs to sell and corresponded to Level 3 of the IFRS 13 fair value hierarchy. The fair value was generally derived using the same method as in the current year, while the valuation parameters were also derived correspondingly.

The discount rates used in the valuations were between 4.9% and 5.9% after tax and between 7.1% and 8.4% before tax for the conventional power plants, and between 3.0% and 5.4% after tax and between 4.3% and 7.7% before tax for the offshore wind farms.

### Investment result

In the reporting period, the write-downs on entities accounted for using the equity method of €21.4 million relate to the joint venture in Turkey in the Sustainable Generation Infrastructure segment. The main reasons for this write-down are the increase in capital costs and the negative development of the US dollar exchange rate. The recoverable amount of around €200 million corresponds to Level 3 of the IFRS 13 fair value hierarchy and was calculated on the basis of the fair value less costs to sell. Using a business valuation model, the fair value was derived using future cash flows, which were based on the medium and long-term planning that was valid as of the date of the impairment test. The discount rates used in the valuations were between 9.6% and 10.6% after tax and between 12.0% and 13.3% before tax (2021 financial statements: between 8.9% and 9.8% after tax and between 11.1% and 12.3% before tax).

### Dividends

On 5 May 2022, the Annual General Meeting of EnBW AG approved the proposal by the Board of Management and the Supervisory Board to distribute a dividend of €1.10 per share for the 2021 financial year. Dividends of €297.9 million were paid to shareholders on 10 May 2022. In the previous year, a dividend of €1.00 per share was distributed for the 2020 financial year. This corresponded to a dividend payment of €270.9 million.

### Contingent liabilities and other financial commitments

Compared to 31 December 2021, contingent liabilities and other financial commitments increased by €4,259.9 million to €34,614.5 million. This increase was primarily attributable to higher purchase obligations for electricity, gas and hard coal as well as higher investment obligations for property, plant and equipment, especially related to the new construction of wind farms.

## Notes relating to fair value

The fair value of financial assets and financial liabilities is determined by reference to quoted market prices, insofar as the financial instruments are traded on an active market, or by using recognized valuation methods such as the discounted cash flow method. Where the parameters used in the valuation techniques are not supported by observable market data, assumptions need to be made which can affect the fair value of financial assets and financial liabilities.

The fair value and carrying amounts of the financial assets and financial liabilities under the individual balance sheet items are shown below.

### Carrying amounts and fair value of financial instruments

in € million	30/06/2022			31/12/2021		
	Fair value	Not in scope of IFRS 7	Carrying amount	Fair value	Not in scope of IFRS 7	Carrying amount
Financial assets	7,479.2	614.2	8,093.4	7,323.4	595.0	7,918.4
Measured at fair value through profit or loss	(3,919.3)		(3,919.3)	(4,542.6)		(4,542.6)
Measured at fair value in equity	(1,818.4)		(1,818.4)	(2,248.1)		(2,248.1)
Measured at amortized cost	(1,741.5)		(1,741.5)	(532.7)		(532.7)
Trade receivables <sup>1</sup>	6,691.4		6,691.4	6,282.7		6,282.7
Other assets	19,575.0	1,734.6	21,309.6	20,919.5	1,240.7	22,160.2
Measured at fair value through profit or loss	(14,549.3)		(14,549.3)	(16,387.0)		(16,387.0)
Measured at amortized cost	(4,128.3)		(4,128.3)	(3,701.0)		(3,701.0)
Derivatives designated as hedging instruments	(872.7)		(872.7)	(806.0)		(806.0)
Lease receivables	(24.7)		(24.7)	(25.5)		(25.5)
Cash and cash equivalents	5,242.8		5,242.8	6,653.1		6,653.1
Assets held for sale <sup>2</sup>	2.5	0.0	2.5	31.2	22.8	54.0
<b>Total</b>	<b>38,990.9</b>	<b>2,348.8</b>	<b>41,339.7</b>	<b>41,209.9</b>	<b>1,858.5</b>	<b>43,068.4</b>
Financial liabilities <sup>3</sup>	9,491.5		10,394.9	11,783.0		11,250.4
Trade payables	4,219.6	4,118.7	8,338.3	2,403.1	4,072.7	6,475.8
Other liabilities and subsidies	24,433.6	2,736.8	27,170.4	24,692.1	2,571.3	27,263.4
Held for trading	(16,988.1)		(16,988.1)	(18,652.1)		(18,652.1)
Measured at amortized cost	(6,236.4)		(6,236.4)	(4,672.8)		(4,672.8)
Derivatives designated as hedging instruments	(317.7)		(317.7)	(482.8)		(482.8)
Lease liabilities	(891.4)		(891.4)	(884.4)		(884.4)
<b>Total</b>	<b>38,144.7</b>	<b>6,855.5</b>	<b>45,903.6</b>	<b>38,878.2</b>	<b>6,644.0</b>	<b>44,989.6</b>

<sup>1</sup> Due to the impact of the war between Russia and Ukraine, the amount of expected credit losses on trade receivables was increased moderately on the basis of internal forecasts.

<sup>2</sup> This refers to a non-recurring measurement of the fair value due to the application of IFRS 5.

<sup>3</sup> The fair value of bonds and liabilities to banks must be allocated to hierarchical level 1 (30/06/2022: €6,765.4 million, 31/12/2021: €8,588.1 million) and hierarchical level 2 (30/06/2022: €2,726.1 million, 31/12/2021: €3,194.9 million), respectively.

The individual levels of the valuation hierarchy are as follows:

- Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities
- Level 2: Methods for which all input parameters that have a significant effect on the recorded fair value are observable, either directly or indirectly
- Level 3: Methods that use input parameters which have a material impact on the recorded fair value and are not based on observable market data

At the end of each reporting period it is determined whether there is any reason to reclassify between the levels of the valuation hierarchy. A reclassification is carried out if the valuation method for measuring fair value is changed and the input factors with significance for the valuation will result in allocation to a different level. Due to the fact that prices quoted by brokers are used, securities with a fair value of €46.3 million (31 December 2021: €10.2 million) were reclassified from Level 1 to Level 2 and securities with a fair value of €49.3 million (31 December 2021: €18.7 million) were reclassified from Level 2 to Level 1 in the six-monthly financial statements.

Counterparty default risk is taken into account when measuring the fair value of derivative financial instruments. Default risk with respect to an individual counterparty is calculated on the basis of the net risk position. For information on the valuation method and the input parameters used, please refer to the explanations in the section “Accounting for financial instruments” in the Integrated Annual Report 2021 (p. 225f.<sup>7</sup>).

## Hierarchy of input data

in € million	30/06/2022			31/12/2021		
	Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Financial assets	2,570.7	940.2	2,226.8	3,145.2	1,582.0	2,063.4
Measured at fair value through profit or loss	(1,087.2)	(605.3)	(2,226.8)	(1,279.0)	(1,200.2)	(2,063.4)
Measured at fair value in equity	(1,483.5)	(334.9)		(1,866.2)	(381.8)	
Other assets	76.6	15,345.4		186.6	17,006.4	
Measured at fair value through profit or loss	(0.1)	(14,549.2)		(0.5)	(16,386.5)	
Derivatives designated as hedging instruments	(76.5)	(796.2)		(186.1)	(619.9)	
Assets held for sale <sup>1</sup>			2.5			
<b>Total</b>	<b>2,647.3</b>	<b>16,285.6</b>	<b>2,229.3</b>	<b>3,331.8</b>	<b>18,588.4</b>	<b>2,063.4</b>
Other liabilities and subsidies		16,954.4	351.4	191.2	18,943.7	
Held for trading		(16,636.7)	(351.4)	(3.3)	(18,648.8)	
Derivatives designated as hedging instruments		(317.7)		(187.9)	(294.9)	
<b>Total</b>	<b>0.0</b>	<b>16,954.4</b>	<b>351.4</b>	<b>191.2</b>	<b>18,943.7</b>	<b>0.0</b>

<sup>1</sup> This refers to a non-recurring measurement of the fair value due to the application of IFRS 5.

The following table shows the development of the financial instruments to be accounted for at fair value in accordance with Level 3:

in € million	As of 01/01/2022	Changes in consolidated companies, currency adjustments, other	Changes recognized through profit or loss	Changes recognized in equity	Additions	Disposals	As of 30/06/2022
Financial assets	2,063.4	3.7	120.0	-1.3	115.5	-74.7	2,226.8
Other liabilities	0.0	0.0	-351.4	0.0	0.0	0.0	-351.4

For financial assets, the changes recognized through profit or loss of €120.0 million (previous year: €114.7 million) were recognized in the financial result. In the first six months of the year, gains from Level 3 financial instruments were recognized in the investment result and financial result in the amount of €124.3 million (previous year: €49.1 million), of which €122.8 million (previous year: €49.1 million) is accounted for by financial instruments still held on the reporting date.

The premises for determining the price risks associated with the financial instruments measured at fair value in accordance with Level 3 were 2.5% for investments in real estate and infrastructure funds (31 December 2021: 1.0%) and 10.0% for other financial instruments (31 December 2021: 10.0%). In the risk scenario in question, the net profit/loss for the year would improve by €125.5 million (31 December 2021: €100.0 million). A decrease of the same amount would have an opposite effect.

In other liabilities, derivatives in the “held for trading” measurement category of €351.4 million (31 December 2021: €0.0 million) were reclassified from Level 2 to Level 3. These were derivatives whose valuation was adjusted on the basis of unobservable input parameters against the background of possible restrictions in gas supply. The scenario with the highest probability of occurrence was selected for this adjustment. The compensation that is available by applying the instruments in the latest version of the EnSiG plays a decisive role in this context. These instruments should be applied in order to minimize any losses and thus reduce the impact of having to procure replacement gas. If the anticipated damage mitigation measures, including article 28 EnSiG, that are modeled in this scenario are interpreted differently in reality, there could be an additional negative impact on the

fair value of up to €969.4 million. If the legal agreement reached with the importer is better than anticipated, the fair value could improve by up to €237.2 million. A hypothetical price increase/reduction of +/-70 % would result in an additional negative/positive effect on the net profit/loss for the year of €52.5 million. If the supply quota increases by 20%, it would result in an improvement in earnings of €13.3 million.

In the context of our energy trading activities, EnBW enters into energy trading contracts for the purpose of price risk management, optimization of power plants, load equalization and optimization of margins. Trading for own account is only permitted within narrow, clearly defined boundaries. The price risks mostly arise from the procurement and sale of electricity, the procurement of coal, gas and oil as fuels, and the procurement of emission allowances. Furthermore, EnBW is exposed to price risks from speculative items entered into in own-account trading. The price risks are hedged using appropriate financial instruments on the basis of continuously monitored forecasts of market prices.

The hedging instruments used in the first half of the year were forwards, futures, swaps and options. The sensitivity of the measurement of derivatives to the price of electricity, coal, oil, gas and emission allowances is analyzed below. The analysis was made assuming that all other parameters remain unchanged. It includes only derivatives whose changes in market value affect equity or the net profit/loss for the year. These are derivatives that are accounted for as stand-alone derivatives as well as derivatives used as hedging instruments in cash flow hedges.

For all commodities, typical volatilities were determined and rounded on the basis of the front year. These volatilities give the percentage rate by which the market price is shifted on the evaluation date. For all commodities, the resulting changes in market prices are multiplied by the sensitivities and aggregated for each commodity.

The analysis does not include any derivatives that are intended for the purpose of receipt or delivery of a non-financial item in accordance with the entity's expected purchase, sale or usage requirements (own use), and hence are not required to be accounted for in accordance with IFRS 9. Our generation and distribution positions are not included in the analysis either.

The sensitivities presented below therefore do not represent the actual economic risks to which the EnBW Group is exposed but rather serve solely to satisfy the disclosure requirements of IFRS 7.

The information presented in the table shows only the effects of the price risks on the six-monthly net profit/loss and on equity. A change in price of the same amount in the other direction would have an opposite, positive effect.

#### Price risks

in € million			30/06/2022	31/12/2021
Electricity	+60% (previous year: +60%)	Profit for the year	-1,099.5	-396.6
	+60% (previous year: +60%)	Equity	-955.3	-1,141.9
Coal	+90% (previous year: -60%)	Profit for the year	-472.2	-204.9
	-90% (previous year: -60%)	Equity	-1,075.2	-248.1
Oil	-30% (previous year: -25%)	Profit for the year	-10.7	-6.6
Gas	-70% (previous year: +65%)	Profit for the year	-18.6	-4.5
	+70% (previous year: +65%)	Equity	-365.2	-284.3
Emission allowances	+55% (previous year: -50%)	Profit for the year	-64.8	-918.4
	-55% (previous year: -50%)	Equity	-1,582.4	-1,180.5

EnBW has investments in shares, share-based investment funds, fixed-income securities and investments in private equity companies that pose price risks for the company, which include, among other things, currency risk. When selecting securities, the company always attaches particular importance to high marketability and a good credit rating. As of the reporting date of 30 June 2022, shares, share-based investment funds, fixed-income securities and investments in private equity companies totaling €5,202.0 million (31 December 2021: €6,311.5 million) were exposed to market risk.

The effects of price risks from shares, share-based investment funds, interest-bearing securities and investments in private equity companies (real estate, infrastructure and private equity funds) on the six-monthly net profit/loss and on equity are analyzed below. For information on the assumptions made in the analysis, please refer to the explanations in the section “Accounting for financial instruments” in the Integrated Annual Report 2021 (p. 238<sup>7</sup>). The premises on which the sensitivity analysis is based are 10.0 % for shares, share-based investment funds and investments in private equity funds (31 December 2021: 10.0 %) and 2.5 % for interest-bearing securities and investments in real estate and infrastructure funds (31 December 2021: 1.0 %).

In the risk scenario in question, the six-monthly net profit/loss would improve by €187.7 million (31 December 2021: €175.1 million). The hypothetical change in profit/loss is primarily due to shares, share-based investment funds and investments in private equity companies. In the risk scenario in question, the equity would increase by €38.9 million (31 December 2021: €20.1 million). Of the hypothetical change in equity, €38.9 million (31 December 2021: €20.1 million) is accounted for by fixed-income securities. The information presented shows only the effects on the six-monthly net profit/loss and on equity in the case of an increase in the values of shares, share-based investment funds, interest-bearing securities and investments in private equity companies. A reduction of the same amount would have the opposite effect.

## Segment reporting

01/01 – 30/06/2022

in € million	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Generation Infrastructure	Other/ Consolidation	Total
External revenue	9,527.3	3,121.3	14,465.5	5.4	27,119.5
Internal revenue	726.0	1,156.2	3,437.5	-5,319.7	0.0
Total revenue	10,253.3	4,277.5	17,903.0	-5,314.3	27,119.5
Adjusted EBITDA	114.9	587.7	851.8	-130.2	1,424.2
EBITDA	-79.5	557.4	1,204.4	-40.0	1,642.3
Adjusted EBIT	33.0	273.1	497.1	-156.0	647.2
EBIT	-161.4	207.4	789.3	-65.8	769.5
Scheduled amortization and depreciation	-81.9	-314.6	-354.8	-25.7	-777.0
Impairment losses	0.0	-35.4	-60.4	0.0	-95.8
Capital employed as of 30/06/2022	1,485.8	9,825.1	7,526.9	570.1	19,407.9

01/01 – 30/06/2021

in € million <sup>1</sup>	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Generation Infrastructure	Other/ Consolidation	Total
External revenue	6,380.1	1,895.4	4,374.8	4.4	12,654.7
Internal revenue	525.2	743.0	2,091.0	-3,359.2	0.0
Total revenue	6,905.3	2,638.4	6,465.8	-3,354.8	12,654.7
Adjusted EBITDA	223.0	645.7	727.6	-116.9	1,479.4
EBITDA	195.8	609.0	396.6	-34.2	1,167.2
Adjusted EBIT	147.0	357.8	368.6	-141.7	731.7
EBIT	119.8	321.1	-905.8	-59.0	-523.9
Scheduled amortization and depreciation	-76.0	-287.9	-359.0	-24.8	-747.7
Impairment losses	0.0	0.0	-943.4	0.0	-943.4
Capital employed as of 31/12/2021	1,731.8	10,212.1	6,520.4	656.1	19,120.4

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

Due to a change in the allocation of business activities to the different Board of Management remits, there has been a change in the composition of our segments. The area of contracting was previously allocated to the Smart Infrastructure for Customers segment but is now part of the Sustainable Generation Infrastructure segment. Innovation activities were previously reported under the Smart Infrastructure for Customers segment but will be presented under the System Critical Infrastructure segment from 2022 onwards. The figures for the comparative periods have been restated in each case.

Sales of electricity and gas, energy industry services and energy solutions, telecommunications and electromobility are summarized in the Smart Infrastructure for Customers segment. The System Critical Infrastructure segment encompasses the value-added stages of transmission and distribution of electricity and gas. In addition, the expansion of the HVDC connections in the transmission grid, the provision of grid-related services and the supply of water is reported in the System Critical Infrastructure segment. The Sustainable Generation Infrastructure segment comprises the areas of Renewable Energies and Thermal Generation and Trading. Renewable Energies includes project development, project planning and the construction and operation of power plants based on renewable energies. Thermal Generation and Trading encompasses conventional electricity generation, the trading of gas and electricity, the provision of system services and the operation of reserve power plants for the transmission grids. In addition, the gas midstream business with storage, the dismantling of power plants, district heating and waste management / environmental services are reported here.

Internal and total revenue reported under “Other/Consolidation” mainly refers to consolidation effects. In particular, activities that cannot be attributed to the separately presented activities of the segments are disclosed in the other performance indicators here.

Segment reporting is based on internal reporting.

The segment figures have been determined in accordance with the accounting policies used in the consolidated financial statements. Internal revenue shows sales between Group companies. Sales between the segments were made at market prices.

Adjusted EBITDA is one of the key internal performance indicators. Adjusted EBITDA is an earnings ratio before the investment and financial results, income taxes and amortization, adjusted for non-operating effects, which accurately reflects the development of results of operations. In the management report, the performance of the segments is explained with the aid of adjusted EBITDA.

Adjusted EBITDA can be reconciled to earnings before taxes (EBT) as follows:

in € million	01/01– 30/06/2022	01/01– 30/06/2021
Adjusted EBITDA	1,424.2	1,479.4
Non-operating EBITDA	218.1	-312.2
<b>EBITDA</b>	<b>1,642.3</b>	<b>1,167.2</b>
Amortization and depreciation	-872.8	-1,691.1
<b>Earnings before interest and taxes (EBIT)</b>	<b>769.5</b>	<b>-523.9</b>
Investment result	141.6	58.6
Financial result	36.6	156.1
<b>Earnings before tax (EBT)</b>	<b>947.7</b>	<b>-309.2</b>

## Significant events after the reporting date

EnBW issued a Schuldschein loan with a volume of €500 million in July that was mainly placed with banks and savings banks. The Schuldschein loan consists of six different tranches with terms of three, five, seven and ten years. Alongside the fixed rate tranches, the two medium-term maturities also each have a variable rate tranche.

In response to the tense situation on the energy markets, the German government announced amendments to the Energy Security Act in May and has since released more specific details and clarification on these changes in the subsequent months. The results of these amendments are already taken into account in this report. The amended act came into force on 12 July.

On 4 August 2022, the Federal Ministry for Economic Affairs and Climate Action published a clarification of section 26 EnSiG in the form of a questions and answers document. At the current time, there is still some uncertainty about the extent to which the information in this document could impact the applicability of the mechanisms in EnSiG that we have already applied (including section 28). If this clarification document impacts the validity of the already applied mechanisms, it could have an additional negative impact on earnings. If section 28 EnSiG is not applicable, there is a risk that the anticipated legal agreement with the importer could result in extra costs. Based on the current price on the spot market, this could result in an additional negative impact on earnings of up to €1.3 billion.



## Certification following auditor's review

### To EnBW Energie Baden-Württemberg AG, Karlsruhe

We have reviewed the interim condensed consolidated financial statements of EnBW Energie Baden-Württemberg AG, Karlsruhe, which comprise the income statement, statement of comprehensive income, balance sheet, condensed cash flow statement, statement of changes in equity and selected explanatory notes, and the interim group management report for the period from 1 January to 30 June 2022, which are part of the half-year financial report pursuant to Sec. 115 WpHG [“Wertpapierhandelsgesetz”: German Securities Trading Act]. Management is responsible for the preparation of the interim condensed consolidated financial statements in accordance with IFRSs on interim financial reporting as adopted by the EU and of the interim group management report in accordance with the requirements of the WpHG applicable to interim group management reports. Our responsibility is to issue a report on the interim condensed consolidated financial statements and the interim group management report based on our review.

We conducted our review of the interim condensed consolidated financial statements and of the interim group management report in compliance with German Generally Accepted Standards for the Review of Financial Statements promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Those standards require that we plan and perform the review to obtain a certain level of assurance in our critical appraisal to preclude that the interim condensed consolidated financial statements are not prepared, in all material respects, in accordance with IFRSs on interim financial reporting as adopted by the EU and that the interim group management report is not prepared, in all material respects, in accordance with the requirements of the WpHG applicable to interim group management reports. A review is limited primarily to making inquiries of the Company's employees and analytical assessments and therefore does not provide the assurance obtainable from an audit of financial statements. Since, in accordance with our engagement, we have not performed an audit of financial statements, we cannot issue an auditor's report.

Based on our review, nothing has come to our attention that causes us to believe that the interim condensed consolidated financial statements are not prepared, in all material respects, in accordance with IFRSs on interim financial reporting as adopted by the EU or that the interim group management report is not prepared, in all material respects, in accordance with the provisions of the WpHG applicable to interim group management reports.

Without qualifying this conclusion, we refer to the statements made by the Board of Management in the sections „General conditions / Cross-segment framework conditions / War between Russia and Ukraine“ and „Opportunities and risks“ of the interim group management report as well as the section „Impact of the war between Russia and Ukraine on interim financial reporting“ and the related section „Notes relating to fair value“ as well as the section „Significant events after the reporting date“ in the half-year financial report. In these sections, the Board of Management explains, that the opportunities and risks are evaluated using a set of different scenarios and probabilities, which also cover, in particular, the possibility of a further reduction in, or even a complete halt to, gas deliveries from Russia. How this situation actually develops in the future could either increase or reduce the level of opportunity or risk presented. In addition, the negative impact on earnings from delivery restrictions taken into account in the consolidated half-year financial statements, the sensitivity of the underlying input parameters and the increased uncertainties caused by events after the reporting date are disclosed in the half-year financial report.

Stuttgart, 10 August 2022

Ernst & Young GmbH  
Wirtschaftsprüfungsgesellschaft

Prof. Dr. Wollmert  
German Public Auditor

Prof. Dr. Kuhn  
German Public Auditor


## Declaration of the legal representatives


We assure to the best of our knowledge that, in accordance with the accounting principles applicable for six-monthly financial reporting, the six-monthly consolidated financial statements give a true and fair view of the net assets, financial position and results of operations of the Group and that the interim Group management report gives a true and fair view of the business development including the result and situation of the Group and also describes the significant opportunities and risks relating to the anticipated development of the Group in the remaining financial year.

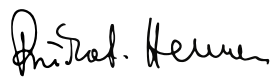
Karlsruhe, 10 August 2022


EnBW Energie Baden-Württemberg AG

  
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### Important notes

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Please also note the important information relating to all of our publications which is also valid for this report. This information can be found on the EnBW website at [www.enbw.com/disclaimer-en](http://www.enbw.com/disclaimer-en). This Quarterly Statement can be downloaded in German or English. Only the German version is authoritative.

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