Combined management report

of the EnBW Group and EnBW AG

Fundamentals of the Group

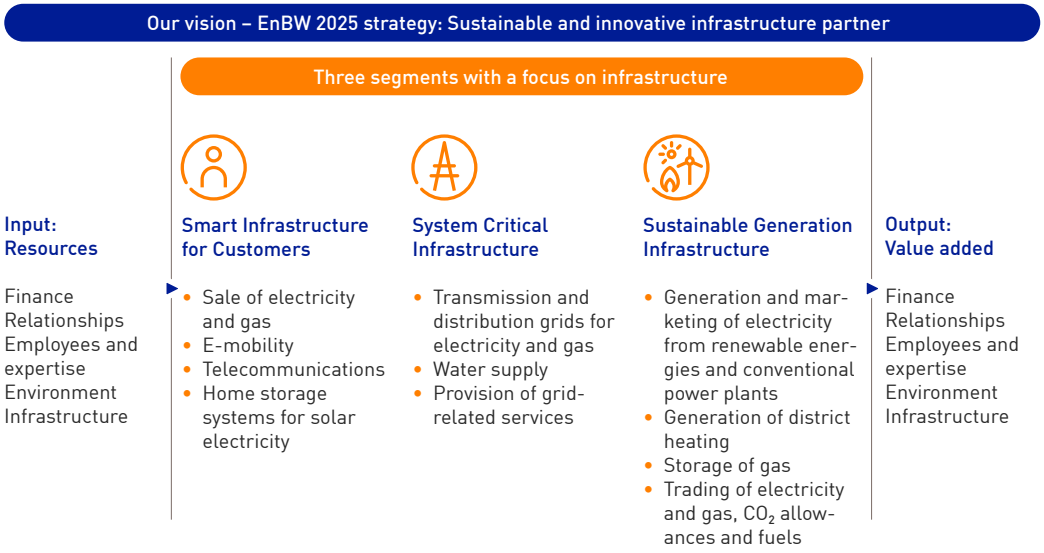
Business report

Fundamentals of the Group

Business model

Business principles

Business model



Our company is transforming itself from an 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 acts as a compass for our strategic alignment. We draw on a variety of resources – from finances through to infrastructure – for our corporate activities. As a result of the efficient use of these resources, we create value for ourselves and our stakeholders.

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, the provision and expansion of quick-charging infrastructure and digital solutions for electromobility, activities in the telecommunications sector and other household-related solutions such as photovoltaics and home storage systems.
- 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, waste management and energy 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 the trading of electricity, gas, CO_2 allowances and fuels, as well as the direct distribution of renewable energy power plants.

A main goal of our **EnBW 2025 strategy** is to develop a balanced and diversified business portfolio along the entire value-added chain via these three growth fields. Our portfolio is also characterized by a high proportion of stable, regulated business and an attractive risk-return profile. We have updated the 2025 strategy with an outlook to the period up to 2030. You can find more about the strategy in the chapter "Strategy, goals and performance management system" (p. 26 ff.).

The themes of **sustainability and climate protection** continue to be issues of intense public interest and will also influence social acceptance for our business activities to a greater extent in future. We have set ourselves the goal of continuing to develop our business model in line with the economic, ecological and social dimensions of sustainability. As an energy company, we can make a particularly effective contribution to climate protection. In the Group, we aspire to reduce our greenhouse gas

emissions by 70% by 2030 in comparison to the reference year 2018 and become climate neutral with respect to our own emissions (Scope 1 and 2) (p. 30 ff.↗) by the end of 2035 at the latest.

We believe that **digitalization** does not only form an important basis for sustainable growth, profitability and competitiveness but is also fundamentally important for the success of the energy transition. Through our digitalization agenda 2030 and especially our emphasis on the application of data and artificial intelligence (AI and GenAI), we are intensifying our activities and developing other, Group-wide initiatives. Our focus lies on the digital evolution of our business activities, developing skills and supporting our sustainability activities (examples can be found on p. 40↗, 41↗, 50↗, 52 ff.↗, 64↗ and 87 ff.↗).

In order to achieve a necessary level of resilience, EnBW has introduced specific guidelines and methods for a systematic crisis, emergency and **business continuity management system (BCM).** The BCM exists in all relevant organizational units Group-wide with the aim of maintaining or restoring normal operational processes (examples can be found on p. 100↗, 101 f.↗, 93↗ and 135↗). It is tasked with developing and implementing measures to maintain value-added processes so that the company is able to respond in an optimal way to events that may cause operational shutdowns, emergencies or crises. Our subsidiary Netze BW had its BCM – implemented in the main areas of the company – audited in accordance with DIN ISO 22301 for the first time in 2023 and received its certification at the beginning of 2024.

Our company's **business model** has proved itself to be **robust and flexible** even in times of crisis. The reliable supply of electricity, gas, water and heating to our customers was not at risk at any time. Furthermore, reliable infrastructure has become an increasingly important issue in the social consciousness.

Our **portfolio** has also proved itself to be fundamentally **stable** in crisis situations. Our integrated approach thus enabled us to compensate for varying developments in different business fields in the 2023 financial year. Further information on the impact of the economic situation on our business activities can be found in the chapter "General conditions" (p. 58 ff.↗).

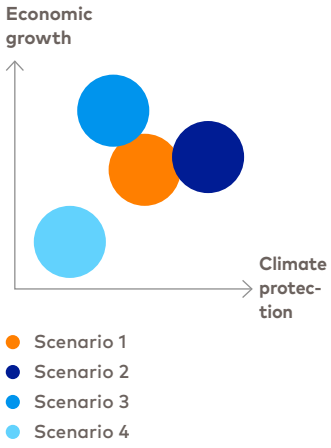
Assessment of the robustness of our business model against the background of climate change

We analyze the robustness of our business model now with an increasing focus on climate change due to the growing importance of climate-related risks and the recommendations issued by the Task Force on Climate-related Financial Disclosures (TCFD). Our strategic considerations take into account the requirements of the energy transition and the profound changes that will take place due to the transformation towards climate neutrality with the effects they will have on all business sectors and private households. We place particular focus on the expansion of renewable energies, electricity consumption, the expansion of the grids, grid stability and the security of supply. In this context, we examine the requirements with respect to climate protection, possible implementation paths and the implications for the EnBW business. Accordingly, a main component of our analyses of energy industry conditions is **evaluating the different ways in which the energy transition and the transformation to climate neutrality** could possibly develop. This acts as an important basis for assessing the opportunities and risks for our business (p. 135 f.↗) that will arise due to climate change and the dynamic regulatory environment associated with it.

In order to evaluate these opportunities and risks, we use real developments to derive **realistic future scenarios that take into account all of the different aspects of the energy transition.** These scenarios are primarily characterized by two dimensions. The **first dimension** is climate protection and encompasses our transformation to a climate-neutral company with its impact on all of the variables influencing the energy industry. It is thus of crucial importance for our business, as well as for the opportunities and risks along the entire value-added chain. The sustainable economic growth that is achievable in the long term is the **second dimension.** The level of growth that can be achieved in the long term will also have an impact on key variables such as the demand for electricity or commodity prices.

In the space defined by these dimensions, we describe **four scenarios that are particularly relevant to EnBW.** We fundamentally believe that we will achieve our goal of becoming a climate-neutral company. However, the speed at which this transformation can be implemented differs in the various scenarios. Two scenarios assume "normal" economic growth within the scope of so-called potential growth (scenarios 1 and 2). In scenario 2, the climate targets defined in the EU Green Deal will be largely achieved within the defined time span up to the middle of the century. In scenario 1, there will be a slight delay in achieving the goal of climate neutrality because it will not be possible to comprehensively solve the practical challenges associated with the implementation of the energy transition. In addition, we describe two other scenarios in which there is a long-term, permanent deviation in economic development that lies outside the scope of potential growth. In scenario 3, it is assumed that a higher priority will be assigned by society and politics to short and medium-term economic growth than to the quick implementation of a transformation towards climate change mitigation. Greater growth will thus be achieved during the period under consideration. In contrast, a period characterized by ongoing crises and weaker economic growth is assumed in scenario 4. In this scenario, the transformation to climate neutrality will be achieved at the slowest pace because the opportunities to secure the required investment in a timely manner will be significantly restricted.

Energy industry scenarios for EnBW



Within the scenarios, **variables** that have different characteristics depending on the scenario in question determine how the energy market develops. These include assumptions on the development of demand, the restructuring of the power plants as part of the phaseout of coal and the full decarbonization of electricity generation, the development of the transmission grids, and the prices and pricing structures for fuels. In addition, estimates about relevant market trends, such as in the area of renewable energies, electromobility or the development of a hydrogen market, play an important role. Based on the assumptions made for specific variables, possible paths for how the energy markets (especially electricity and gas) will develop in the long term are derived for the four scenarios. In the process, we predict the wholesale market prices for electricity in simulated calculations using computer models. These simulations also take into account physical risks, such as the influence meteorological fluctuations may have on the electricity market due to the availability of wind and sunlight, and thus make it possible to incorporate potential changes to the physical environment due to climate change into the calculations. The scenarios produced in this way can provide us with quantitative descriptions that serve as the basis for assessing our business and, in particular, also allow us to evaluate the opportunities and risks associated with climate change.

Value added

Value added for EnBW and its stakeholders

The aim of our corporate activities is to add value in the short, medium and long term. This reflects corporate success, as well as competitiveness and future viability, and does not only depend on the company itself but also on the business environment, relationships with stakeholders (p. 42 ff.↗) and the use of a variety of different resources. The efficient usage of these resources creates value for ourselves and our stakeholders. We associate the concept of sustainable economic development with our aspiration to conduct all of our business activities in a responsible way.

Value added 2023 for EnBW and its stakeholders

Input: Resources

Finance

Solid financial structure

Non-current assets
€36.6 billion

Equity
€15.9 billion

Relationships

Focus on stakeholders

Procurement volume
of around €6.3 billion

Proportion of suppliers using the EnBW Supplier Code of Conduct, measured by procurement volume:
97 %

Employees and expertise

People as the main focus

Employees
at the Group: 28,630

Proportion of women in management positions at EnBW AG in the first and second levels below the Board of Management
15.4 % / 24.7 %

Environment

Use of natural resources

Total investment / of which in renewable energies (RE)
€4,902.6 million / €1,174.2 million

Total final energy consumption / of which RE
1,146 GWh / 20.6 %

Infrastructure

Sustainable infrastructure partner

Grid lengths
Electricity 148,000 km
Gas 31,000 km

Installed output / of which RE
12,226 MW / 46.9 %

Business model

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

Output: Value added

Finance

TOP Adjusted EBITDA
€6.4 billion

TOP Debt repayment potential
41.3 %

TOP Value spread
10.2 %

Relationships

TOP Customer Satisfaction Index
130 / 161

TOP Reputation Index
55

Employees and expertise

TOP People Engagement Index
82

TOP LTIF for companies controlled by the Group / overall
2.4 / 3.7

Environment

TOP Installed output of RE and share accounted for by RE Generation capacity
5.7 GW / 46.9 %

TOP CO_2 intensity
347 g / kWh

Infrastructure

TOP SAIDI Electricity
19.3 min. / a

Transmission volumes [1]
Electricity 55,800 GWh
Gas 29,100 GWh

Own generation / of which RE
26,552 GWh / 47.8 %

Outcome: Contribution to sustainability

Economy

- Securing **profitability**, managing the **financial profile** and increasing **Group value**
- Developing **sustainable, innovative services**
- Integrating sustainability criteria into the **investment approval process**

Ecology

- Expansion of **renewable energies, grids and charging infrastructure**
- Gradual **phaseout of coal planned by 2028**
- **Climate neutral** with respect to Scopes 1 and 2 by 2035
- Certification of Paris-compliant climate protection targets in all Scopes (1 – 3) by the **Science Based Targets initiative (SBTi)**
- Transformation of the natural gas business towards **climate-neutral gases** (biogas, hydrogen)

Society and social

- Guaranteeing the **security of supply**
- **Sustainable purchasing** and **responsible raw materials procurement**
- **People as the main focus** – diversity, qualifications, leadership and skills
- Assuming our **social responsibility**

Contribution made by EnBW to the Sustainable Development Goals (SDGs)

1 In the System Critical Infrastructure segment.

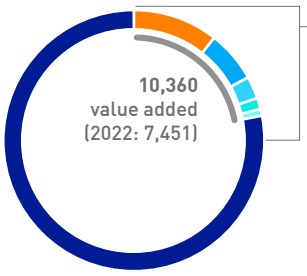
We present how EnBW adds value and how we use our resources to this end by means of our key performance indicators (p. 32 ff.) and other selected performance indicators. With respect to the resource **finances,** it is critically important that we maintain a solid financial structure at all times so that we can finance our business activities. Sustainable financing instruments are playing an increasingly important role in this area (p. 32). The value we generate for ourselves and our main stakeholders is presented in our value-added statement (p. 21). An important factor for the resource **relationships** is building customer loyalty to strengthen trust in EnBW as a partner and supplier. Active dialog with stakeholders builds trust and social acceptance (p. 42 ff.). We generate added value in this area by engaging in social issues relevant to our various target groups. Always having the right **employees** with the right **expertise** in the right place is a key focus of the HR policy. Expertise, experience and diversity contribute to the success of the company (p. 101 ff.). We also engage in a range of research and development activities to identify market opportunities and trends and develop innovative products (p. 47 ff.). We create room for personal development, offer apprenticeships and courses for students, run a multistage career integration program for refugees and migrants and are active in the area of diversity (p. 102 f.). With respect to the **environment,** we generate energy using the natural resources wind, water, sun, biomass and geothermal energy. We generate value in this area by improving our carbon footprint, expanding our renewable energy power plants and connecting them to the grid, developing energy-efficient products and ensuring that we engage in sustainable and responsible procurement (p. 93 ff.). Our resources related to **infrastructure** comprise the expansion and operation of power plants, grids and gas storage facilities. Furthermore, we are continuing to expand our quick-charging infrastructure and the telecommunications and broadband business (p. 91 ff.). EnBW mainly generates value here by pushing forward the energy and mobility transition.

Value-added statement

The value-added statement indicates the degree to which we contribute to the continuing economic development of the company and our stakeholders using our financial resources. Further information on the dialog with our stakeholders is summarized in the chapter "In dialog with our stakeholders" (p. 42 ff.).

Value added of the EnBW Group [1]

Output: value
in € million



36,919 suppliers and service providers: material and other operational expenditure [2]
(2022: 53,698)

47,279 cash-relevant business performance
(2022: 61,149)

Use of value added

	2023	2022
EnBW Group: retained cash flow	47%	43%
Active and former employees: primarily wages and salaries	29%	36%
State: taxes	13%	10%
Shareholders: dividends	6%	7%
Outside investors: interest	4%	4%

1 The figures for the previous year have been restated.
2 Includes interest and dividends received, as well as the dedicated financial assets contribution.

We define value added as our cash-relevant business performance in the past financial year less cash-relevant expenses (suppliers and service providers). The value added is derived from the cash flow statement and corrected based on the use of funds. In the reporting year, we generated value added of 21.9% (previous year restated: 12.2%). Despite the decrease in cash-relevant business performance, value added was higher than in the previous year because the fall in cash-relevant cost of materials was greater. As well as being used in the form of wages, salaries and pension payments for active and former employees, a further share is dedicated to payments to the state in the form of income taxes and electricity and energy taxes. After consideration of other stakeholder groups, the retained cash flow is available to the company for future investments without the need to raise additional debt (p. 82).

Our operating segments

We identified the material events of the 2023 financial year by using the materiality analysis process that we describe in detail on p. 43. These are shown in the following diagram allocated to our three segments.

Overview of the segments

Smart Infrastructure for Customers

Significant events in 2023

- E-mobility growth strategy continues with EnBW mobility+ reaching the milestone of 1,000 quick-charging stations nationwide and providing access to more than 500,000 charging points in the EnBW HyperNetwork (p. 89 f.)
- New cooperations for the expansion of charging infrastructure at retail properties (p. 89 f.)
- Resolute ongoing expansion of the fiber-optic network (p. 91)

Sales in 2023

114,500 GWh Gas (B2C / B2B)

34,200 GWh Electricity (B2C / B2B)

Number of customers in 2023

B2C and B2B	5.5 million

Development of adjusted EBITDA
in € billion

2023	Target for 2025	Target for 2030
0.2	0.6	0.7 – 1.0

Key figures in 2023

Employees (as of 31/12/2023)	5,711
Investment	€383.0 million
Adjusted EBITDA	€239.5 million
Share of adjusted EBITDA[2]	3.8%

System Critical Infrastructure

Significant events in 2023

- Sale of two 24.95% shareholdings in the transmission grid operator TransnetBW to each of Südwest Konsortium and KfW (p. 26)
- Start of construction of SuedLink (converter and subproject for the excavation work) and ULTRANET (line construction) (p. 64)
- Implementation of a comprehensive expansion and renewal program for the distribution grids at Netze BW (p. 92)
- Progress with the south German natural gas pipeline (SEL) project (p. 65)
- Participation in the development of a core hydrogen network on behalf of the German government (p. 64)

Grid lengths in 2023

148,000 km
Electricity transmission and distribution grid

31,000 km
Gas transmission and distribution grid

Transmission volumes in 2023

Electricity	55,800 GWh
Gas	29,100 GWh

Development of adjusted EBITDA
in € billion

2023	Target for 2025	Target for 2030
1.8	1.3	2.3 – 2.6

Key figures in 2023

Employees (as of 31/12/2023)	11,635
Investment	€2,671.9 million
Adjusted EBITDA	€1,772.0 million
Share of adjusted EBITDA[2]	27.8%

Sustainable Generation Infrastructure

Significant events in 2023

- Investment decision for the He Dreiht offshore wind farm; sale of minority shareholding to a consortium (p. 27)
- Conclusion of multiple power purchase agreements for the He Dreiht wind farm (p. 27)
- Purchase of further delivery capacities for liquefied natural gas (LNG) in Stade (p. 56)
- Decommissioning of the nuclear power plant GKN II, receipt of the final dismantling approvals, all nuclear power plants currently being dismantled (p. 68)
- Start of construction on the three fuel switch projects in Stuttgart-Münster, Altbach/Deizisau and Heilbronn at the beginning of 2024 (p. 27)

Installed output in 2023

47% share accounted for by renewable energies

Generation portfolio in 2023[1]

Electricity generation	26,500 GWh
Installed output	12,208 MW

Development of adjusted EBITDA
in € billion

2023	Target for 2025	Target for 2030
4.6	1.3	2.7 – 3.0

Key figures in 2023

Employees (as of 31/12/2023)	7,563
Investment	€1,783.5 million
Adjusted EBITDA	€4,647.6 million
Share of adjusted EBITDA[2]	73.0%

Important cross-segment events in 2023
Acceleration of the coal phaseout plan and certification of EnBW's reduction targets by the Science Based Targets initiative (SBTi) to confirm they are line with the Paris Agreement (p. 30 ff.)

1 The values stated for electricity generation and installed output are not identical to the totals for the EnBW Group. Several power plants are allocated to the other two segments. The total generation of the EnBW Group is 26,552 GWh (excluding positive redispatch volumes), of which 12,680 GWh is generated from renewable energy sources. The total installed output of the EnBW Group is 12,226 MW, of which 5,728 MW is from renewable energy power plants. The totals for generation and installed output for the Group are shown in detail on p. 94.

2 The sum of the three segments does not correspond to the adjusted EBITDA for the EnBW Group. €-293.9 million (-4.6%) is attributable to Other/Consolidation in the 2023 financial year (p. 71 f.).

Group structure and business radius

EnBW is organized according to the model of an integrated company. EnBW AG is managed through business units and functional units: Core operating activities along the entire energy industry value chain are concentrated in the business units. The functional units carry out Group-wide support and governance tasks. The EnBW Group consists of EnBW AG as the parent company and 256 fully consolidated companies, 25 companies accounted for using the equity method and 3 joint operations. Further information on the organizational structure can be found in the chapter "Corporate governance" under "Management and supervision" on p. 37 ff..

Baden-Württemberg, Germany and Europe

Further information on **selected companies of EnBW AG** can be found under the following link.

Online

Selected EnBW companies

Baden-Württemberg
EnBW Energie Baden-Württemberg AG, Karlsruhe
EnBW mobility+ AG & Co. KG, Karlsruhe
EnBW Ostwürttemberg DonauRies AG, Ellwangen
Erdgas Südwest GmbH, Karlsruhe
NetCom BW GmbH, Ellwangen
Netze BW GmbH, Stuttgart
terranets bw GmbH, Stuttgart
TransnetBW GmbH, Stuttgart
ZEAG Energie AG, Heilbronn

Germany
ONTRAS Gastransport GmbH, Leipzig
Plusnet GmbH, Cologne
SENEC GmbH, Leipzig
Stadtwerke Düsseldorf AG, Düsseldorf
VNG AG, Leipzig
Yello Strom GmbH, Cologne

Denmark
Connected Wind Services A/S, Balle

France
Valeco SAS, Montpellier

Great Britain
Mona Offshore Wind Holdings Limited, Sunbury-on-Thames[1]
Morgan Offshore Wind Holdings Limited, Sunbury-on-Thames[1]
Morven Offshore Wind Holdings Limited, Sunbury-on-Thames[1]

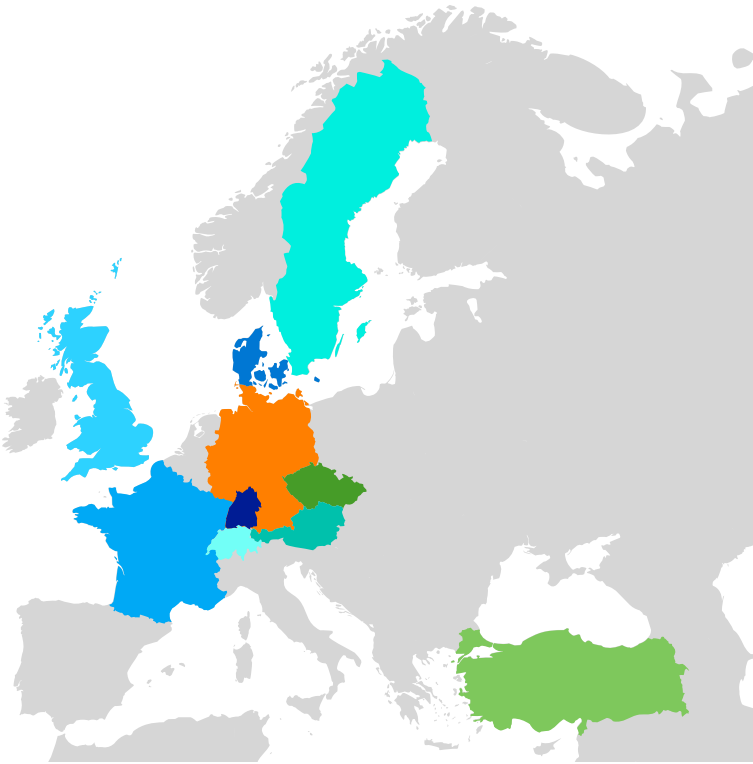
Austria
SMATRICS EnBW GmbH, Vienna

Sweden
EnBW Sverige AB, Falkenberg

Switzerland
Energiedienst Holding AG, Laufenburg

Czech Republic
Pražská energetika a.s., Prague

Turkey
Borusan EnBW Enerji yatırımları ve Üretim A.S., Istanbul[1]



1 Not fully consolidated, accounted for using the equity method.

The full list of shareholdings can be found in the notes to the consolidated financial statements under (38) "Additional disclosures."

Our **roots lie in Baden-Württemberg,** where we are positioned as a market leader. We rely here on EnBW AG, Netze BW and a series of other important subsidiaries.

We also operate throughout the rest of **Germany** and in **selected markets abroad** via our various subsidiaries. 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 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. In Great Britain, we have secured the rights to build several offshore wind farms together with our partner bp. 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 actively engaged in **the operation of the charging infrastructure and provide a range of products and services necessary for electromobility** in many European countries through our subsidiary EnBW mobility+. We are the market leader for quick charging in Germany and are now also expanding onto the Austrian market with SMATRICS EnBW. Our subsidiary SENEC, based in Leipzig, offers holistic energy solutions for customers to meet their own energy needs using solar electricity and home storage. The telecommunications company Plusnet based in Cologne supplements our portfolio in our nationwide **broadband business,** while our subsidiary NetCom BW has its main focus in this sector in Baden-Württemberg.

Click on the respective logos to access the websites of our **most important subsidiaries.**

Our **most important participating interests** in relation to the value-added chain include the following groups of companies:

Energiedienst (ED), based in Laufenberg, Switzerland, has around 1,200 employees and is an ecologically oriented German-Swiss listed company with various subsidiaries that is active in South Baden and Switzerland. ED exclusively generates green electricity using primarily hydropower and has already been measuring and regulating its Scope 1, Scope 2 and parts of its Scope 3 emissions since 2020 to ensure they remain climate neutral. Alongside the production, sale and supply of electricity, this group of companies offers its customers smart, networked products and services, including photovoltaic plants, heat pumps, electricity storage systems, electromobility and e-car sharing.

Pražská energetika (PRE), based in Prague, Czech Republic, has around 1,800 employees and its core business activities include the sale of electricity and gas, the distribution of electricity in Prague and Roztoky, the generation of electricity from renewable energies, the operation and expansion of fiber-optic infrastructure, the expansion of the charging infrastructure for electromobility and the provision of energy services. PRE is the third-largest electricity supplier in the Czech Republic. As part of its activities, PRE promotes the use of modern technological solutions and advises on the implementation of innovative technologies and achieving energy savings.

Stadtwerke Düsseldorf (SWD) is one of the largest municipal energy supply companies in Germany. It has around 3,300 employees and SWD and the companies in which it holds a majority shareholding supply customers in Düsseldorf and the surrounding region with electricity, natural gas, district heating and drinking water, as well as being responsible for waste disposal and street cleaning services in the metropolitan area of Düsseldorf. In addition, the company's focus is placed on the needs-based development of networked urban infrastructures in the areas of energy, mobility, the circular economy and real estate. SWD is supporting the state capital of North-Rhine Westphalia to achieve its target of becoming climate neutral with respect to Scope 1 and 2 emissions by 2035.

VNG and its subsidiaries as gas importers, wholesalers and operators of critical gas infrastructure ensure Germany is reliably supplied with gas. This group of over 20 companies is active across Europe and employs about 1,600 people. It has its headquarters in Leipzig and concentrates on the business areas of Trading and Sales, Transport, Storage, Biogas and Digital Infrastructure. VNG is also pursuing an ambitious path for a market ramp-up of renewable and decarbonized gases such as biogas and hydrogen, paving the way for a sustainable, secure supply and, in the long term, the climate-neutral energy system of the future.

Customers and sales brands

We supply **around 5.5 million customers** with energy and differentiate between two customer groups: The B2C customer group includes retail customers, small commercial enterprises, the housing industry and agriculture. The B2B customer group encompasses major commercial enterprises and industrial companies, as well as redistributors, municipal utilities, local authorities and public entities.

We use our sales brands to orient ourselves to the needs of our customers. In the B2C sector, we sell green electricity, electricity, gas, district heating, energy industry services, energy solutions and drinking water under the **EnBW brand.** These products and services focus on Baden-Württemberg. We sell green electricity and gas products, as well as solutions and digital services related to energy, to retail and commercial customers throughout Germany through the **Yello brand.**

We are also represented in the B2C and B2B sectors via our subsidiaries through the **Erdgas Südwest, ODR** and **ZEAG brands.**

Under the **naturenergie brand,** Energiedienst (ED) sells green electricity across Germany and gas to retail customers in South Baden via a subsidiary. In addition, ED also offers many other sustainable products and services through this brand in the areas of heating, living, photovoltaics and mobility – from solar power plants and e-car sharing services through to heating concepts for districts. In Switzerland, the ED Group provides electricity to business customers. PRE sells electricity, gas and energy services to retail and commercial customers in Prague and the surrounding region under the **PRE brand.** PRE also supplies electricity, gas and energy services to industrial customers across the Czech Republic under the PRE brand. Electricity and gas are sold in the Czech Republic under the **Yello brand,** primarily via online channels to households and commercial customers. SWD supplies retail and commercial customers in the B2C sector and business and industrial customers in the B2B sector with electricity, gas, heating, energy solutions and drinking water under the **Stadtwerke Düsseldorf brand.** The sales focus is placed here on Düsseldorf and the local region. Under the **VNG brand,** VNG supplies around 400 public utilities and redistributors as well as large industrial customers with gas via a subsidiary and its investments at home and abroad. Under the **goldgas brand,** VNG also sells gas and electricity to private households and commercial customers in Germany and Austria via its subsidiary of the same name.

Strategy, goals and performance management system

Strategy

Sustainable and innovative infrastructure partner

Our **EnBW 2025 strategy** has the motto "Making and shaping the infrastructure world of tomorrow" and is based on a holistic approach to stakeholders. It defines specific financial and non-financial targets in the dimensions of finance, strategy, customers and society, environment and employees. We have made sustainability an integral part of our corporate strategy because we want to ensure that we create economic, ecological and social added value for our stakeholders.

Our EnBW 2025 strategy increasingly places the company's focus onto the infrastructure aspects of existing energy-related business fields and other activities that are aligned with our core expertise. Our core expertise – what we do well and do better than many others – lies in the safe and reliable construction, operation and management of critical infrastructure in the energy sector, such as the generation of power and heat or the distribution of energy by our grid subsidiaries. This can also be transferred to other **business fields related to infrastructure.** One example of this type of business field is our broadband business in which we have made major progress by winning various large contracts. We are also involved in the expansion of urban infrastructure, for example the smart networking of energy and heating supplies, telecommunications and e-mobility.

Our strategy and its integrated approach along the value-added chain has demonstrated its resilience in times of crisis. The war between Russia and Ukraine, high volatility on the markets and the possibility of regulatory interventions on the market increase the level of uncertainty with which predictions about the future development can be made. Therefore, we continuously monitor and evaluate conditions with respect to their possible impact on our business. We remain committed to our overarching strategic alignment as an integrated energy and infrastructure provider, even more so because of our **robustness in times of crisis** (p. 17 f.↗).

We are following these **strategic goals** in our three segments:

Our **Smart Infrastructure for Customers** segment encompasses our end-customer business. In the next few years, we will especially focus on the growth area of electromobility. We aim to further expand our quick-charging infrastructure to around 30,000 quick-charging points by 2030 in order to promote electromobility, maintaining our position as the market leader in this sector in the process (p. 89 f.↗). And in the area of B2C sales for electricity and gas, we will continue to rely on digitalization to deliver an improved customer experience and increase our cost efficiency. We are also expanding our household-related energy solution business (such as in the area of photovoltaics and storage systems).

In the **System Critical Infrastructure** segment, our grid subsidiaries for electricity and gas will further expand the transmission grids as they form an important cornerstone of our earnings alongside the distribution grids. At our subsidiary TransnetBW, we sold two minority shareholdings of 24.95% each to the Südwest consortium headed by SparkassenVersicherung and to the KfW. In addition, our grid companies will upgrade the electricity distribution grids so that they are ready to meet the challenges of the future and ensure they are prepared for the additional demands that will be placed on them by electromobility, the increasing number of heat pumps and the decentralized feed-in of energy. Numerous local authorities have invested in our distribution grids via the "EnBW connects" participation model (p. 90↗). To support the decarbonization of the gas sector, our grid companies are preparing their grid infrastructure for the use of climate-friendly and climate-neutral gases in the future, such as hydrogen.

In the **Sustainable Generation Infrastructure segment,** the main focus is the expansion of renewable energies and disposable capacity, i.e., flexibly deployable power plants. The expansion of renewable energies will cover further selective internationalization and the realization of projects without state funding. The 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. In addition, EnBW and bp plan to build

three offshore wind farms through joint ventures that will have a total capacity of 5.9 GW and lie off the coast of Great Britain. They will be placed into operation from 2029. Long-term power purchase agreements (PPAs) with industrial customers will be used to safeguard this investment. With respect to coal-based conventional generation, we plan to phase out coal by 2028 based on the assumption that renewable energies will be ramped up as necessary and that the significant progress in expanding the grids in accordance with the plans announced by the German government can be achieved. As a replacement for several of our coal power plants and to secure our portfolio of renewable energies, we already decided in 2022 to construct gas power plants (fuel switch) that could also be operated using hydrogen in the future (H_2-ready). The operation of Block II of our Neckarwestheim nuclear power plant ended as planned on 15 April 2023 in accordance with the amended German Atomic Power Act. We are adapting our trading activities to the changes in our generation portfolio and the energy markets and further expanding our market position with a focus on Europe.

We had planned to use this portfolio to increase our **adjusted EBITDA** to €3.2 billion by 2025 in accordance with our EnBW 2025 strategy. It was possible to exceed this target in the 2023 financial year and in our current plans we now also expect to exceed this earnings target (p. 125↗).

We had also originally planned **net investment** of around €12 billion in total between 2021 and 2025 as part of our EnBW 2025 strategy, of which 80% was intended for growth projects. We are now expecting that our net investment will be higher due to, among other things, a faster energy transition and the rise in inflation (p. 124 f.↗). There was investment of €8 billion between 2021 and 2023. The main focus of our investment will be the expansion of the grids, especially the SuedLink and ULTRANET projects of our grid subsidiary TransnetBW that are central to the future energy supply in Germany, the expansion of renewable energies, such as the planned realization of the EnBW He Dreiht offshore wind farm, the construction of H_2-ready gas power plants in Altbach/Deizisau, Stuttgart-Münster and Heilbronn, and further developments in the Smart Infrastructure for Customers segment, such as the further expansion of electromobility. We resolutely apply sustainability criteria when taking investment decisions (p. 36↗) and align our growth accordingly (p. 80 f.↗).

Outlook 2030

EnBW has updated the 2025 strategy with an outlook to the period up to 2030. Based on our integrated approach, we will rigorously push forward the expansion of the energy infrastructure. Our main focus will be placed on the accelerated expansion of renewable energies and the grid infrastructure, as well as the development of smart products and services for our customers that support the energy transition at home and on the move.

In the period from 2024 up to and including 2030, we are planning gross investment totaling around €40 billion. Approximately 60% of this investment will be in the expansion of the grids in the System Critical Infrastructure segment and approximately 30% will be on the expansion of wind farms and solar parks and the construction of climate-friendly, hydrogen-ready power plants in the Sustainable Generation Infrastructure segment. The remaining amount of around 10% will primarily flow into the expansion of electromobility in the Smart Infrastructure for Customers segment. The vast majority of the investment will be made in Germany, while about 10% will be in our other markets. EnBW will further accelerate the pace of the energy transition with its planned investment up to 2030. At the same time, our aim is to comply with the strict sustainability criteria in the EU taxonomy in more than 85% of the investment. We want to continue implementing the projects associated with this investment in cooperation with partners. Taking into account these partnerships, we expect total net investment of around €22 billion by 2030. We have already been able to secure almost half of the expected cash returns, especially via the participation model for our He Dreiht offshore wind farm and the investments made by financing partners in the transmission grid operator TransnetBW. We will largely finance our net investment from retained cash flow until 2030 and otherwise will mainly rely on green financing instruments. At the same time, we will always strive to maintain a solid investment-grade rating based on a debt repayment potential of at least 15%.

In terms of adjusted EBTDA, we expect to increase earnings to between €5.5 and €6.3 billion by 2030, of which between €0.7 and €1.0 billion will be accounted for by the Smart Infrastructure for Customers segment, between €2.3 and €2.6 billion by the System Critical Infrastructure segment and between €2.7 and €3.0 billion by the Sustainable Generation Infrastructure segment. With our

balanced portfolio across these three segments and a proportion of low-risk adjusted EBITDA of at least 70%, we want to continue to play a leading role in reshaping the energy sector in Germany.

EnBW Sustainability Agenda

More detailed information on the **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** and continued to implement it in 2023. We developed it in a multistage process that incorporated our stakeholder groups and took our corporate values into consideration. The 15 measures developed as part of the EnBW Sustainability Agenda have made an important contribution to the corporate success of EnBW over the last two years and are helping to anchor sustainability even more strongly into our activities and solutions. As a consequence, they make a noticeable contribution to value added and minimize the risks facing our company. Four strategic focus areas covering all of the ESG dimensions provide a framework for the 15 measures.

Strategic themes and measures for the EnBW Sustainability Agenda

New energy and climate neutrality

1. Expansion of renewable energies and taking biodiversity criteria into account in major projects
2. Climate-neutrality road map and socially responsible phaseout of coal
3. Further development towards becoming a system partner for hydrogen provision and infrastructure

Infrastructure transition

4. Eco-efficient quick-charging parks and climate-neutral corporate mobility
5. Strengthening the grid infrastructure for the energy and mobility transitions
6. Sustainable districts and real estate
7. Promoting forms of working and mobility that are ready for the future by laying new fiber-optic cables in rural areas

Culture of sustainability

8. Board of Management and management remuneration aligned to sustainability criteria
9. Expanding the area of sustainable finance, financing via green bonds
10. Holistic consideration of sustainability in the investment process
11. Expanding the evaluation of risks and opportunities to include climate risks
12. Expanding the sustainable HR strategy

Protecting the natural environment

13. Anchoring sustainability criteria in the purchasing process
14. Increasing the use of low carbon materials and the efficient use of resources, reducing harmful emissions and water consumption
15. Protecting employees and local residents

We made important progress with all of the measures in the 2023 financial year. Here are some **selected examples:**

New energy and climate neutrality: EnBW is transforming energy and heating generation to shape the path towards climate neutrality. Following the endorsement of our climate protection targets by the renowned Science Based Targets initiative (SBTi), the Board of Management and Supervisory Board have now approved precisely defined, science-based reduction paths for all Scopes (1 to 3). The key to reducing emissions will be the planned phaseout of coal by 2028. Another important milestone will be the planned fuel switch projects for generating electricity and heating using more climate-friendly gases at the sites in Baden-Württemberg from 2026 onwards **(measure 2)** (p. 30 ff.↗). As part of **measure 3,** we aim to make EnBW a pioneer in all market segments related to climate-neutral gases. EnBW, including its subsidiaries such as Netze BW and VNG, is engaged in several hydrogen projects along the entire value-added chain. We are concentrating here on developing a product range certified according to EU standards.

Infrastructure transition: As the market leader in the expansion of the charging infrastructure for electromobility, EnBW is committed to creating a sustainable customer experience. This begins with using 100% green electricity in the operation of our charging stations. As part of the EnBW Sustainability Agenda, we have been investigating how we can design more sustainable charging parks. We carried out a life cycle analysis of a pilot project at the "Next Level" charging park in Chemnitz to test which elements can be transferred to charging park planning **(measure 4).** The charging park was presented at IAA MOBILITY in Munich and not only serves the purpose of reducing CO_2 emissions but is also designed to meet the needs of drivers of electric vehicles, with a special focus on aspects

Netze BW won the **German Sustainability Award** in the grid infrastructure category.

Online ↗

such as creating a family-friendly and barrier-free experience. The two EnBW subsidiaries EnBW mobility+ and Netze BW both won the German Sustainability Award 2024 at the end of 2023. Explaining its decision, the jury recognized EnBW mobility+ as a pioneer in the construction and operation of quick-charging infrastructure for electric cars and a trailblazer in the mobility transition. As part of **measure 5**, Netze BW is addressing the challenges posed by the decentralization of electricity and heating generation and the ramping up of electromobility using technical solutions. For this purpose, the largest distribution grid operator in Baden-Württemberg has introduced more than 150 measures focusing on the environment, energy transition, people, climate and society. **Measure 6** addresses both EnBW's own real estate and the development of sustainable districts for third parties. It is laying the foundations for a climate-neutral real estate portfolio by 2035. To this end, we have implemented the first steps of the agreed road map that lays out the measures required to reduce CO_2 emissions.

Culture of sustainability: Measure 9 is designed to strengthen the area of sustainable finance. Two green senior bonds with volumes of €650 million and €850 million, respectively, (p. 32↗) have been issued as part of measure 9, each on the basis of taxonomy-aligned activities. EnBW is actively engaged in promoting sustainable finance across all sectors. For example, we are a member of corporate networks such as econsense, the sustainability network of German business, and represented in expert groups such as the Accounting Standards Committee of Germany and the Sustainable Finance Advisory Committee of the German Federal Government. In a project to implement the requirements in the Corporate Sustainability Reporting Directive (CSRD) and European Sustainability Reporting Standards (ESRS), we are working to adapt our sustainability reporting in good time for the 2024 reporting year. As part of **measure 10,** we extended the investment approval process to cover other business categories, while almost doubling the number of assessments we carried out in 2023. An evaluation of the CO_2 emissions and thus the impact on the climate of a new project has also been made a standard part of the process. In order to strengthen the resilience of the business model and against the background of growing physical risks, a new IT system has been introduced at the Group as part of **measure 11** that will allow us to carry out climate risk analyses at the sites in the Group for the EU taxonomy. Based on the future scenarios RCP2.6, RCP4.5 and RCP8.5 developed by the Intergovernmental Panel on Climate Change (IPCC), we are carrying out climate risk analyses of existing and future EnBW sites to assess the impact of possible extreme weather events. The analyses will allow the specialist departments and business areas to test and implement suitable mitigation and adaptation measures at an early stage.

Protecting the natural environment: EnBW laid the foundations for exercising due diligence with respect to human rights in compliance with the legal requirements with the ratification of the Declaration on Human Rights in spring 2023 and the first EnBW policy statement in accordance with the Act on Corporate Due Diligence Obligations in Supply Chains (Lieferkettensorgfaltspflichtengesetz, LkSG) as part of **measure 13.** This includes robust control and implementation structures, as well as comprehensive risk analyses of our own business areas and throughout the supply chain. In addition, we have automated and digitalized the business partner audit for the purchasing of raw materials and this has enabled us to carry out comprehensive due diligence checks on business partners even more efficiently and effectively since fall 2023 (p. 52 ff.↗). We carried out a status quo analysis with the aim of increasing our resource efficiency and strengthening the circular economy, by recording and analyzing the measures that had been carried out up to now across the Group. Using this as a basis, we identified key areas of focus for pilot projects and potential areas for adding value. In this context, we are investigating, for example, whether used electric car batteries can be recycled in the construction of new electricity storage systems. As part of **measure 15,** we have examined the Group-wide implementation of an occupational safety management system (ISO 45001) and held workshops to inform individual business areas and companies in which we have a participating interest about the system. The aim, in particular, is to promote expertise in the area of occupational safety at those companies in which we have a participating interest and which have a high risk potential. Our own occupational medicine department has continued to offer a variety of services to employees to help them improve their physical and mental health since the end of the coronavirus pandemic (p. 102↗).

The EnBW Sustainability Agenda is supported by a **governance structure** that continuously monitors the implementation of the agenda using performance indicators. The individual measures can be adjusted if necessary. The results of the Sustainability Agenda have been analyzed and will serve as the basis for the updated Sustainability Agenda 2.0 in 2024.

Learn more about our **Sustainability Agenda** here.

Online

Our climate protection goals

Two key elements of the **EnBW Sustainability Agenda** are compliance with science-based targets and the achievement of our goal of climate neutrality. Our goals for reducing greenhouse gas emissions along the value-added chain are aligned with these aims.

Science Based Targets initiative (SBTi)

The **Science Based Targets initiative (SBTi)** helps companies to develop their own **science-based climate protection targets.** In October 2021, EnBW announced its intention to set science-based targets according to the SBTi. We concluded this process as planned in spring 2023. We have thus aligned our climate protection targets with the targets of the Paris Agreement. The reduction targets cover the entire value-added chain for EnBW and are split into three emission categories or so-called Scopes: Scopes 1 and 2 include, in particular, the greenhouse gas emissions produced by our power plants as they generate electricity and heat, and when energy is distributed in the grids operated by our subsidiaries. Our Scope 3 emissions are mainly influenced by the gas consumption of our customers (p. 95 ff.). We aim to follow a 1.5 degree-aligned path for Scopes 1 and 2 emissions and a "well below 2 degrees"-aligned path for Scope 3 emissions. We also aim to reduce our CO_2 emissions in Scopes 1 and 2 by 83% by 2035 (based on the reference year 2018). In the same period, we aim to reduce our emissions from gas sales in Scope 3 by 43% in comparison to the reference year 2018. These targets have been certified by the SBTi. We will offset any residual Scope 1 and 2 emissions in the period after 2035 on a transitional basis by purchasing CO_2 certificates and thus by supporting recognized climate change mitigation projects until the emissions have been completely reduced to zero. Along this path we have also defined various intermediate targets and milestones: We will reduce our Scope 1 and 2 emissions by 50% by 2027 and by 70% by 2030 (based on the reference year of 2018).

Further information on the **SBTi** can be found on our website.

Online

As an integrated energy company with its own generation portfolio – which is increasingly characterized by renewable energies – we can make an important contribution to decarbonization and thus to safeguarding the livelihoods of future generations.

Measures

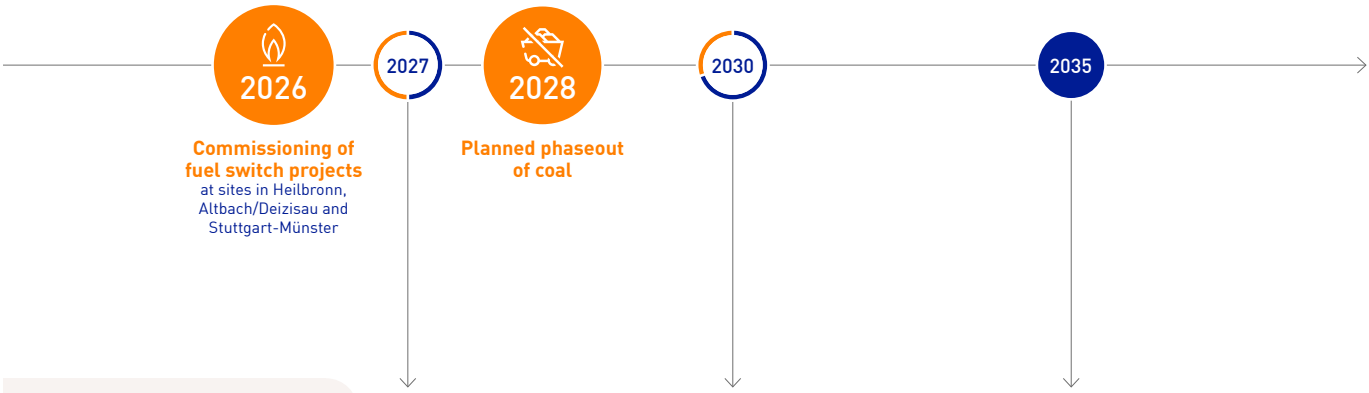
Our climate protection targets **are in line with the requirements and targets of the Paris Agreement.** They should also strike a balance between the different expectations of our stakeholders, with whom we remain in constant dialog. This includes above all the provision of affordable and climate-friendly energy and ensuring the security of supply.

Further information on our **climate protection targets** can be found here.

Online

The most important step for achieving our climate protection goals is the early phaseout of coal. Based on the assumption that renewable energies will be ramped up as necessary and the significant progress in expanding the grids in accordance with the plans announced by the German government will be achieved, we will phase out the use of coal at EnBW by 2028. Even before the Coal Phaseout Act, we voluntarily divested ourselves of 2,700 MW of particularly carbon-intensive generation capacity. We have already implemented appropriate human resources measures such as further training and forward-looking human resources planning for employees working in conventional generation. Some employees from the area of conventional generation are already bringing their technical expertise to other areas of the company, such as at our offshore wind turbines.

Our climate protection goals



	2027	2030	2035
Goals	• Reduction in emissions[1] by **50%**	• Reduction in emissions[1] by **70%**	• **Climate neutral** in Scopes 1 and 2[2]
Measures	**2020 to 2027** • Planning and implementing the fuel switch to climate friendlier fuels, use of green electricity with guarantees of origin at the sites in Heilbronn, Altbach/Deizisau and Stuttgart-Münster • Decommissioning the remaining coal power plant capacities of around 2 GW	**2027 to 2030** • Planned phaseout of coal by 2028 • Concluding the fuel switch at the power plant sites in Heilbronn, Altbach/Deizisau and Stuttgart-Münster • Making our gas power plants H_2-ready • An increasing proportion of renewable electricity supply in the grid business • Preparing to switch over our gas power plants to hydrogen	**2030 to 2035** • Using green gases (hydrogen) in our power plants • High proportion of renewable electricity supply in the grid business • Supporting the ramp-up of hydrogen in the heating sector • Offsetting the remaining CO_2 emissions with recognized climate mitigation projects

1 Reduction in Scope 1 and 2 emissions compared to the reference year 2018.
2 Achievement of our climate protection targets in line with the 1.5 degree path of the Paris Agreement.

This video explains our **reduction path.**

Online ↗

Milestones

Scope 1 and 2: emissions in our value added-chain

An important milestone for reducing our CO_2 emissions will be the fuel switch at the power plants in Heilbronn, Altbach/Deizisau and Stuttgart-Münster. Specific emissions from electricity generation will be reduced by around 60% as a result of the switch from hard coal to natural gas. The conversion work at the plants is already underway and is due to be completed in 2026. The aim is to operate the plants from the middle of the 2030s onwards with climate-neutral gases, primarily green hydrogen, so that they will then generate climate-neutral energy. We plan to phase out coal power plants with around 2,000 MW of generation capacity that are still on the market by 2028.

Various measures will be required to reduce our indirect emissions from purchased or acquired energy (Scope 2). The CO_2 emissions from the general electricity mix will be reduced in the coming years by the expansion of renewable energies and the gradual phaseout of fossil fuel-fired generation. This will also lead to a reduction in our Scope 2 emissions. Furthermore, we plan to specifically utilize green electricity.

Scope 3

When it comes to reducing our Scope 3 emissions, the volume of our gas sales is particularly important. This will be dependent on various developments in the heating sector. Alongside a further increase in the use of heat pumps, the partial mixing of the natural gas used to generate heat with climate-neutral gases and the expansion of climate-neutral district heating, there will be a general reduction in the need to heat buildings due to energy-efficient refurbishment and a fall in the average age of the residential building stock. We will push forward these developments as a partner, especially when establishing a hydrogen infrastructure. This will enable us to offer our gas customers a more environmentally friendly energy supply in future as we align our sales portfolio towards green gases.

Netze BW won the **German Sustainability Award** in the grid infrastructure category.

Online

The last step to reaching climate neutrality

We already set ourselves the target in 2020 of becoming climate neutral with respect to Scope 1 and 2 emissions by 2035. We plan to offset any non-reducible, residual greenhouse gas emissions by supporting recognized climate change mitigation projects that are carried out according to the highest standards (such as the Gold Standard). Just like Netze BW, our subsidiary Energiedienst was already in previous years measuring its Scope 1, Scope 2 and some of its Scope 3 emissions to ensure they remain climate neutral.

Sustainable financing

Further information on our **sustainable financial instruments** can be found on our website.

Online

The use of **sustainable financing instruments** underpins our corporate strategy and makes a contribution to achieving national and international sustainability targets, above all the Paris climate protection targets and the UN Sustainable Development Goals (SDGs) (p. 30 ff.). Since 2018, we have successfully issued several **green bonds** on the capital market. As of 31 December 2023, these bonds had a total volume of €5 billion. We issued a green subordinated bond with a volume of €500 million on 23 January 2024. In accordance with our Green Financing Framework, the proceeds from our green bonds are exclusively used in the areas of renewable energies (offshore wind, onshore wind and photovoltaics), clean transport (charging infrastructure for electromobility) and the project category electricity grids that was newly added in 2022.

Information on how the funds from the green bonds are used can be found in the **Green Bond Impact Report** on our website.

Online

We provide detailed information on the allocation of the funds every year in our **Green Bond Impact Report,** which is published at the same time as the Integrated Annual Report. The green bonds thus support our investment in sustainability and in turn the key non-financial performance indicators in the environment dimension. The financing conditions for the **sustainability-linked syndicated credit line** are linked to selected non-financial key performance indicators. The proceeds from the **green promissory note of our subsidiary VNG** can only be used for environmentally sustainable projects: The focus in the medium to long term will be green gases, primarily biogas and sustainably produced hydrogen.

Our Chief Financial Officer Thomas Kusterer has been named **"CFO of the Year"** and our sustainable financing was one of the reasons for this award.

Online

Goals and performance management system

Performance management system

The management of the company comprises financial, strategic and non-financial goals and, as well as the finance and strategy goal dimensions, includes the dimensions customers and society, environment and employees. The centerpiece of this **integrated corporate management** is the performance management system (PMS). The most important financial and non-financial Group goals have been broken down into target agreements insofar as they are considered a sensible performance indicator for the respective area. The value drivers for the most important operating performance indicators that contribute to the achievement of targets for the key performance indicators (finance, strategy and environment goal dimensions) are reported in the quarterly performance reviews conducted at a Board of Management level. In terms of external communication, the PMS feeds into the **integrated reporting** of the financial and non-financial performance of the company based on the "International Integrated Reporting Framework." This Integrated Annual Report 2023 incorporates the financial and non-financial aspects of our business activities. The key performance indicators enable us to measure the degree to which goals are achieved and to manage our company.

TOP

Definition of the key performance indicators

We monitor the implementation of our strategy by means of a holistic goal and performance management system. This system strengthens integrated thinking in our company. At the same time, it underpins our comprehensive and transparent focus on performance and stakeholders. Our goal system comprises the five dimensions of finance, strategy, customers and society, environment and employees. A number of specific targets have been defined in each goal dimension and their achievement is continuously measured using key performance indicators. Linked with this goal system and the centerpiece of our corporate management is the performance management system (PMS). Quantitative target values are currently set for the key performance indicators for the 2025 strategy horizon and now for the first time also the 2030 strategy horizon.

The **financial key performance indicators** within the PMS are the adjusted EBITDA, the shares of the adjusted EBITDA accounted for by the segments, debt repayment potential, value spread and from 2024 onwards also the share of adjusted EBITDA accounted for by low-risk earnings and the proportion of taxonomy-aligned expanded capex:

- The **adjusted EBITDA** is the earnings before the investment and financial results, income taxes, depreciation and amortization and adjusted for non-operating effects. Adjusted EBITDA is a key performance indicator for the finance goal dimension, while the key performance indicators for the strategy goal dimension, which describe the shares of adjusted EBITDA accounted for by the segments (p. 71 f. and p. 125) are derived from it.
- The key performance indicator **debt repayment potential** describes the retained cash flow in relation to net debt. The debt repayment potential measures the ability of EnBW to repay its debts from its current earnings potential. This performance indicator should enable us to achieve a controlled growth in earnings within the scope of our financial targets, while maintaining a solid investment-grade rating at the same time. It will guarantee that the financial profile of EnBW complies with the quantitative requirements stipulated by the rating agencies. Therefore, we regularly check whether our target value for the debt repayment potential complies with the current requirements of Moody's and S&P. Our most recent review led to an increase in the target value from ≥ 12 to ≥ 15 (p. 83 and p. 126).
- The **value spread** measures the surplus return over the minimum return on capital employed before taxes in a reporting period. It is calculated by deducting the minimum return on capital employed before tax, defined by the weighted average cost of capital (WACC), from the return on capital employed before taxes that was actually achieved (p. 84 f. and p. 126). Value spread will no longer be classified as a key performance indicator relevant to the control of the company from the 2024 financial year onwards and will be replaced by the new key performance indicators share of adjusted EBITDA accounted for by low-risk earnings and proportion of taxonomy-aligned expanded capex.
- The **share of adjusted EBITDA accounted for by low-risk earnings** is the sum of the adjusted EBITDA for the System Critical Infrastructure segment and the adjusted EBITDA for the Renewable Energies area in relation to the adjusted EBITDA for the EnBW Group. The external financing of our necessary investment is an important part of the EnBW strategy. In contrast to some of its competitors, EnBW operates along the entire value added chain. Against this background, it is especially important for EnBW to determine the share of low-risk activities for the rating agencies. The target level for the debt repayment potential that is required to achieve a certain rating class is dependent on this performance indicator. At the moment, a share of low-risk business ≥ 70% should guarantee that a debt repayment potential of 15% is sufficient to retain the current rating target (p. 93 f.).
- For a definition of the **proportion of taxonomy-aligned expanded capex,** please refer to our taxonomy section on p. 107 ff.. External financing is an important tool for successfully implementing the EnBW strategy, while the EU taxonomy provides a central framework for the investment strategy of banks and investors who have a focus on sustainability. By reporting on sustainable investment both at our fully consolidated companies and also at entities accounted for using the equity method, we are placing great importance on the performance indicator proportion of taxonomy-aligned investment. Furthermore, financial institutions (banks and investors) are obligated in the EU Taxonomy Regulation to report on the proportion of sustainable investment in their investment strategies. Companies who are already aligning their investment strategies according to the criteria in the EU taxonomy are thus more attractive to investors and are able to position themselves for a sustainable future.

In addition to the financial key performance indicators, the PMS also includes **non-financial key performance indicators:**

The **customers and society goal dimension** comprises the Reputation Index, the Customer Satisfaction Index and the SAIDI (System Average Interruption Duration Index) Electricity:

- In order to calculate the **Reputation Index,** a total of around 5,000 people – from the stakeholder groups relevant for the EnBW brand of customers, the wider public, industrial companies, opinion leaders and investors – are asked about their impressions of the EnBW brand by an external market research institute. Results are collected for each stakeholder group about the distinctiveness of the brand and their assessment of the competence of and emotional attitude towards the EnBW

brand. These are merged together to form a Reputation Index. The individual reputation indices for each stakeholder group are weighted equally to form a consolidated and reported Reputation Index (p. 87↗ and p. 127↗).

- The key performance indicator **Customer Satisfaction Index** assesses the average satisfaction of private end customers for electricity over the year, which is directly linked to customer loyalty. The information is compiled using customer surveys about the two brands EnBW and Yello conducted by an external service provider. The Customer Satisfaction Index allows us to draw conclusions about how well we are meeting the needs and wishes of surveyed customers (p. 88↗ and p. 127↗).
- **SAIDI Electricity** serves as the key performance indicator of supply reliability. It specifies the average length of supply interruption in the electricity distribution grid experienced annually by each connected customer. SAIDI Electricity includes all unscheduled interruptions to supply that last more than three minutes for the end consumer. The definition and calculation of this performance indicator is based on the guidelines issued by the Network Technology / Network Operation Forum (FNN) of the VDE (German Association for Electrical, Electronic & Information Technologies) (p. 92↗ and p. 127↗). The reliability of the supply in the grid areas operated by our grid subsidiaries builds on our comprehensive investment in grids and facilities as well as our system expertise.

The key performance indicators in the **environment goal dimension** are the installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE and CO_2 intensity:

- **The installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE** are measures of the expansion of renewable energies and refer to the installed output of the power plants and not to their weather-dependent contribution to electricity generation (p. 93 f.↗ and p. 128↗).
- The emissions of CO_2 from own generation of electricity for the Group, as well as the volume of electricity generated by the Group without the contribution made by the nuclear power plants, form the basis for the calculation of the key performance indicator **CO_2 intensity.** This performance indicator is calculated as the ratio between the emissions and the generated volume of electricity and thus specifically describes the amount of CO_2 released per kilowatt hour. By discounting the electricity generated by nuclear power plants, the performance indicator will not be influenced by the phasing out of nuclear energy (p. 95 ff.↗ and p. 128↗).

The People Engagement Index (PEI) and LTIF (Lost Time Injury Frequency) are utilized as performance indicators in the **employees goal dimension:**

- The **PEI** expresses how engaged employees are in their work at EnBW. It is compiled at all companies with more than 100 employees (except for the Independent Transmission Operators [ITOs]) as part of an employee survey carried out by an external, independent service provider. It is determined based on the first question of the standardized list of questions "How happy are you working for the EnBW Group / a company in the Group?" It is a question that uses a rating scale from 1 (I do not agree at all) to 5 (I agree completely). The value determined is then converted to a scale of 0 to 100 (p. 101↗ and p. 128↗).
- **LTIF** is calculated on the basis of LTI (Lost Time Injuries), which denotes the number of accidents during working hours which have occurred exclusively because of a work assignment from the company and result in at least one day of absence. LTIF indicates how many LTI occurred per one million working hours performed. According to the current definition, the calculation of the LTIF overall includes all companies with more than 100 employees. For the calculation of the LTIF for companies controlled by the Group, those companies engaged in the area of waste management are excluded because the number of accidents deviates significantly from that in the core business in the energy industry. Moreover, companies that are fully consolidated in the EnBW Group for the first time in the respective reporting year will not be included in the LTIF for companies controlled by the Group for a transitional period of three years if the LTIF calculated for the respective company deviates significantly from the LTIF for companies controlled by the Group. This transitional period will make it possible to take measures to improve the area of occupational safety. External agency workers and contractors are not taken into account in either performance indicator. In future, the existing LTIF performance indicators will be replaced by LTIF energy (excluding waste management) and LTIF overall, which includes waste management. According to the new definition, both performance indicators cover the entire group of consolidated companies for the financial reports, including companies with less than 100 employees.

Newly fully consolidated companies will not be included in LTIF energy (excluding waste management) for a maximum transitional period of three years if the LTIF calculated for the respective company deviates significantly from the LTIF at a Group level. Contractors are not taken into account in either performance indicator (p. 105 and p. 129).

TOP Financial and non-financial key performance indicators and targets

Goal dimension	Goal	Key performance indicator	2023	Target for 2025	Target for 2030
Finance	Securing profitability	Adjusted EBITDA in € billion	6.4	3.2[1]	5.5 – 6.3
	Managing the financial profile	Debt repayment potential in %	41.3	≥ 15[2]	≥ 15[2]
	Increasing Group value	Value spread in %	10.2	–[3]	–[3]
	Robustness of the earnings potential	Share of adjusted EBITDA accounted for by low-risk earnings in %[4]	–	≥ 70	≥ 70
	Focus on the energy transition	Proportion of taxonomy-aligned expanded capex in %[4]	–	≥ 85	≥ 85
	The EnBW Group, p. 71 f. | Forecast, p. 125 f. | Report on opportunities and risks, p. 130 ff. | Multi-year overview, p. 311				
Strategy[5]	Share of result accounted for by "Smart Infrastructure for Customers"	Share of overall adjusted EBITDA in € billion	0.2/3.8%	0.6/20.0%	0.7 – 1.0
	Share of result accounted for by "System Critical Infrastructure"	Share of overall adjusted EBITDA in € billion	1.8/27.8%	1.3/40.0%	2.3 – 2.6
	Share of result accounted for by "Sustainable Generation Infrastructure"	Share of overall adjusted EBITDA in € billion	4.6/73.0%	1.3/40.0%	2.7 – 3.0
	The EnBW Group, p. 71 f. | Forecast, p. 125 | Report on opportunities and risks, p. 130 ff. | Multi-year overview, p. 311				
Customers and society	Reputation	Reputation Index	55	55 – 59	56 – 60
	Customer proximity	EnBW/Yello Customer Satisfaction Index	130/161	125 – 136/ 148 – 159	148 – 157/ 155 – 175
	Supply reliability	SAIDI Electricity in min./year	19.3	< 20	< 20
	The EnBW Group, p. 87 ff. | Forecast, p. 127 | Report on opportunities and risks, p. 135 | Multi-year overview, p. 312				
Environment	Expand renewable energies (RE)	Installed output of RE in GW and the share of the generation capacity accounted for by RE in %	5.7/46.9	6.5 – 7.5/ > 50	10.0 – 11.5/ 75 – 80
	Climate protection	CO_2 intensity in g/kWh[6]	347	380 – 440	90 – 110
	The EnBW Group, p. 93 ff. | Forecast, p. 128 | Report on opportunities and risks, p. 135 f. | Multi-year overview, p. 312				
Employees	Employee engagement	People Engagement Index (PEI)[7]	82	77 – 83	77 – 83
	Occupational safety	LTIF for companies controlled by the Group[8,9] LTIF overall[8] LTIF energy[9,10] LTIF overall[10]	2.4 3.7 – –	2.1 3.5 – –	– – ≤ 2 ≤ 3.3
	The EnBW Group, p. 101 ff. | Forecast, p. 128 f. | Report on opportunities and risks, p. 136 | Multi-year overview, p. 313				

1 It was already possible to exceed this target in the 2023 financial year and in our current plans we now also expect to exceed the earnings target for 2025.
2 EnBW regularly checks the target value for debt repayment potential to ensure it can maintain its rating target. In this context, the target value was raised to ≥ 15.
3 Value spread will be replaced from 2024 onwards by the new key performance indicators share of adjusted EBITDA accounted for by low-risk earnings and proportion of taxonomy-aligned expanded capex.
4 This performance indicator will be relevant to the ongoing management of the company from 2024 onwards.
5 The sum of the three segments does not correspond to the adjusted EBITDA for the EnBW Group. €-293.9 million (-4.6%) is attributable to Other/Consolidation in the 2023 financial year (p. 71 f.). The target value for 2030 includes €–0.2 to €–0.3 billion in Other/Consolidation.
6 The calculation for this performance indicator does not include nuclear generation and the share of positive redispatch that cannot be controlled by EnBW. If the share of positive redispatch that cannot be controlled by EnBW is taken into account, CO_2 intensity would be 393 g/kWh for the reporting year (previous year: 508 g/kWh). The CO_2 intensity including nuclear generation for the reporting year was 366 g/kWh (previous year: 401 g/kWh).
7 Variations in the group of consolidated companies (all companies with more than 100 employees are generally considered (except ITOs)).
8 The LTIF for companies controlled by the Group excluding waste management and LTIF overall, which includes waste management, only includes companies with more than 100 employees excluding external agency workers and contractors.
9 Newly fully consolidated companies are not included for a maximum transition period of three years.
10 LTIF energy (excluding waste management) and LTIF overall, which includes waste management, cover the entire group of consolidated companies for the financial reports, including companies with less than 100 employees excluding contractors.

Interdependencies

In order to give a comprehensive portrayal of the company, we are convinced that it is not only necessary to present economic, ecological and social aspects, but also to illustrate and provide an analysis of interdependencies between them. To further encourage the idea of a holistic corporate management approach within EnBW, we promote integrated thinking within all important company processes. In doing so, we anchor not only financial but also non-financial aspects into decision-making processes.

Since the 2021 financial year, we have illustrated the progress we have made in anchoring integrated thinking in our company using the investment approval process as an example, and have thus also been able to highlight the increasingly important role played by non-financial aspects.

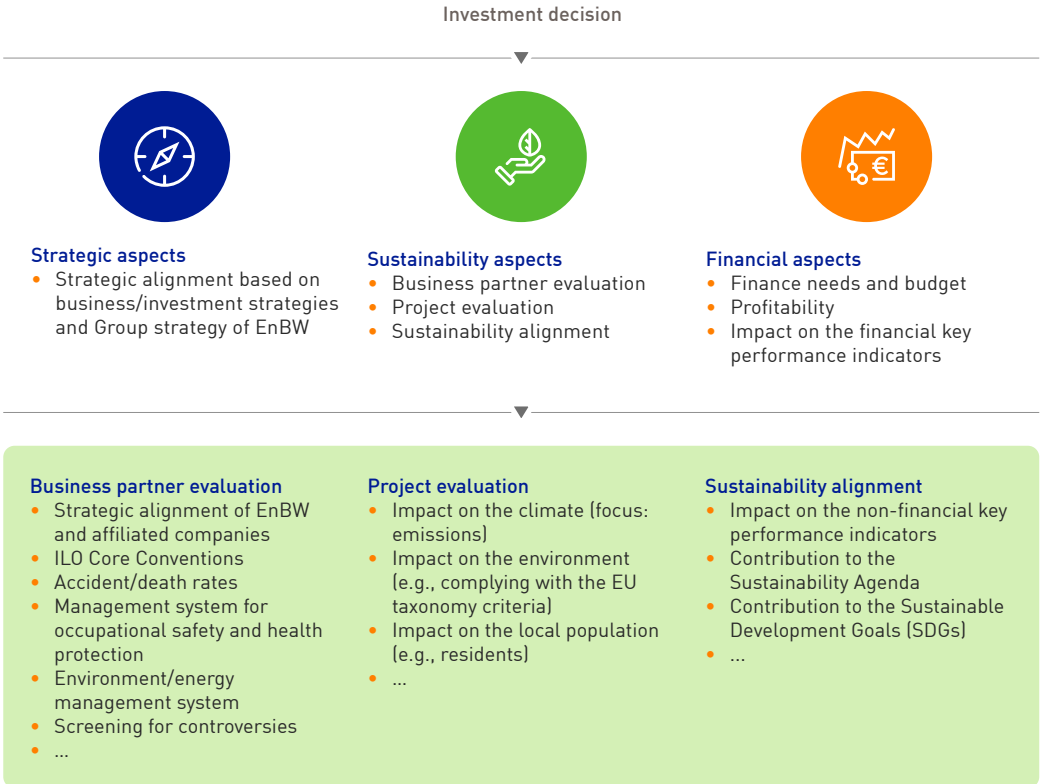
Alongside economic and strategic factors, this type of sustainability evaluation has become a fixed component of the approval process followed by the EnBW investment committee and the EnBW Board of Management, providing information relevant to the decision-making process.

The investment approval process is defined by the entire Board of Management. Individual projects are discussed and recommendations drawn up by the investment committee (InC). Alongside the Chief Financial Officer, the members of the InC include representatives from all remits of the EnBW Board of Management and various specialist departments, including the sustainability department. The InC develops recommendations that are presented to the entire Board of Management together with the project documentation submitted by the specialist departments.

When evaluating individual investment projects, we not only evaluate the strategic alignment, funding requirements, profitability and impact of the project on the key financial performance indicators but also take **the following steps of the sustainability evaluation** into consideration on an equal basis in the investment approval process.

- **Business partner evaluation:** Every business partner (supplier, service provider, joint venture partner, company being acquired) is assessed with respect to its management of social and environmental sustainability. The business partner is also screened and evaluated to identify any controversies related to sustainability in the last five years with respect to corporate/compliance misconduct, labor law, human rights, environmental and product responsibility.
- **Project evaluation:** Examining the planned project and/or project category with respect to sustainability. We evaluate the impact of the project category (e.g., wind power, solar, fuel switch, fiber-optic) on the three areas of the climate, environment and people.
- **Sustainability alignment:** The project is examined from a strategic perspective to determine whether it complements our sustainability-aligned business plan.

Investment approval process



Corporate governance

Corporate management

Good corporate governance is an essential part of the corporate culture at EnBW. We are convinced that responsible and transparent corporate governance strengthens the trust and confidence that customers, capital providers, employees and the general public place in the company, thereby contributing to its long-term success. The Board of Management and Supervisory Board have the responsibility of managing and supervising the company above and beyond merely fulfilling statutory requirements, but to do so in accordance with recognized benchmarks for good corporate governance and in harmony with the principles of a social market economy, guaranteeing the continued existence of the company and ensuring a sustainable increase in its added value. Therefore, we also predominantly meet the recommendations of the German Corporate Governance Code (DCGK) in the version from 28 April 2022.

As the member of the Board of Management responsible for corporate governance, Colette Rückert-Hennen monitored conformity with the German Corporate Governance Code at EnBW and reported extensively to the Board of Management and Supervisory Board on all current themes pertaining to corporate governance. Both boards acknowledged her report and addressed the recommendations and suggestions in the Code. They subsequently approved the company's annual declaration of compliance pursuant to section 161 German Stock Corporation Act (AktG) on 7 December 2023. The current declaration of compliance is part of the Integrated Annual Report (p. 161 ff.↗) and is also published at www.enbw.com/declaration-of-compliance. The remuneration report can be found in a separate report at www.enbw.com/corporate-governance.

The **declarations of compliance from previous years** are published here.

Online ↗

Management and supervision

Board of Management

Allocation of responsibilities at Board of Management level (as of 9/3/2024)

Dr. Georg Stamatelopoulos Chairman	**Thomas Kusterer** Finance, Deputy Chairman	**Colette Rückert-Hennen** Sales and Human Resources	**Dr. Georg Stamatelopoulos (on an interim basis)** Sustainable Generation Infrastructure	**Dirk Güsewell** System Critical Infrastructure
• Corporate development • Sustainability • Strategy and energy economy • Communications / policy • IT and Digital Office • Corporate security • Enterprise development and transformation	• Accounting and tax • Controlling • Finance • Investor Relations • M&A • Digital finance and finance transformation • Equity investment management • Purchasing • Risk management / ICS • Risk management for trading • Venture Capital • Performance in growth	• Personnel • HR strategy • Sales, marketing and operations • People-centered transformation • Legal • Auditing • Regulatory management • Compliance management and data protection • Boards and shareholder relationships • Occupational medicine and health management • Real estate management	• Conventional generation / nuclear • Renewable generation • Coordination technology • Waste management / environmental services • Decentralized energy services • Occupational safety, environmental protection and crisis management • Research and development • Trading	• DSO[1] electricity / gas • TSO[2] electricity / gas • Grid technology • Telecommunications • Gas value chain • Innovation management

1 Distribution system operator.
2 Transmission system operator.

Further information on the **Board of Management** of EnBW AG can be found on our website.

Online ↗

As of 31 December 2023, the Board of Management of EnBW AG consisted of five members. As of 9 March 2024, the Board of Management of EnBW AG consists of four members. In the reporting period, the Chairman of the Board of Management up to the end of 8 March 2024 was Andreas Schell. Dr. Georg Stamatelopoulos has been Chairman of the Board of Management and Thomas Kusterer Deputy Chairman since 9 March 2024. Dr. Georg Stamatelopoulos will still be responsible for the remit "Sustainable Generation Infrastructure" until his successor has been appointed. The Board of Management is jointly responsible for managing Group business. In addition to the role of CEO,

the tasks performed by the Board of Management are split into the remits of "Finance," "Sales, Legal, Human Resources," "Corporate Real Estate Management," "Sustainable Generation Infrastructure" and "System Critical Infrastructure."

Supervisory Board

The Supervisory Board of EnBW AG consists of 20 members in accordance with article 8 (1) of the Articles of Association. In accordance with the German Co-determination Act (MitbestG), an equal number of members represent shareholders and employees. Three employee representatives are nominated by the ver.di trade union. The Supervisory Board appoints the members of the Board of Management and advises them on their management of the company. It discusses the business performance, planning and strategy of the company together with the Board of Management at regular intervals and ratifies the annual financial statements. The Supervisory Board is always involved in decisions of fundamental importance to the company. Legal transactions and measures subject to the approval of the Supervisory Board are defined in its rules of procedure. In order for the Supervisory Board to optimally perform its functions, it has formed the following standing committees: a personnel committee, a finance and investment committee, an audit committee, a nomination committee, a mediation committee in accordance with section 27 (3) MitbestG, a digitalization committee and an ad hoc committee.

The full version of the **Report of the Supervisory Board** is published here.

Online ↗

Further information on the Board of Management and Supervisory Board can be found on our website in the Report of the Supervisory Board, the Integrated Annual Report under the section on "Corporate bodies" (p. 302 ff.↗) and the declaration of corporate management (p. 161 ff.↗). The declaration of corporate management according to sections 289f and 315d HGB is part of the combined management report and is also published separately at www.enbw.com/corporate-governance.

Annual General Meeting

You will find all of the information about our **Annual General Meeting** here.

Online ↗

The Annual General Meeting offers a platform for dialog with stakeholders and it is where shareholders exercise their rights with regard to company matters. The Annual General Meeting passes resolutions on the discharge of Board of Management and Supervisory Board members, the appropriation of earnings and the selection of the auditor. Resolutions of the Annual General Meeting only require a simple majority of votes in most cases. Each bearer share is equivalent to one vote.

Shares of EnBW AG are listed on the General Standard segment of the Frankfurt Stock Exchange. A stake of 46.75% of the share capital in EnBW AG is owned by each of both the Federal State of Baden-Württemberg – via its wholly owned subsidiary NECKARPRI GmbH and, in turn, via its wholly owned subsidiary NECKARPRI-Beteiligungsgesellschaft mbH – and by Zweckverband Oberschwäbische Elektrizitätswerke (Zweckverband OEW) via its wholly owned subsidiary OEW Energie-Beteiligungs GmbH.

Overall, the shareholder structure is unchanged as of 31 December 2023 when compared to the previous year.

Shareholders of EnBW

Shares in %[1]	
OEW Energie-Beteiligungs GmbH	46.75
NECKARPRI-Beteiligungsgesellschaft mbH	46.75
Badische Energieaktionärs-Vereinigung	2.45
Gemeindeelektrizitätsverband Schwarzwald-Donau	0.97
Neckar-Elektrizitätsverband	0.63
EnBW Energie Baden-Württemberg AG	2.08
Other shareholders	0.39

1 The figures do not add up to 100% due to rounding differences.

The ordinary Annual General Meeting of EnBW AG was held as a virtual event on 3 May 2023. It approved the proposal by the Board of Management and the Supervisory Board to distribute a dividend of €1.10 per share for the 2022 financial year to shareholders. Based on the shares entitled to dividends, this corresponds to a dividend payout of €297.9 million, which was disbursed on 8 May 2023.

The next ordinary Annual General Meeting will be held on 7 May 2024 in virtual form in accordance with the "Act on the introduction of virtual general meetings of stock corporations and amending other provisions."

Compliance and data protection

Compliance management systems

The **code of conduct** and other information on the theme of **compliance** are published here.

Online ↗

Compliance with the relevant legal regulations and internal company rules forms the basis for our business activities, is part of our corporate culture and is laid out in the code of conduct. Our compliance management systems (CMS) and functions are individually designed: They are based on company and sector-specific priorities and risks, the size of the company and other factors. They are designed to support each company – and thus the whole Group – in avoiding risks, liability claims and damage to reputation.

Depending on the type of corporate control over a company, the compliance-relevant companies with employees are either directly or indirectly integrated into the compliance management system of EnBW. The compliance management system focuses on the prevention, detection and sanctioning of corruption, the prevention of violations against competition and antitrust laws, and the prevention of money laundering in those companies directly integrated into the CMS. A total of 24 companies were directly integrated into the CMS of EnBW in the reporting year (previous year: 23). The CMS is regularly examined and updated both internally and externally.

The companies that are indirectly integrated into the CMS – Energiedienst (ED), Pražská energetika (PRE), Stadtwerke Düsseldorf (SWD), VNG and ZEAG as well as the ITOs (Independent Transmission Operators) terranets bw and TransnetBW – operate their own independent compliance systems. The preventative measures that these companies implement apply to all participating interests that are integrated into the respective compliance management system. We aim to safeguard our commercial success by combating compliance risks – especially money laundering, corruption and bribery. Preventative risk assessment methods, advisory services and training concepts have been implemented at EnBW, the compliance-relevant companies and the ITOs.

Compliance activities in the reporting year

Around **1,200** **participants** in events within the leadership campaign.

In 2023, we carried out the **leadership campaign** "Compliance & Privacy – Culture, Leadership, Dialog" to strengthen the compliance and data protection culture. The main themes of the kickoff event were the importance of an effective compliance and privacy culture for EnBW and the Board of Management's expectations of managers with respect to compliance and data protection. Afterwards, we also held other events to highlight why a good whistleblower culture relies on how well it is trusted by employees, why data protection is not just a hygiene factor but also a trademark for the company, how managers can influence unwritten rules and decision-making situations, and why tolerance is an important aspect of a good compliance culture.

We also held training courses for other target groups working in sensitive compliance areas (+31.6% more participants in comparison to the previous year). Among other things, we once again provided special training courses for employees who are responsible for certain tasks, such as auditing business partners or imposing trade and financial sanctions. All of our employees and managers are obligated to complete an e-learning course on the prevention of corruption and bribery every two years. New employees must complete this training during their first year of employment. All of the indirectly integrated companies also held **compliance training courses** to increase awareness among employees.

Number of participants in compliance training events [1]

	2023	2022	2021	2020	2019
Sensitive areas	1,877	1,275	716	839	904
New management personnel / employees	501	484	355	369	229
Management personnel	184	188	34	75	52
Total	**2,562**	**1,947**	**1,105**	**1,283**	**1,185**

1 At EnBW AG and directly integrated companies, excluding the participants in the leadership campaign.

The annual **compliance risk assessments** at EnBW investigate the corruption, antitrust, fraud and data protection risks and form the basis for all work relating to compliance. In 2023, they were carried out using a risk-based selection process at those companies directly integrated into the CMS. New legal developments such as the Act on Corporate Due Diligence Obligations in Supply Chains (Lieferkettensorgfaltspflichtengesetz, LkSG) (p. 53↗) were taken into account in our compliance risk assessment tools. In the implementation of regulatory requirements, the compliance department assisted with measures taken in response to the LkSG such as the EnBW policy statement (p. 53↗). This document defines, among other things, that the Human Rights Committee – comprising the heads of the sustainability and compliance departments – acts as the supervisory body for EnBW's risk management activities in relation to human rights and the environment.

The EnBW compliance department is available to provide advice on all **compliance issues** and can be reached via a hotline, e-mail or in person. This service is also available to all subsidiaries. In 2023, the hotline received around 1,100 inquiries relating to the key issues of sponsoring, donations and gifts. Advice was also provided on conflicts of interest and other compliance issues. Advisory services dealing with compliance themes at the indirectly integrated companies were also used to good effect.

In order to improve our compliance work, we have pushed forward our **digitalization initiatives.** For example, a piece of AI-based software for efficient auditing of business partners called "GePaRD" was developed and implemented in a Group-wide project. We also started the gradual rollout of our tool to optimize the documentation of and processes involved in business partner audits. In addition, we are continuing to improve our information and self-service options in order to make it easier for employees to independently work with compliance themes.

Compliance whistleblower system and suspected breaches

Our new **whistleblower system for reporting suspected compliance breaches** can be found here.

Online ↗

Detailed information on the EnBW whistleblower system and the reporting process can be found in the **rules of procedure relating to the EnBW Group's grievance process.**

Online ↗

A new tool was added at EnBW AG to the existing reporting channels in the 2023 financial year for whistleblowers to report suspected compliance breaches. The new EnBW whistleblower system provides people within the company and also external parties with a low-threshold opportunity to report compliance issues – in various different languages and anonymously if desired – either via an online reporting channel or using a telephone hotline (24 hours a day from Monday to Sunday). Our grievance process not only complies with LkSG requirements but also with the legal requirements for whistleblower systems in the Whistleblower Protection Act (Hinweisgeberschutzgesetz). At the same time, it can also be used to report discrimination or unequal treatment according to the General Act on Equal Treatment (Allgemeines Gleichbehandlungsgesetz). Alongside EnBW AG, the companies ED, PRE, SWD, VNG, ZEAG, terranets bw and TransnetBW have also established a whistleblower system and other reporting channels.

In the reporting year, a total of 65 suspected compliance breaches were reported to the central compliance department of EnBW AG. From the submitted reports, we identified 19 compliance breaches at directly integrated companies. None of these breaches were associated with bribery or corruption. There were no compliance breaches at indirectly integrated companies in the reporting year.

At the beginning of the reporting year, the Federal Cartel Office, Federal Network Agency and State Bureau of Investigation carried out an investigation into the suspected abuse of a dominant position on one or more balancing energy markets and the suspicion of the criminal manipulation of the market. EnBW AG was named as one of the accessory parties and cooperated fully with the authorities. The accusations are being dealt with internally. At the time this report was published, however, there were no indications of any deliberate unlawful behavior by employees.

In the 2023 financial year, we faced neither antitrust law penalty procedures nor third-party antitrust lawsuits. Law enforcement agency investigations of individual employees and former members of corporate bodies relating to the so-called Russian business deals and the sales tax carousel in CO_2 allowance trading also continued throughout 2023 without any discernible activity by the law enforcement agencies. It is not possible to say at the present time when these proceedings will end.

Data protection

In view of the increasing digitalization of our business activities, data protection plays an important role. Our efforts to bring more and more digitalization to the Group in order to both simplify internal processes and develop new business models are closely accompanied by the data protection department in an advisory capacity at an early stage. The interrelationship between data protection law and European regulations on data law are monitored and evaluated for EnBW above all in a cross-functional body so that the company can detect any need for action at an early stage. The directory of processing activities required by law is maintained in digital form. An automated process ensures that the documentation is regularly checked and updated. Data protection compliance risks are also specifically examined every year as part of a risk assessment. The data protection department works to guarantee that the rights of the data subject are respected through regular training to raise awareness, continuous improvement measures and audits. In the reporting year, an independent law firm reviewed the data protection management system. Regular reports are submitted to the Board of Management and supervisory bodies to ensure transparency and control. We meet the standards we have set for the processing of personal data by using internal data protection guidelines within the Group that define objectives, the principles for the processing of the data and the procedures themselves. We also have an established reporting system for reporting any data protection breaches. A network of decentralized data protection managers has been formed to support compliance with legal and internal Group regulations. This network regularly receives information, advice and training from the central data protection department. In sensitive areas of the company, digital learning activities and online seminars are used to raise employee awareness for this theme. We also offer special e-training courses and educational campaigns for areas of the company that work particularly closely with personal data.

In dialog with our stakeholders

Our stakeholders

The **Energy & Climate Protection Foundation** provides the ideal platform for dialog on the future of energy.

Online

Continuous dialog with our stakeholders and the **open and respectful exchange** of insights and perspectives. In addition, it can also help us to identify central developments and key or risk topics at an early stage. The dialog with stakeholders thus contributes to the economic success of the company. Therefore, we will continue to intensify this dialog – with a special focus on the themes of the energy transition, mobility transition, climate protection and sustainability.

Our stakeholder groups and selected opportunities for dialog

- Telephone conferences with investors and analysts, Annual General Meeting, Group Bankers' Day, investor update and road show
- Donation campaigns and relief efforts, participation and dialog with citizens, supporting entrepreneurs and young start-ups, engagement in art and culture, tours, information events, Open Door Days, activities with the Junge Stiftung
- Local authority Energy Day, local authority events, Energy Team Baden-Württemberg, regional council meetings, EnBW Sustainability Dialog, discussions with local politicians
- Dialog and discussion with customers, networking events, test customer panel, participation in trade fairs and congresses, sustainability campaign
- Dialog on handling coal and gas procurement responsibly, discussions on cooperation with suppliers
- Employee communication and services, opportunity to invest financially in three wind farms, diversity campaigns, social engagement of employees, opportunity for dialog with potential employees, sustainability challenge
- Events held by the Energy and Business Club, discussion formats and exchange of ideas with politicians, active communication via the media, discussion events held by the Energy & Climate Protection Foundation
- Funding program "Stimuli for Diversity," dialog on the climate and sustainability, campaigns for the environment and climate protection

Materiality analysis

We have continuously expanded our processes over the last few years for **identifying material themes** and linking them with the development of the company's strategy. Material aspects are determined based on our non-financial declaration and on the International Integrated Reporting Framework, as well as in accordance with standards for sustainability reporting issued by the Global Reporting Initiative (GRI). In addition, current developments flow into the determination of future key issues, such as the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) on climate-related risk reporting.

We consider themes to be material if they have a **significant influence on long-term value added** and thus the performance and future viability of our company. Contributions to the strategic orientation of the company as a sustainable and innovative infrastructure partner are of particular importance in this context. Furthermore, aspects reflecting any important economic, ecological and social impacts our company may have and that significantly influence the perception of stakeholders are also taken into account. Material themes are continuously implemented in the functional and business units, as well as in the individual companies of EnBW.

The **materiality analysis process** comprises three steps: the creation of an overview of the themes relevant to strategy and communication, the development of a list of themes relevant from the perspective of sustainability and the derivation of material themes from the reputation analysis. In parallel, these aspects are regularly compared with the main areas of focus for the Supervisory Board and Board of Management. Every step leads to a prioritization of themes and ultimately to a final list of the top themes. The material themes and events at EnBW in the 2023 financial year are allocated to the three segments in the overview of the segments (p. 22↗). By focusing on our material themes, we aim to make a significant contribution to the Sustainable Development Goals (SDGs) and generate added value for our stakeholders.

Sustainable Development Goals

The Sustainable Development Goals (SDGs) define the global framework for building a sustainable future. These **sustainability goals** were published by the United Nations in 2015 as part of the Agenda 2030. The 17 overarching goals and 169 targets focus on global challenges in an economic, ecological and social context. All sectors of society – including companies – have been called on to make their contribution to achieving the SDGs.

EnBW's contribution to the SDGs

As a sustainable and innovative infrastructure partner, we want to contribute to the achievement of these goals through our activities while also creating value for our stakeholders. In particular, we make a contribution to **four key SDGs.** It is fundamentally important for us as a company to address the concerns and interests of society and we carry out various activities and campaigns to this end every year.

Four key SDGs at EnBW – activities and performance indicators (examples)

SDG 7: Affordable and clean energy

- Expansion of renewable energies (RE)
- Climate-friendly products (e.g., green electricity)

- Key performance indicators: Installed output of RE, Customer Satisfaction Index

SDG 9: Industry, innovation and infrastructure

- Expansion and operation of electricity and gas grids
- Research, development and innovation

- (Key) performance indicators: SAIDI Electricity, SAIDI Gas

SDG 11: Sustainable cities and communities

- Expansion of quick-charging infrastructure for electromobility
- Expansion of broadband infrastructure

- Performance indicator: Number of EnBW quick-charging stations in Germany

SDG 13: Climate action

- Coal phaseout 2028 and climate neutrality 2035 (Scope 1 and 2)
- Biodiversity at EnBW sites

- (Key) performance indicators: CO_2 intensity (generation), CO_2 emissions

Other important SDGs at EnBW

Corporate citizenship and social activities

Our commitment to addressing the concerns and interests of society is concentrated on the **core areas** of popular sport, education, social issues, the environment, and art and culture. We place our main focus on overriding social issues with the aim of making a positive contribution to the target groups of end customers, business partners and local authorities. We also refer you to the "Report on opportunities and risks" for more information on our engagement in this area (p. 135↗).

The Group guidelines on corporate sponsoring, memberships, donations and involvement with universities govern the goals, responsibilities, standards, principles and processes for EnBW AG and all of the domestic companies in which it holds a controlling interest. Companies based outside of Germany must comply with the EnBW guidelines for foreign companies. Donations are documented in a donation report that is presented annually to the Board of Management. In 2023, **donations made by the EnBW Group** came to €3.6 million, following €2.1 million in the previous year. Donations worth around €580,000 (previous year: €720,000) were attributable to EnBW AG. The main reasons for the rise in the total donations were an increase across the Group in aid provided in response to war and natural catastrophes and a growth in activities to mitigate the consequences of the energy crisis.

The EnBW Board of Management decided a number of years ago not to send Christmas gifts to business partners. Instead, we once again made donations to **social projects in Baden-Württemberg** in 2023 and supported eight charitable campaigns and campaigns initiated by readers of regional newspapers in Baden-Württemberg with total donations of €32,000. The main focus of our social engagement in 2023 were **relief campaigns** for people affected by war and natural catastrophes: As a response to the earthquake in the Turkish-Syrian border region at the beginning of 2023, we took action to provide support in the affected areas. This included €100,000 of emergency aid, of which €50,000 was donated directly to emergency aid measures in the region and €50,000 provided to our joint venture Borusan EnBW Enerji for local relief campaigns. We were able to raise almost €65,000 with our employee fundraising campaign for the victims of the earthquake via betterplace.org and a further €42,000 was raised during a Turkish themed week in the company canteens. In addition, employees were actively engaged in a variety of ways and supported the humanitarian aid in the affected region themselves to provide aid to the victims of the earthquake and help restore the heavily damaged infrastructure in the region. In 2023, we also offered further assistance to those people in Ukraine impacted by the war between Russia and Ukraine. The aid provided by EnBW was mainly in the form of in-kind donations. For example, we supplied technical

equipment such as emergency generators and power transformers for the repair and maintenance of the damaged energy infrastructure in Ukraine. With these efforts, EnBW and its subsidiaries are taking part in an initiative organized by the Federal Ministry for Economic Affairs and Climate Action (BMWK) that has called for energy companies across Europe to offer assistance.

Since 2016, employees have regularly supported social and charitable projects with the **EnBW "Making it happen" bus.**

Online

The **EnBW "Making it happen" bus** went on tour again in 2023 and the team supported a total of four selected social projects, which were each also awarded up to €5,000 for any necessary materials.

Various subsidiaries in the EnBW Group also addressed the concerns and interests of society in 2023. Some examples can be found below:

Stadtwerke Düsseldorf (SWD) donated €400,000 to the hardship funds administered by the Bürger-Stiftung Düsseldorf to help support low-income households in Düsseldorf. SWD also made in-kind donations to humanitarian aid organizations in Ukraine and provided financial support to various organizations assisting earthquake victims in Turkey and Syria. **Pražská energetika (PRE)** continued to provide support to the Charta 77 Foundation – Barriers Account, as well as other non-profit organizations focusing on charity, health, social and education activities, and environmental protection. In addition, PRE developed programs to help people impacted by fuel poverty and raise awareness of how to use energy efficiently. Via its subsidiary ONTRAS Gastransport (ONTRAS), **VNG** supported the "Foundation for volunteering and civic involvement in Mecklenburg-West Pomerania" in 2023 and also made donations to five charitable associations in its grid area who help people in need. As part of its "Mail instead of letter" campaign, **Netze BW** once again gave its customers the opportunity to receive requests to read the electricity meter electronically in 2023. The savings on postage, paper and printing costs were then donated to numerous charitable organizations in the local communities. This campaign also helps to reduce CO_2 emissions. Instead of sending Christmas gifts to business partners, Netze BW supported five charitable organizations in its grid area with total donations of €10,000 in 2023.

Learn more about our engagement in **art and culture** here.

Online

In the area of **art and culture,** we are presenting the Sahara Project as part of the "Mack in ZKM" exhibition in cooperation with the Center for Art and Media (ZKM) in Karlsruhe from November 2023 to April 2024. This exhibition in the foyer invites visitors to explore photographs, collages and objects created by Heinz Mack, one of the most important German artists of the post-war generation. We also provided a platform for the organization release Stuttgart e. V. via a series of exhibitions called "release and art." Half of the proceeds raised by the artists was donated to the Stuttgart-based organization that provides advice and assistance to people with drug-related issues.

Corporate guidelines for party donations and lobbying

The **EnBW Code of Conduct** is available on our website in PDF format via the following link.

Online

You will find a selection of the associations of which EnBW and its Group companies are **members** here.

Online

Ensuring transparency with respect to our lobbying activities forms part of our sustainability activities (p. 28 f.). The **EnBW Code of Conduct** has been valid since 2009 for EnBW AG and all companies in which it holds a controlling interest. Our lobbying activities are coordinated in our offices in Brussels, Berlin and Stuttgart. As well as maintaining direct contact with political decision makers or their employees and participating in relevant events, we also engage in political dialog by publishing position papers and contributing to consultation processes either directly or via associations. At the same time, we hold our own specialized political events and conferences at our sites. Furthermore, we work together with sector associations and initiatives, research institutes, foundations and think tanks at a local, regional and European level. The EnBW Code of Conduct stipulates that no donations may be made to political parties, organizations affiliated with them, civil servants, elected representatives or candidates for public office.

In dialog with citizens

Dialog with citizens is important to us as an energy company. A large number of both in-person and virtual events was held in 2023 to give out information and encourage the participation of citizens. These included:

The closing event for a one-year, multistage dialog forum was held at our **GeoHardt geothermal project** (p. 48) in March 2023 in which the participants presented the report on their findings to the two project partners EnBW and MVV. GeoHardt also informed interested members of the public about the current status of the geothermal project at a digital information event in May. After confirming the investment decision for the **conversion and expansion of the pumped storage power plant in Forbach** in May 2023, we informed citizens and interested parties about planned construction work and answered their questions at an event held at the site in October. Also in October, we held the first large meeting with residents to mark the foundation of our **WärmeWerk Wörth** (p. 48). In cooperation with our partners – the City of Wörth am Rhein and Daimler Truck – we informed residents about measures that have been planned for investigating whether the deep geothermal energy could be used to provide heating to the local area and gave the residents an opportunity to ask questions. Citizens also had the opportunity for further dialog via an information stand set up at a local retailer.

In the area of **nuclear energy,** the main topics for dialog with citizens were the three-and-a-half month extension to electricity production at our power plant block Neckarwestheim II at the beginning of 2023 and the political discussions about the continued operation of nuclear power plants in Germany. We provided information on our procedures and stance on the subjects at, for example, a digital press event held at the end of March 2023. Information on the extension and end of electricity production and the latest news on the dismantling work at our two nuclear power plant blocks Neckarwestheim I and II was also provided in May at two large press events held at the site in Neckarwestheim that were attended by numerous representatives from the media.

Link to the **citizen participation platform.**

Online

We plan, construct and operate wind farms and photovoltaic power plants in direct partnership with or through the participation of local authorities and citizens. Local citizens are able to use the **EnBW citizen participation platform** to participate financially in regional renewable energy projects. Three projects funded through such citizen participation models were implemented in Steinheim, Allmendingen and Häusern in 2023.

Research, development and innovation

Research and development

Goals

The goal of our research and development is to identify technological trends at an early stage, assess their economic potential and build up expertise in the business units. For this purpose, we carry out pilot and demonstration projects together with partners or customers directly at the site of their subsequent application. This ensures that successful research projects deliver innovations for our company. Research, development and innovation also lead to inventions and patents in many cases. The portfolio of patents fell by 6 patents in 2023 (previous year: +23); the EnBW Group thus held 242 patents (previous year: 248) at the end of the year. The patents held by EnBW focus mainly on the areas of renewable energies, gas and electromobility.

Selected activities

Wind energy: Offshore wind power plants with fixed foundations are limited to shallow waters with water depths of up to around 50 m. Floating platforms could be used to install wind turbines in deeper waters and are thus an important component of the offshore strategy at EnBW. We developed **Nezzy²** in cooperation with the engineering company aerodyn from northern Germany. Following successful tests on a 1:10 scale, a 1:1 model was constructed in 2023 and is due to enter test operation in 2024. In parallel, we analyzed the feasibility and costs of using floating platforms for publicly tendered projects in deep waters in Europe, such as in the Mediterranean Sea off the coast of Southern France. Our subsidiary Valeco launched the **"Pieux à ailettes réutilisables pour éoliennes flottantes" (PAREF)** project in 2023 with funding from the French government to carry out environmental research into how the construction and operation of floating platforms can positively impact underwater flora and fauna.

Further information on the **floating wind power plant Nezzy²** can be found on our website.

Online ↗

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). During the first test flight for the DLR drone superARTIS, we tested the communication between the wind park system and the drone initially on land at the EnBW onshore wind farms Schwienau II and III in October 2023. The aim of the **Condition Monitoring 4.0** (AutoDiagCM) project, which is being carried out in cooperation with the Karlsruhe University of Applied Sciences, is to develop a diagnostic system for monitoring the condition of onshore and offshore wind turbines by September 2025. This project is also funded by the BMWK. As part of the project, we have collected data on the condition of our turbines and cross-referenced it with incidents where there has been damage in the past. In addition, a new type of detector was also developed in 2023 to identify damage using the data. This pattern recognition system will not only enable us to identify damage before it occurs but will also suggest preventative measures and help avoid unplanned downtimes.

Further information on the **Offshore Drone Challenge 2024** initiated by EnBW and the DLR can be found here.

Online ↗

Further details on **Condition Monitoring 4.0** for wind turbines can be found online.

Online ↗

Photovoltaics: Since December 2022, we have been supporting the two-year project **PV4Rail** led by the Fraunhofer Institute for Solar Energy Systems. The aim of the project is to tap into unused potential in the generation of PV electricity. A concept for a system and an inverter will be developed that will allow PV parks located near to train tracks to feed electricity directly into the railway's own electricity grid. A roundabout route via the public 50 hertz electricity grid has so far been the only available option as there is no suitable inverter compatible with the 16 2/3 hertz frequency of the railway's electricity grid. In this project funded by the BMWK, EnBW is developing the electrical concept and evaluating profitability.

Our subsidiary **EnPV** has developed a new photovoltaic cell design that promises higher cell efficiency at lower production costs when compared to the mass market cells currently available. Novel laser processes enable EnPV to employ a simple method to position all the contacts on the rear of the cell and in doing so largely remove the need for the material silver. In August 2023, EnPV signed a memorandum of understanding with a North American PV producer to manufacture the EnPV technology in a joint pilot plant.

Geothermal energy: In addition to the production of electricity, geothermal energy has the potential to reduce the use of fossil fuels in heating networks. We support our business partners, such as local authorities, in decarbonizing their heating networks using geothermal energy. We have held the geothermal license for the Mannheim-Heidelberg-Speyer region together with MVV since August 2020. This license grants us the right to examine how geothermal energy can be used to decarbonize the local district heating system within this region. The two companies founded the company **GeoHardt** for this purpose at the beginning of 2021 and in 2023 they carried out studies to identify the precise target areas for boreholes and the associated drilling sites.

Further information on the **Hardt geothermal project** can be found here.

Online

A geothermal plant in **Bruchsal** that is operated jointly with the company Stadtwerke Bruchsal is already reliably supplying a nearby police station with geothermal heat today. We were able to increase the amount of heating energy in the 2022/2023 heating period to 2,600 MWh (previous year: 2,400 MWh) and fully cover the customer's demand. Now that it has been demonstrated that the geothermal plant is capable of stable operation, it will be integrated into the operational unit for generating district heating. Geological studies carried out as part of the research will be used to determine whether the heating production can be expanded so that other customers can be supplied with heat from geothermal power. In the meantime, the technology in the electricity generation plant has been upgraded so that it generated 2,200 MWh of electricity, which is more than twice as much as in the previous year.

EnBW also founded the **WärmeWerk Wörth** together with Daimler Truck and the City of Wörth am Rhein in 2023. It will examine the different possibilities for delivering a climate-neutral energy supply to both the Mercedes Benz factory in Wörth and also the City of Wörth am Rhein. If a suitable solution is found, the plan will be to construct and operate a geothermal power plant to provide heating. A major aim of the partners is to utilize geothermal heat in the existing local heating grids in the municipality.

Further details on the **large-scale heat pump in Stuttgart-Münster** are available online.

Online

We are taking a further step towards achieving climate neutrality for our regional district heating supply at the site of our Stuttgart-Münster combined heat and power plant. A large-scale heat pump will utilize the waste heat from the cooling water draining from the site to generate 20 MW of district heating. The **large-scale heat pump in Stuttgart-Münster** will be one of the first plants in Germany on this scale, setting new standards in how waste heat is used to meet energy needs. The new plant will be placed into operation in the first half of 2024.

Find out more about the **hydrogen projects in Wyhlen** here.

Online

Hydrogen from renewable energies: We also want to provide our customers with carbon-neutral gaseous energy sources in the long term. We are investigating how to generate affordable green hydrogen with funding from the German government at the H_2-Wyhlen and H_2Mare field labs. In **Wyhlen,** our subsidiary naturenergie hochrhein is expanding an electrolysis plant that was constructed with funding from the Federal State of Baden-Württemberg by 5 MW to 6 MW. It will supply industry and mobility customers with green hydrogen generated using green electricity. A total of 30 companies showed an interest in the public invitation to tender for the direct distribution of the green hydrogen. The construction of the plant at the Wyhlen hydroelectric power plant is due to begin in 2024. The work to expand the production capacities should be completed by the end of 2025. Together with a consortium of 35 industry and research partners, we are carrying out research in the **H_2Mare** project into the production of green hydrogen directly at offshore wind power plants. The invitation to tender for the floating platform and various plant components will be issued by the end of the first quarter of 2024. The plant should be placed into operation in 2025 as the first plant in Germany for the generation of hydrogen and derived products at sea and will act as the basis for us to become the technological leader in the field of offshore hydrogen production.

Instead of using electrolysis, **climate-neutral hydrogen can also be produced from green ammonia.** In June 2023, EnBW, VNG and the Japanese energy company JERA signed a memorandum of understanding with the goal of examining the feasibility of constructing a demonstration plant. Ammonia is already available today in huge quantities and can be transported to its point of use more easily than hydrogen.

In the 20th episode of the **"Podcast on the future of energy,"** the head of the Green Gases division at VNG speaks about, among other things, the opportunities for hydrogen in Germany.

Online

Hydrogen in the gas grid: Natural gas grids can be decarbonized using zero-emission energy sources like hydrogen – just like the electricity grid. At the field laboratory **"Energy Park Bad Lauchstädt"** in central Germany, we are investigating the entire value-added chain for green hydrogen on a large

The **"Energy Park Bad Lauchstädt"** demonstrates all stages of the value added-chain for hydrogen.

Online

industrial scale – from its production from wind power and transport through to the storage and use of green hydrogen in a refinery – in a project led by VNG. The project has been running since September 2021 and is being funded by the BMWK. Following the final investment decision by the consortium partners in early 2023, the first milestones in the construction of the site have already been achieved. This included installing the first of the eight wind turbines, fitting a pig trap in the future hydrogen line and placing the new transformer station into operation. A first supply contract for green hydrogen has been concluded with the TotalEnergies refinery in Leuna. The 30 MW high-pressure alkaline electrolysis plant is due to be installed in 2024.

Further information on the **"Hydrogen Island Öhringen"** project can be found on our website.

Online

Our subsidiary Netze BW started a pilot project called the **"Hydrogen Island Öhringen"** in 2020 in the City of Öhringen in the Hohenlohe district that is unique across Germany. A natural gas mix with a green hydrogen content of up to 30% will be produced in a separate island grid. The hydrogen will be produced from renewable energies using an electrolyzer on the premises of Netze BW that was placed into standard operation in November 2023. The mixed gas is now being used to supply heat to the company premises and 22 other buildings.

EnBW is currently working on the development of fuel cell systems for a variety of different applications. As part of a **pilot project at the Stuttgart-Feuerbach heating plant,** which is operated by EnBW Contracting, we are cooperating with Bosch to test five highly efficient fuel cells. The solid oxide fuel cells (SOFCs) with a total electrical output of around 50 kW will be used to cover the plant's own electricity needs and to preheat any additional water that may be required. The project is due to run for a period of three years and will deliver important information on the robustness, durability and efficiency of the fuel cells and the requirements and processes involved in their planning, installation and operation. As part of a research project at the site of the geothermal power plant **in Bruchsal, EnBW is also testing a fuel cell system** from Bloom Energy with a total output of 300 kW. The system is due to be placed into operation in fall 2024. The fuel cell system can today already be used to produce a natural gas mix with a hydrogen content of up to 20%. It has the potential to be upgraded to operate with 100% hydrogen in the future. The electricity generated by the system will either be used to meet the geothermal plant's own energy needs or sold.

Inductive charging: In multiple projects with passenger cars and commercial vehicles, EnBW is carrying out research into how to make electromobility with wireless charging even more environmentally friendly and expand the current limits on the range of the vehicles. An **electric bus that is inductively charged** has connected our site at the Port of Karlsruhe with the public transport system since 2021. In May 2023, another electric bus was placed into operation at the horticultural show in Balingen. It charges its batteries inductively while waiting at the two bus stops and during the journey along an approximately 400 m stretch of road. During the course of the year, we expanded the induction route so that the electric bus can now also be used on several bus routes in Balingen as part of the regular public transportation service.

We are also testing the **wireless charging process on passenger cars** and expanding our activities in this area. For example, two already existing projects with leading automotive companies and suppliers were combined into one research project in 2023 to standardize the prototypes produced by various manufacturers for wireless charging under consideration of statutory calibration guidelines. Tests were carried out in the car park at the EnBW City site in Stuttgart to investigate how well charging plates from one manufacturer that have been installed in the floor work with receivers from another manufacturer that have been installed on a car. Further tests of the inductive charging technology will be supported by the University of Stuttgart and are being funded by the German government. The aim is to bring the wireless charging of cars to market maturity and make it available to EnBW customers.

Further information on the **extraction of lithium** at the Bruchsal geothermal plant can be found here.

Online

Sustainable extraction of lithium: In cooperation with the Karlsruhe Institute of Technology (KIT) and other parties, we investigated a process to sustainably extract lithium from thermal water as part of a research project in Oberrheintal. A **lithium recovery facility** with a reactor was initially constructed at the existing geothermal power plant in Bruchsal. The short- and long-term extraction experiments carried out at the site from February to August 2023 confirmed the results produced in the laboratory. After upgrading the process to work with three reactors, the team managed to complete the cycle in 2023 and also operate the facility with a lot less water and materials. The improved technology with three reactors was constructed in 2023. The experiments being carried out in the first half of 2024 will attempt to find the ideal carrier material and identify the economic potential of extracting lithium for electric car batteries here in Germany.

Expenditure and personnel

In the 2023 financial year, we spent €38.8 million (previous year: €28.1 million) on research and development. This increase was due to project-specific one-off expenses for the funded large-scale heat pump research project in Stuttgart and hydrogen projects at VNG. We received government research grants of €8.9 million (previous year: €4.8 million). There was a total of 66 employees in areas dedicated to research and development at the Group (previous year: 49). In addition, 259 employees (previous year: 282) were involved in research and development projects as part of their operational work.

Expenditure on research and development

in € million	2023	2022
Grids	10.9	12.3
Generation from renewables	15.7	8.0
Smart energy world, storage and electromobility	4.3	3.9
Hydrogen	7.1	3.5
Customer-related research projects	0.2	0.1
Other	0.5	0.4
Total[1]	38.8	28.1

1 The figures may not add up due to rounding differences.

Innovation

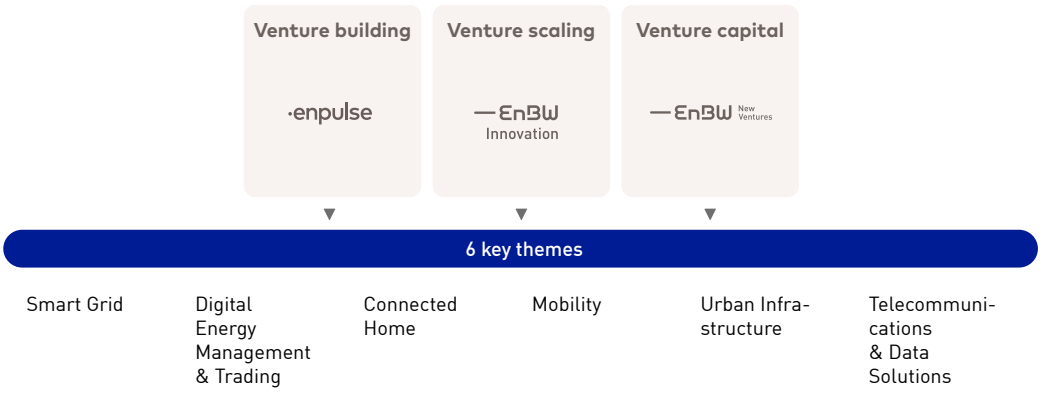
Goals

One fundamental aim of our business activities is to develop innovations that push forward the energy transition. Our innovation strategy is designed 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. One important focus is strengthening the entrepreneurial independence of the team and spinning off business models as start-ups as early as possible. In addition, we also invest in start-ups outside of the EnBW Group, in order to push forward existing innovations and establish a strong network of partners.

Innovation strategy

Our **innovation strategy** is based on **three central pillars:** venture building, venture scaling and venture capital. 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



Learn more about how **EnPulse** supports young start-ups.

Online ↗

Venture building: EnPulse is responsible for all of the early-phase activities of EnBW Innovation and develops new business models within the six key themes. It has a broad range of tasks, from analyzing trends and developing and testing initial business ideas through to the foundation of start-ups. EnPulse also offers start-up grants to young people with entrepreneurial ambitions and

supports them in the further development of their business model for between six and twelve months. Two start-up grants were awarded in 2023 to **OXO Earth** and **Freeze Carbon.** OXO Earth enables forest owners to participate in the CO_2 markets and maximize the climate performance of regional forests. In contrast, Freeze Carbon operates a CO_2 marketplace that enables buyers and sellers to neutralize unavoidable emissions.

EnPulse has also invested in the company **metiundo.** This company provides property owners with access to live data on their energy and water usage in their real estate portfolio. It thus helps them produce legally compliant CO_2 reports and puts them in a position where they are able to take energy efficiency measures and utilize renewable energies. **Levl** was spun-off from EnPulse as an independent company in 2023. The start-up is building a large-scale virtual storage system for the energy transition and gives its customers the opportunity to monetize unused battery capacity. Furthermore, EnPulse sold its shares in **DigiPark,** a provider of digital parking solutions, to another current investor.

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 coaches 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.

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

Online ↗

One example of this is the start-up **SMIGHT,** which is a leading provider of IoT (Internet of Things) grid solutions and has around 90,000 measurement points installed in the low-voltage grid. SMIGHT uses its own retrofit sensor technology to collect real-time data from the local distribution grid and help ensure that the grid is operated efficiently. The start-up **ChargeHere,** which was founded as an independent company in 2022, offers charging solutions for the electrification of company fleets that take into account the current state of the grid when charging. ChargeHere is currently investigating the extent to which car batteries can be used to stabilize the electricity grids in the research and demonstration project Park4Flex led by the Institute of Power Transmission and High Voltage Technology (IEH) at the University of Stuttgart.

In 2023, EnBW Innovation received the **Digital Lab Award** in the category "Transport & Infrastructure" for its work which is awarded by Infront Consulting & Management in cooperation with the business magazine Capital. It thus achieved first place from among the best innovation units that focus on sustainability and digitalization.

Dr. Marc Umber, Head of Investment Team at **ENV,** was selected as an **Emerging Leader 2023** by Global Corporate Venturing.

Online ↗

Crispin Leick, Managing Director of **ENV,** was named as one of the 100 leading **Corporate Venturing Experts** by Global Corporate Venturing.

Online ↗

Venture capital: EnBW New Ventures (ENV) invests in fast-growing young companies offering digital and sustainable solutions, giving EnBW access to new technologies and business models. In turn, ENV offers these entrepreneurs access to professional investor expertise and a network of customers and suppliers in the energy and infrastructure sectors. ENV has invested in 18 start-ups and two venture capital funds so far. In addition, EnBW realized four successful exits and a majority takeover. Its evergreen business model had an initial investment volume of €100 million and allows any proceeds from the sale of shares in start-ups to be reinvested in new companies.

Learn more about the ENV investment **volytica diagnostics** here.

Online ↗

ENV made two new investments in 2023. The British start-up **VivaCity** uses artificial intelligence to help reduce traffic accidents and lower emissions in cities. The software provider **volytica diagnostics** based in Dresden has developed the smart, cloud-based battery diagnostics platform "vdx engine" that can analyze the condition of batteries and carry out simulations of their performance without any need for additional hardware. In addition, ENV invested in the Series A funding rounds for the companies **vialytics** and **CYCLE** in its existing portfolio. The intelligent road management system from vialytics can be used to automatically evaluate the condition of roads and bike paths. CYCLE provides delivery companies with electric bikes via an all-inclusive carefree subscription service. Furthermore, ENV participated in the Series B funding round for the company **Holo-Light** that raised US$12 million. Holo-Light's augmented reality software makes it possible for engineers to collaboratively create and edit 3D models for the development of new products and services. Stable data visualization is supported by XR (extended reality) streaming.

Procurement

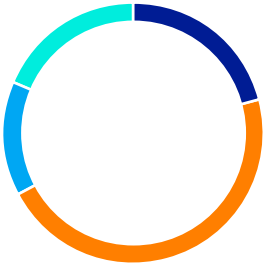
Efficient and sustainable procurement processes

More information on the **sustainable supply chain** can be found on our website.

Online

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 is our path to developing efficient procurement processes that retain value. Central purchasing strives to achieve sustainable procurement and ensures compliance with applicable laws and EnBW guidelines. It is also contributing to the success of the energy transition by applying its expertise in the supplier market and making a commercial contribution to the profitability of projects. As a result, it makes an important contribution to the competitiveness of the company, helping to safeguard its future.

Procurement volumes of the EnBW Group by segment
in %



- 21.1 System Critical Infrastructure (2022: 25.5)
- 46.2 Sustainable Generation Infrastructure (2022: 50.4)
- 14.3 Smart Infrastructure for Customers (2022: 14.7)
- 18.4 Other (2022: 9.4)

The **procurement volume** of the EnBW Group in 2023 (without ITOs) amounted to around €6.3 billion (previous year: around €6.5 billion). The still-high level is due to major investment in fuel switch projects (conventional power plants), the expansion of the grids (electricity distribution grids, broadband) and solar power storage systems, which were contractually agreed in the reporting year.

The **procurement markets** were significantly impacted in 2023 by the effects of the war between Russia and Ukraine, considerably higher demand on our markets due to the acceleration in the energy transition, geopolitical uncertainties and high inflation (p. 58). Despite the tense situation on the markets overall, prices for important raw materials fell during the course of 2023 and were below the levels in the previous year. In order to minimize the negative impact on our business, we continuously refined our procurement processes and decision-making criteria also in 2023. We were able to counter the impact of geopolitical instability through a process of reorganization that shifted the focus more strongly to strategic purchasing. Furthermore, we significantly improved the quality of our forecasts for scarce goods with the Supply Chain Resilience project in 2023. Our forward-looking procurement management processes reduce the risk of price increases and supply disruptions.

Further diversifying our suppliers and service providers and improving cooperation with them plays an important role in our efforts to achieve a leading position on the energy market. **Supplier management** promotes successful cooperation with our suppliers because it makes their performance transparent and also makes continuous optimization in partnership possible. The careful selection of our suppliers is embedded in our risk management system and supports the observance of legal regulations and internally defined quality standards, as well as EnBW's aspiration for sustainable supply chains. 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.

Supplier management process

1 Supplier identification
Identification and documentation of potential suppliers

2 Supplier selection/ prequalification
Registration/onboarding, completion of the EnBW qualification stages

3 Supplier evaluation/ classification
Assessing suppliers based on defined evaluation criteria, classification of the suppliers

4 Supplier development
Deriving development measures according to the classification of all suppliers

Sustainable procurement begins with the careful selection of suppliers. 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

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

Online

rights, the fight against corruption, data protection and quality management. Our **Supplier Code of Conduct (SCoC)** acts as a shared set of values and an important criterion for the selection and development of our suppliers. Some 97% of our suppliers (measured by procurement volume) had accepted the SCoC as the basis for our cooperation by the end of 2023. Suppliers who did not comply with the SCoC have been categorically blocked in our purchasing system since April 2023.

Respecting human rights and protecting the environment are key pillars of our corporate culture. In cooperation with our business partners, we are working to **make the supply chain more sustainable by improving transparency**. We will continue to align our procurement process even more strongly to social and ecological aspects in the next few years. This is reflected in our EnBW Sustainability Agenda (p. 28 f.).

EnBW was **honored for its sustainable reorganization of purchasing** with the "Sustainable Operations Championship Award" in the category "Human Rights Due Diligence" at the Sustainability Congress 2023. Further information on the award can be found here.

Online

In 2023, we worked intensively to **implement the requirements of the Act on Corporate Due Diligence Obligations in Supply Chains (Lieferkettensorgfaltspflichtengesetz, LkSG).** The LkSG has been in force since the beginning of 2023. It requires German companies to establish key elements of corporate due diligence in their own value-added chain and with respect to their suppliers. EnBW takes this responsibility seriously and has revised its human rights and environmental risk management system on the basis of the already existing structures and processes, so that it complies with the legal requirements. The entire Board of Management has collective responsibility for compliance with the LkSG risk management requirements at EnBW. One of the main tasks in 2023 was analyzing our processes to identify and prioritize risks in our own business areas and along our supply chains and **implementing targeted measures to ensure compliance with human rights due diligence.** We have, for example, integrated an automated risk evaluation process into our supplier management system that allows us to directly consider risks relating for human rights and the environment in the selection of suppliers and take appropriate preventative measures. Additional training courses are being used to raise the awareness of our employees in purchasing of human rights and environmental issues. To ensure that we can develop and implement targeted and effective measures, we have also established a Human Rights Steering Committee. In October 2023, we published a **policy statement** in accordance with the requirements in the LkSG. It describes how we will implement the LkSG in the future, which risks we have identified and prioritized and which measures we are taking to further minimize these risks. The EnBW policy statement is mainly based on the **EnBW Code of Conduct** and the **EnBW Declaration on Human Rights.** Our aim is to work even more closely together with our suppliers for this specific purpose and to keep the identified risks as low as possible from the outset, while continuing to improve the situation for people and the environment along our supply chain in the process.

The **EnBW policy statement** can be downloaded in PDF format here.

Online

The **EnBW Code of Conduct** can be found on our website.

Online

The **EnBW Declaration on Human Rights** is available to download in PDF format.

Online

Since the middle of 2022, our **CO_2 tracker for emissions in the supply chain** has enabled us to identify important emission generators and reduce our Scope 3 upstream CO_2 emissions in collaboration with our suppliers by carrying out more in-depth analyses. We have also been including CO_2 emissions and other sustainability criteria as measurable decision-making criteria in applicable invitations to tender since 2022 (p. 95 ff.). In 2023, we issued invitations to tender for the first time in which **CO_2 emissions were a relevant award criterion,** and we contractually obliged our suppliers, for example, to formulate and document clearly defined CO_2 reduction targets that cover both direct and indirect emissions. We are using these measures to further reduce the CO_2 emissions in our supply chains.

Our suppliers are provided with central access to information and self-service options in our **supplier portal.**

Online

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. This underlines our commitment to develop efficient and sustainable procurement processes in line with the LkSG.

Our subsidiaries that are not overseen by central purchasing at EnBW AG address non-financial aspects in purchasing using their own mechanisms. **Energiedienst (ED)** works together closely with central purchasing at EnBW AG to procure important product groups using joint invitations to tender and framework contracts, as well as in the associated prequalification processes. In addition, orders are placed largely with regional suppliers from Germany, Switzerland or neighboring EU countries. Purchasing at the companies of **Pražská energetika (PRE)** ensures that suppliers observe practices such as the payment of social security contributions, the settlement of tax liabilities, the prevention of money laundering and compliance with their own code of conduct that includes ethical standards

for cooperation. Potential suppliers must verify their compliance with these aspects by either submitting a sworn declaration or by presenting corresponding certificates when bidding for invitations to tender. At **Stadtwerke Düsseldorf (SWD),** sustainability aspects are anchored in the compliance guidelines, environmental management system manuals and process descriptions. In the area of procurement, SWD pays particular attention to the use of environmentally friendly and sustainable products. It also uses clauses in its supplier contracts as one way to reinforce the fight against corruption and bribery and to ensure observance of labor and social laws. In addition, SWD uses a Supplier Code of Conduct (SCoC) that includes joint obligations with the suppliers to generate economic, ecological and social added value along the entire supply chain. Alongside economic criteria, SWD places great importance on business ethics, integrity, legally compliant trade, compliance with working standards and environmental protection when selecting, evaluating and monitoring new and existing business partners. The fundamental principles for procurement at **VNG** are regulated by a code of conduct, the management handbook and Group guidelines. Aspects such as the prevention of corruption – which is embedded in the compliance management system – and environmental protection are fixed components of procurement processes.

We also refer you to the details provided in the "Report on opportunities and risks" (p. 130 ff.↗).

Responsible raw materials procurement in the coal sector

Origin of coal supplies

With a view to the CO_2 reduction targets set by the German government, we will gradually replace hard coal with more climate-friendly energy sources. The most important milestones here will be the realization of the fuel switch projects and the planned phaseout of coal by 2028 (p. 31↗). Nevertheless, hard coal will still play a relevant role for EnBW as a source of energy over the next few years to ensure a reliable and economic supply of electricity. **Responsible raw materials procurement,** especially in the coal sector, is thus extremely important to us in order to strengthen our sustainable purchasing.

Origin of coal supplies to EnBW power plants

in million t	2023	2022
Columbia	1.1	1.6
USA	0.8	0.4
South Africa	0.1	–
Russia	0.1	2.0
Other	–	0.1
Total [1]	2.2	4.2

1 The figures may not add up due to rounding differences.

Around
48%
fewer coal deliveries than in the previous year.

2023 was characterized by a **sharp decrease in the amount of electricity generated from hard coal** in Germany, which was also reflected in the total amounts of hard coal delivered to the EnBW power plants. Deliveries fell from 4.2 million t in 2022 to 2.2 million t in 2023. This was not only due to general developments on the market but also the shutdown of Block 7 of the Heilbronn power plant due to damage. Colombia was the most important source of supply for power plant coal in 2023. However, deliveries fell from 1.6 million t to 1.1 million t because of the fall in demand. The second most important source of supply was the USA with 0.8 million t in 2023 (previous year: 0.4 million t). The Russian coal that was supplied to our power plants (0.1 million t) was from stocks stored at the ports before sanctions were imposed. As a result of the decrease in total deliveries and lower prices for coal, the **procurement volume** fell considerably from €1,150 million in the previous year to €260 million in 2023.

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

Online ↗

The EnBW Group places great importance on knowing exactly **where the coal it uses is sourced** and being able to disclose this information. A total of 93.8% of our coal requirements were covered in 2023 by contracts where the respective producers are already known when the contract is concluded. The remainder is sourced from contracts concluded with trade intermediaries who usually define a quality standard and the countries from which the coal could be sourced, but not the source of the coal itself.

The Colombian coal delivered in 2023 was sourced from the producers Drummond and Cerrejón. The coal from the USA was sourced from various mining regions.

The opportunities and risks in relation to coal procurement can be found in the "Report on opportunities and risks" (p. 134 f.↗).

Positioning, overarching concepts and due diligence for the protection of human rights

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

Online

In accordance with the Guiding Principles on Business and Human Rights of the United Nations, we strive to procure coal responsibly. The EnBW coal supplier portfolio acts as the basis for our activities and it is updated on an annual basis. The sustainability performance of current and potential coal suppliers to EnBW is continuously examined and evaluated on the basis of the **EnBW rules of conduct** governing the responsible procurement of hard coal and other raw materials. The business partner audit comprises an audit with respect to both compliance and sustainability. We determine any future action based on the supplier evaluations resulting from these audits, such as requesting further specific information from selected suppliers. In the process, we pay close attention to the latest studies from competitors and international initiatives, as well as relevant information and contributions from civil society organizations.

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

Online

We have been a member of the **Responsible Commodities Sourcing Initiative** (RECOSI – formerly Bettercoal) since 2020. The independent audits carried out via RECOSI and the monitoring of the progress made by the individual producers with respect to fulfilling the RECOSI Continuous Improvement Plans flow into our process for auditing business partners. Currently, we are primarily active within RECOSI in the Colombian working group because this is where the majority of the coal deliveries are sourced. We have also been actively involved in the South African working group since 2023. In addition, we use RECOSI as a platform for exchanging information with our producers and, above all, with other stakeholders from civil society, with government representatives from the coal mining regions and with experts on individual countries and human rights.

Our rules of conduct form the foundation for our business activities. In the sustainability clause that is a fundamental component of all of our contracts with coal producers, we obligate our business partners to observe these rules of conduct. In addition to regular auditing of the sustainability performance of coal suppliers, a multistage auditing process is triggered in the event of suspected breaches of the rules. This can lead to temporary suspension or, as a last resort, the termination of the business relationship and thus exclusion from our procurement process. When new contracts are due to be concluded, the results of the analyses saved in the sustainability index are routinely 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 developed in cooperation with the producers and their implementation is monitored. In 2023, this committee held regular meetings to discuss possible additions to our portfolio of producers. This process was improved further in 2023 through the implementation of a digitalization project. Using an in-house tool called "Sus-Check," we have made the process for all areas of the company participating in the AVB even more transparent and efficient.

Current developments

Colombia

Colombia was the most important country to EnBW for the procurement of coal in 2023. However, the amounts of coal sourced from Colombia have also fallen significantly due to the lower demand for coal in comparison to the previous year. As a member of the Colombian working group at RECOSI, we remain in close contact with both the producers and other European coal companies. This helps us to directly address relevant issues and stay informed about the latest developments with respect to the coal producers in Colombia above and beyond official sources.

USA

The USA was for a long time only of limited importance to us as a procurement country. Producers from the USA have now been added to our portfolio following a thorough sustainability audit and clarification of some outstanding issues.

Russia

We fully switched over to alternative sources of coal by August 2022, at which point we became completely independent from Russian coal. In 2023, our power plants only used residual stocks of Russian coal that were already being held in storage.

Other procurement alternatives

We are currently examining additional procurement options in Australia, Africa and Asia in addition to those in Colombia and the USA in order to further diversify our procurement portfolio in the medium term. The coal market is generally characterized by an elastic supply and the coal is mainly transported by ship, which means that there is no need for any kind of special pipeline infrastructure. Our procurement initiatives make a comprehensive audit of all potential new business partners just as critical as the quality of the available coal and whether it is suitable for our power plants.

Responsible raw materials procurement in the gas sector

Natural gas as a transition technology

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 (p. 31↗). 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 continued to shift the focus onto due diligence measures in the area of gas procurement. The key aspect will be a comprehensive business partner audit of each of the direct LNG and pipeline gas suppliers before they are approved as a business partner for EnBW.

Origin and own consumption

In 2023, EnBW mainly sourced its natural gas via supply contracts with companies in Norway as well as via the European wholesale market. Following the expiry of our Russian gas contracts, we have been strengthening our efforts to diversify our **sources of gas** to a much greater extent. We concluded two long-term purchase agreements in 2022 for liquefied natural gas (LNG) with Venture Global LNG for a term of 20 years to diversify our sources of gas in the long term. The total volume of LNG will be around 2 million t per year, half of which will be sourced from the Plaquemines facility and half from the Calcasieu Pass 2 facility (both in the USA) of Venture Global LNG from 2026/2027 onwards. At the beginning of 2023, we increased our capacity bookings at the planned LNG terminal in Stade to 6 bcm/a to help ensure the continued security of supply in Germany.

In 2023, we acquired 7,203 GWh of natural gas for our **own consumption at EnBW** (previous year: 7,611 GWh). We use this gas for generating electricity and heat in our power plants, for heating our buildings and for operating our gas plants.

The opportunities and risks in relation to gas procurement can be found in the "Report on opportunities and risks" (p. 134 f.↗).

Exercising due diligence

We also take our responsibilities seriously in the procurement of gas and exercise human rights due diligence in our supply chain. The **business partner audit** comprises an audit with respect to both compliance and sustainability. The main focus is placed on the observance of international sustainability standards, a commitment to and compliance with guidelines on environmental protection and human rights, dialog with stakeholders and disclosure of extraction methods. Existing suppliers are reevaluated from a sustainability perspective every year as part of our recurring audits, insofar as there are no reasons to carry out an audit sooner. In order to better adapt our LNG procurement process to our sustainability requirements, we have initiated a **LNG pilot project** within the Responsible Commodity Sourcing Initiative (RECOSI). This project will check whether the continuous improvement process for the procurement of coal can also be transferred to the procurement of

Further information on the **Energy Sector Dialog** can be found here.

Online

You can download the **publication from the Energy Sector Dialog** in PDF format here.

Online

LNG. In 2023, we launched an **Energy Sector Dialog** in cooperation with other companies, associations, NGOs and unions, and headed by the Federal Ministry of Labour and Social Affairs. In the publication "Potential human rights risks along the supply and value chains. Selected sections of the German energy industry," the gas sector has been closely examined using this multi-stakeholder approach. The findings will flow into our risk assessment process. As part of the sector dialog, we also held a discussion with an NGO working in the gas fields in Texas, USA, to ensure that the views of those impacted are taken into account in our assessments.

Methane emissions

The European Commission, European Parliament and Council of the European Union agreed at their trialogue meeting on 15 November 2023 to reduce methane emissions in the energy sector as part of the "Fit for 55" package in a Methane Emission Regulation that is due to come into force on 1 April 2024. Operators of gas infrastructure will be obligated to measure and report their emissions and regularly check their facilities for leaks and repair them without delay. The flaring and venting of methane will be largely prohibited. The final text has not yet been published and the EU has not definitively defined or communicated all of the requirements, especially those related to detecting and repairing leaks. Some renegotiation is expected and work is already being carried out to some extent on how to transcribe the requirements into technical rules at a national level. Further interventions and clarifications by the EU will be published as required in the form of Delegated Acts or Implementing Acts over the next few years.

As previously, our grid companies will continue to regularly check their gas infrastructure for methane emissions and repair any leaks they detect without delay. We currently base our activities in this area on the requirements issued by the Oil and Gas Methane Partnership (OGMP) and will implement the new requirements for measuring and reporting emissions and for the detection and repair of leaks in accordance with the newly adopted Methane Emission Regulation and associated technical rules.

Business report

General conditions

Macroeconomic trends

Economies

In 2023, continuing high inflation and the restrictive interest rate policies introduced by the central banks in response had a marked effect on the global economy. Although it was possible to curb inflation with increases in base interest rates, and further falls in the rate of inflation are expected in 2024, high consumer prices continue to pose a challenge. Despite indications of a slowdown in the economy, the job market remains robust in light of historically low unemployment rates in the advanced economies. However, growth has slowed in emerging and developing countries. The economic slowdown in China due to the ongoing crisis in the Chinese real estate sector is symbolic of this development.

In the meantime, the tension on the energy markets continued to ease in 2023. The risks are still high despite the positive effects of the currently lower consumer prices, which nevertheless remain high, and largely intact supply chains. According to the International Monetary Fund (IMF), global gross domestic product (GDP) grew by 3.1% in 2023 (previous year: 3.5%). The IMF also forecasts global growth of 3.1% for 2024. According to the IMF, while GDP in the eurozone grew by just 0.5% in 2023, the German economy contracted by 0.3%. The economic slowdown and restraint in consumption due to the still relatively high price of electricity were clearly evident according to the energy sector association, the BDEW. Electricity consumption fell in 2023 by 3.3% compared to the previous year. In its World Economic Outlook Update in January, the IMF anticipates an increase in economic output again in 2024 and forecasts growth of 0.9% in the eurozone and growth of 0.5% for Germany. The macroeconomic environment will probably also experience huge uncertainty and volatility in 2024, which makes it difficult to make specific statements about the impact on our company's business performance.

Development of gross domestic product (GDP)

in %	2024	2023 [1]	2022 [1]
World	3.1	**3.1**	3.5
Eurozone	0.9	**0.5**	3.4
Germany	0.5	**-0.3**	1.8
France	1.0	**0.8**	2.5
United Kingdom	0.6	**0.5**	4.3
Sweden	0.6	**-0.7**	2.8
Switzerland	1.8	**0.9**	2.7
Czech Republic	2.3	**0.2**	2.3
Turkey	3.1	**4.0**	5.5

1 The figures for the previous year have been restated.

Development of interest rates

Expectations of a global economic slowdown led to an inverted yield curve for German government bonds in 2023. Following the huge increase in interest rates in the previous year, yields on ten-year German government bonds rose significantly and at times exceeded the 3% mark. Although inflation rates have fallen, they still remain at a high level. To return inflation rates back to the target levels set by the central banks, the European Central Bank (ECB) and the US Federal Reserve (Fed) initially continued to increase key interest rates over the course of the year. While the Fed refrained from increasing interest rates any further in September 2023, the ECB also decided to pause interest rate hikes in October 2023, bringing to an end a run of ten increases in a row. In the fourth quarter, the expectations of interest rate cuts in 2024 even began to grow.

Against this background, the long end of the yield curve has started to fall and actuarial interest rates, which are used to discount the pension provisions, were below the level in the previous year on the 2023 reporting date, which led to a slight rise in the present value of the provisions.

Development of the sector and competitive situation

The energy sector is currently experiencing a period of great upheaval. There is particular pressure for change due to the energy transition. However, digitalization, sector coupling and the desire of local authorities to become self-sufficient are also having a strong influence on the sector.

A significant factor is that the energy sector is highly regulated, which means that political policies strongly influence developments. Traditional energy companies need to re-examine their competitiveness in individual business areas, exploit the potential offered by a changed market environment and realign their strategies for the future.

Selection of international, national, regional and new competitors

Established competitors

National and international
ALPIQ, EDF, EDPR, Enel, Engie, E.ON, Equinor, EVN, Fortum, Iberdrola, Ørsted, RWE, Vattenfall, Verbund

Regional
Badenova, Entega, EWE, Mainova, MVV, NErgie, SWM, Thüga

New competitors

Commodity suppliers / solution suppliers / start-ups
1komma5°, enpal, Lichtblick, NEXT Kraftwerke, Octopus Energy, ostrom, Sonnen, Thermondo, Tibber

Renewable energies
BayWa r.e., bp, Encavis, ENERTRAG, PNE Wind, Shell, theolia, TotalEnergies, wpd

E-mobility, telecommunications and broadband
1&1, Allego, Aral pulse, Deutsche Glasfaser, Deutsche Telekom, Ecotel, Fastned, Google, Ionity, Shell, Tesla, VW

Financial investors
Private equity, infrastructure and pension funds, and insurance companies

EnBW position:
- Further development from an integrated energy supplier to a sustainable and innovative infrastructure partner
- Focus on growth in renewable energies, grids and customer solutions (especially e-mobility, telecommunications and broadband)
- Active in Baden-Württemberg, Germany and selected foreign markets

Challenges:
- Increasing competition due to entry of new market participants in the core business
- New competition due to market entry of EnBW in new business fields
- Optimal positioning with respect to the regulatory environment and highly competitive market

Cross-segment framework conditions

Climate protection

The **German Climate Change Act** is being fundamentally reformed. In future, the entire German government will be responsible for the achievement of the unchanged climate protection targets for 2030 across all sectors. Responsibility will now no longer be split by sector after, in particular, the transport and building sectors were unable to reach the targets they had been set on multiple occasions. This will further increase the pressure on the energy sector to make greater efforts to compensate for shortfalls in other segments. The energy industry was able to achieve its emission targets in the past. As each individual sector will no longer be responsible for its own targets, they will not be obligated to produce an Immediate Climate Action Program if they miss a target. Instead, a Projection Report will be the central steering tool. This report will be created by a research consortium on behalf of the German Environment Agency and will forecast how emissions will develop in the period up to 2030. If projections in two successive years indicate that the climate protection targets for 2030 will be missed, the entire German government must present a multi-year program to guarantee the achievement of the targets. The Immediate Climate Action Program 2023 created using the old methodology and based on some optimistic assumptions predicts that the target will be missed by around 200 Mt CO_2eq. Some tightening of the climate policy targets will be unavoidable in the next few years and must include the transport and building sectors. In this context, the amendments to the Fuel Emissions Trading Act, which stipulate the price per certificate rising to €45 in 2024 and €55 in 2025, are welcomed.

To support the continued decarbonization of the energy sector, the Federal Ministry for Economic Affairs and Energy published the first key points with respect to the auctions that will be held as part of the **power plant strategy** in August 2023. In February 2024, an agreement was reached between the ministries involved in the process at a federal level. The government will hold a total of four auctions for new power plant capacity of up to 2.5 GW each in the form of H_2-ready gas power plants,

which must be fully switched over to hydrogen between 2035 and 2040. The situation will now be subject to clarification with respect to state aid law at a European level. The government will then hold a public consultation phase with operators, manufacturers and associations. Once completed, formal authorization by the European Commission in accordance with state aid rules will still be pending. The new power plants will be integrated into a future capacity mechanism that should be introduced by 2028 at the latest. The government is aiming to reach agreement on the capacity mechanism by summer 2024. EnBW will be actively involved in this process.

The establishment of a national **hydrogen infrastructure** is another pillar of the strategy for decarbonizing the future electricity and heating supply. The framework conditions are currently being developed with the active involvement of EnBW in several draft laws that have not yet been finalized in some cases. EnBW will need hydrogen for the generation of electricity and heating from around 2030 onwards, in order to successfully implement its climate-neutrality strategy on time.

The legislative procedures for the **Solar Package** have been further delayed – the process was due to be concluded by the end of 2023 and will now probably take until at least the end of March 2024. This package should help to accelerate the expansion of photovoltaic (PV) power plants with the goal of almost tripling annual growth in PV capacity from 7.5 GW in 2022 to 22 GW in 2026. The package will also introduce measures to strengthen the European manufacturing industry in the form of so-called "resilience auctions" and rules for the expansion of onshore wind energy and the construction of power lines. The proposed legislation is being accompanied by the pact between the federal and state governments in Germany that aims to remove the bureaucratic hurdles in the areas of nature conservation, repowering and heavy haulage. It includes among other things a "Pact for Accelerating Planning, Approval and Implementation" that aims to streamline processes by updating the law, and reducing and standardizing the number of review steps in the approval procedures. The pact also envisages using digital solutions to speed up approval processes.

The German government has started a comprehensive modernization offensive with the reform of the **German Buildings Energy Act.** In combination with heat planning at a local authority level, the act should reduce the emission of greenhouse gases in the buildings sector. The Heat Planning Act came into force on 1 January 2024. The federal states must ensure that heating plans are created for large cities in their state by 30 June 2026 and for local authorities with less than 100,000 residents by 30 June 2028. The obligation to produce a heating plan is already part of the legal regulations at a state level in some states, including Baden-Württemberg. It is crucial over the next few months that the Buildings Energy Act is closely harmonized with the Heat Planning Act in order to ensure that the regulations contained in these acts can be implemented seamlessly together. EnBW welcomes the Heat Planning Act and the resulting decarbonization of the heating sector (p. 90 f.↗).

European energy policy

At an EU level, almost all of the legislative proposals in the **first part of the "Green Deal – Fit for 55" package** have now been passed by the European Council and EU Parliament, including the most important aspect from an EnBW perspective: the dossier on the revision of the EU Emissions Trading System (ETS) that will introduce a separate emissions trading system for the building and transport sector. The EU has also passed revisions of the Renewable Energy Directive, Energy Efficiency Directive, the regulation defining CO_2 emission performance standards for passenger cars and light commercial vehicles, and the regulation on the deployment of alternative fuels infrastructure. The Energy Taxation Directive is the sole piece of legislation in the first package that has only been examined by the European Council. As things currently stand, the discussions on this piece of legislation in the European Council will most probably not be concluded.

The **second part of the "Fit for 55" package,** which aims to decarbonize the gas sector, is currently at the final trialogue negotiation stage within the legislative institutions of the European Union regarding the prospective EU hydrogen regulation. Positive steps have been taken with respect to important regulation guidelines and unbundling requirements for a future hydrogen grid. These aspects are crucial for the rapid development of the grid and for connecting Baden-Württemberg to the European hydrogen infrastructure. For example, the negotiations for the EU regulation to reduce methane emissions in the energy sector were concluded in November 2023. In December 2023, the European legislators agreed on a revision of the Energy Performance of Buildings Directive. It is anticipated that this directive will still be formally adopted in the current legislative period.

High energy prices and the increasingly difficult situation surrounding the security of energy supply in Europe due to the war between Russia and Ukraine prompted the EU Commission to submit a proposal for the reform of the design of the EU electricity market to the European Council and European Parliament in March 2023. The proposed reform consists of a revision of the Regulation on Wholesale Energy Market Integrity and Transparency (REMIT) and revisions of the regulation on the internal market for electricity and the directive on common rules for the internal market for electricity. The European Council and Parliament already reached agreement on REMIT in November 2023 and agreement on the other two pieces of legislation in December. EnBW is largely neutral about the results of these reforms but is generally critical of the trend for more market interventions in the electricity market, which could have a negative impact on the electricity market overall. Looking forward to winter 2023/2024, the obligatory regulations for the management of gas storage facilities that were defined in 2022 still apply at an EU level. As a result of easing prices on the energy markets and the high fill levels at the gas storage facilities, the EU Commission is not recommending any extension to the emergency measures for the windfall profit levy in the electricity generation sector. Instead, the European Council extended the period of validity for accelerated approval processes governed by the emergency regulations, the market correction mechanism to limit excessively high gas prices and the solidarity mechanism in the gas sector. EnBW views the market correction mechanism critically because if activated it could cause upheaval on the gas market.

In order to strengthen European competitiveness and support industrial policy especially with respect to China and the USA, the EU Commission has presented its proposals for both a Net Zero Industry Act (NZIA) and a Critical Raw Materials Act (CRMA). Both dossiers aim to ensure that the **EU does not lose its competitiveness** in key technologies for the green transition and to reduce Europe's one-sided dependence on individual states for raw materials. While a final agreement on the CRMA has already been reached, the trialogue discussions on the NZIA only started in December 2023. It is anticipated that the negotiations will take place during the first half of 2024 under the Belgium presidency of the European Council. Based on the Inflation Reduction Act (IRA) in the USA, the first EU auctions were held via the EU Hydrogen Bank in November 2023 to support companies with the operating costs in the production of renewable hydrogen. With the aim of ramping up the hydrogen economy, projects for the production of hydrogen in the EU will receive total funding of €800 million over ten years. As an accompanying measure to the NZIA, the EU Commission presented a European Wind Power Action Plan on 24 October 2023 including an ambitious expansion target of 111 GW from offshore wind power by 2030. Although the proposals are not legally binding, the EU Commission nevertheless focuses more deeply on the critical issues in the sector and analyses how the domestic production of wind turbines can be made more competitive again, taking into account aspects such as high raw material prices, rising interest rates and competition from abroad. In addition, the plan contains details on how to incentivize investment, speed up approval procedures and optimize the design of auctions. EnBW does not expect any direct impact from this plan because it is legally a non-binding communication.

Smart Infrastructure for Customers segment

Electricity and gas prices for retail and industrial customers

Average electricity price for a household [1]

in ct/kWh	2023	HY2 2022	HY1 2022
Grid fees [2]	9.52	8.08	8.08
EEG cost allocations [3]	0.00	0.00	3.72
Procurement, sales	23.83	20.64	14.40
VAT	7.30	6.40	5.92
Electricity tax	2.05	2.05	2.05
Concession fees	1.66	1.66	1.66
Other allocations	1.37	1.24	1.24
Total	**45.73**	**40.07**	**37.07**

1 Annual consumption of 3,500 kWh.
2 Including metering and metering station operation. Source: BDEW | As of December 2023.
3 EEG cost allocations were reduced to zero on 01/07/2022.

14.1%

increase in **electricity costs** for a household with an annual consumption of 3,500 kWh in 2023 in comparison to the second half of 2022.

According to an analysis of electricity prices by the German Association of Energy and Water Industries (BDEW) published in December 2023, the average monthly electricity bill for a household with an annual consumption of 3,500 kWh came to €133.36 in 2023. As a result of the abolishment of the EEG cost allocations as of 1 July 2022, the BDEW published two figures for the average electricity price in 2022, one for each half of the year. The average monthly electricity bill in the first half of 2022 was €108.12, while it increased to €116.86 in the second half of 2022.

After reducing prices in 2021 and 2022 and passing on reductions as a result of the abolishment of the EEG cost allocations as of 1 July 2022, we were forced to increase **electricity prices for heating electricity** under the EnBW brand on 1 January 2023 for the first time in three years. These are special electricity tariffs for electric storage heaters and heat pumps. Basic supply tariffs increased on average by 63.4% due to the huge rises in procurement costs as a result of the war between Russia and Ukraine. In comparison to the prices before the abolishment of the EEG cost allocations on 1 July 2022, this corresponded to an increase of around 39.4% or 31.2% depending on the use of the heating electricity. Heating electricity tariffs outside of the basic supply increased by a similar amount as those within the basic supply. We were able to reduce our prices for heating electricity under the EnBW brand again with effect from 1 January 2024 and, above all, pass on the effects of lower procurement costs to our customers. Although procurement costs on the energy markets are still at a high level in comparison to prices before the start of the energy crisis in spring 2021, we have generally been able to cushion the enormous cost increases for our customers since then. Prices for the basic supply fell by 4.6% for heat pump applications and by 5.9% for electric storage heating with a separate meter. Prices for special contracts changed by similar amounts.

The **prices for household electricity** under the EnBW brand remained constant in 2023.

We will increase **electricity prices for the basic supply and reserve supplies** under the EnBW brand by 15.9% with effect from 1 April 2024. At the same time, **heating electricity prices** for electric storage heaters with a combined meter will rise by 4.5%. Tariffs outside of the basic supply and reserve supplies will also change by similar amounts. The political decisions taken in response to the Constitutional Court's ruling on the debt brake in November 2023 were the main reasons for these changes. These decisions led to a significant increase in network user charges for household electricity. At the same time, the levies, user charges and taxes that also make up part of the electricity price for households have also risen overall. Another cost factor affecting the price adjustments were extraordinarily high procurement costs, especially during the energy crisis in 2022. In order to guarantee a safe and reliable supply of energy, EnBW already purchases the volumes of energy required by its customers well in advance on the energy markets. Despite falling prices on the electricity markets, the average price is still much higher than before the energy crisis.

For **industrial customers** receiving a medium-voltage supply, the average electricity price including electricity taxes decreased significantly in 2023 to 24.86 ct/kWh according to calculations made by BDEW. Average electricity prices increased considerably in 2022 due to huge price rises on the energy markets. While the average electricity price still stood at 33.02 ct/kWh in the first half of 2022, it increased sharply in the second half of 2022 to 53.38 ct/kWh.

Average natural gas price for a household in a single-family house [1]

in ct/kWh	2023	Q4 2022	Q1–Q3 2022
Procurement, sales	9.87	15.88	10.06
Grid fees [2]	1.99	1.66	1.66
VAT [3]	0.92	1.31	2.44
Natural gas tax	0.55	0.55	0.55
CO_2 price [4]	0.54	0.55	0.55
Other duties and cost allocations	0.12	0.09	0.03
Total	**13.99**	**20.04**	**15.29**

1 Natural gas central heating with hot water provision, each set at a special customer tariff including a reduced concession fee (0.03 ct/kWh), annual consumption of 20,000 kWh, base price included on a pro rata basis, not volume-weighted.
2 Including metering and metering station operation.
3 The "law for the temporary reduction of the value added tax rate for the supply of gas via the natural gas grid" reduced the VAT rate on gas deliveries from 01/10/2022 from 19% to 7%.
4 The CO_2 price represents the cost for the acquisition of CO_2 emissions trading allowances according to the BEHG and is fixed at a price defined by law until the end of 2025. Source: BDEW | As of December 2023.

-30.2%

decrease in **natural gas prices** for a household with an annual consumption of 20,000 kWh in 2023 in comparison to the fourth quarter of the previous year.

According to calculations by the German Federal Statistical Office, **natural gas prices** for industry fell in the first half of 2023 by 4.6% in comparison to the second half of 2022. In contrast, gas prices for private households increased significantly by 31.3% in the same comparative period. According to the gas price analysis published by the BDEW in December 2023, the average natural gas price for a household in a single-family house over the whole of 2023 was 13.99 ct/kWh.

The prices for gas under the EnBW brand remained constant in 2023. We were able to lower gas prices as of 1 January 2024. This was mainly due to falling procurement costs that we were able to pass on to our customers. The price for the basic supply of gas fell by around 4.5%, while corresponding prices for special contracts changed by similar amounts.

Although procurement costs for gas on the energy markets are still at a high level in comparison to prices before the start of the energy crisis in spring 2021, EnBW has generally been able to cushion the enormous cost increases for its customers since then. As a result, the prices for the basic supply of gas under the EnBW brand are still below average compared to the overall market.

Structural changes

Following a strong year in 2022, the **home electricity storage market** continued to grow in 2023. Around 260,000 home storage system were installed in the first half of 2023 alone (previous year: 105,000). Alongside the high level of demand overall, the removal of VAT, or its reduction to 0%, on new photovoltaic and home storage systems at the beginning of 2023 also had a positive impact. According to EUPD Research, around half a million home storage systems were newly installed by the end of 2023. We support end customers in this area with our household energy solutions (for example in the area of photovoltaics and storage systems) (p. 90↗).

There also continues to be very dynamic growth in the registration of new **electric vehicles.** According to the Federal Motor Transport Authority, around 520,000 electric cars were registered in 2023, which was around 11% more battery-powered electric vehicles than in the previous year. This meant that the share of the total number of new registrations accounted for by purely electric vehicles reached 18.4%. In contrast, there was a sharp fall in the number of plug-in hybrid vehicles in 2023 – with around 176,000 newly registered vehicles – which was due to some extent to the reduction in state subsidies for this category of vehicles. In contrast, the increase in battery electric cars was the result of, among other things, the growing acceptance for these vehicles among customers and the wider choice of models available. EnBW mobility+ is ensuring there will be sufficient **charging infrastructure.** It already operates the largest quick-charging network in Germany, is investing in its further expansion and provides drivers with the opportunity to charge their vehicles throughout large areas of Europe using the EnBW mobility+ app (p. 89 f.↗). There are plans to also significantly expand the infrastructure for cars, commercial vehicles and ships with alternative drive systems at a European level. In this context, a compromise on the Alternative Fuel Infrastructure Regulation (AFIR, previously Regulation 2014/94/EU) was reached on 27 March 2023. It will especially focus on the expansion of e-charging stations. The aim is to install a charging station every 60 km across the core trans-European transport network by the end of 2025. Member states must provide additional charging capacity of 1.3 kW per newly registered electric vehicle.

A comprehensive expansion of the **broadband infrastructure** remains economically unfeasible in many regions. For this reason, future funding will now focus on "gray areas," and since 1 January 2023 has been provided for areas with a bandwidth ≤ 100 Mbit/s, thus effectively for all private customer connections that are not gigabit-ready. Total funding of €17 billion is available for the expansion of the fiber-optic infrastructure. In order to benefit from this transformation to a gigabit-ready infrastructure, Plusnet is active across Germany, while NetCom BW will focus on Baden-Württemberg (p. 91↗).

System Critical Infrastructure segment

In September 2023, the Federal Network Agency published its preliminary findings on the second draft of the **Network Development Plan Electricity 2037 with Outlook 2045.** The plan includes three scenarios describing the envisaged grid in 2037 and the "climate-neutral grid" for Germany in 2045. The plan 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 as the main drivers of the transformation of the energy system. The three scenarios reflect different degrees of hydrogen uptake and electrification. The anticipated installed generation capacities from renewable energies (above all photovoltaic and wind) in 2045 of almost 640 GW to over 700 GW would represent about a fivefold increase in comparison to 2023. This and – according to forecasts – a doubling in gross electricity consumption will require a huge increase in the rate at which the grids are currently being expanded. The expected investment in the transmission grid up to 2045 is around €156 billion in all scenarios with the expectation that the associated expansion measures will be almost completely finished by 2037. To enable the integration of offshore wind power plants, it is estimated that an additional €145 billion will have to be invested in the German offshore grid by 2045. The Federal Network Agency approved the NDP Electricity 2037 with Outlook 2045 on 1 March 2024.

TransnetBW is participating with other transmission grid operators in two major projects to push forward the development of high-voltage DC transmission lines (HVDC) for the future transport of wind energy from the north of Germany to the centers of consumption in the south. TransnetBW is responsible for the most southern section of the **ULTRANET** project that will connect North Rhine-Westphalia and Philippsburg. The Federal Network Agency (BNetzA) approved the plan for this 42 km section at the end of August 2023 and construction work on the transmission line has now begun. In the **SuedLink** project, two high-voltage DC transmission lines from Schleswig-Holstein to Bavaria and Baden-Württemberg are being realized in cooperation with TenneT. In May 2023, the BNetzA approved the plans for the first of a total of eight sections for which TransnetBW is responsible. The construction work for the SuedLink converter in Leingarten started at the end of July 2023. The other seven sections are still in the planning approval process.

The **grid companies in the EnBW Group are implementing numerous digitalization measures** which should reduce the huge need to expand the electricity grid in order to achieve the climate neutrality targets and also to optimize the processes involved in operating the grids. The Act to Relaunch the Digitalization of the Energy Transition (GNDEW) came into force at the end of May 2023 and aims to promote the flexible, legally compliant and comprehensive rollout of smart meters. Obligatory aspects include, for example, control of devices via smart meters and ensuring that several meters can be connected up to one smart meter gateway. The rollout is being significantly accelerated by current trends in photovoltaics, heat pumps and electromobility. Netze BW thus estimates that it will have more than one million smart meters in its grid area by 2030. In addition, Netze BW is currently actively engaged in innovation projects to expand the potential applications for smart meter gateways. In cooperation with E.ON, the meter manufacturer Landis+Gyr and other partners, Netze BW is, for example, pushing forward the integration of meters that record load profile measurements. It is also testing submetering for heating bills in the housing sector in cooperation with the Minol-ZENNER Group.

The rules governing the **reduction in electricity consumption at times of peak load** from the Federal Network Agency (section 14a Energy Industry Act [EnWG]) have made it possible for grid operators to reduce the power consumption of controllable consumers such as heat pumps, wall boxes and electricity storage systems from January 2024 for a maximum of two hours per day if there is an imminent threat that the electricity grid will become overloaded.

In December 2023, the **Network Development Plan (NDP) Gas 2022–2032** from the gas transmission system operators (TSO) was approved with one request for a change by the Federal Network Agency. It contains a binding expansion proposal that takes into account significant changes to the framework conditions in the gas industry. Three variants are considered for 2032 based on LNG deliveries and also allow for the complete loss of Russian gas volumes both for the supply to Germany and also for transmission through Germany. The approved grid expansion measures will require investment of around €4 billion, of which almost €2 billion will be on LNG facilities. The Federal Network Agency is currently engaged in the consultation process on the draft application from the TSO for the core

hydrogen network in Germany. According to the plans, the core hydrogen network will have a length of around 9,700 km and will by 2032 largely consist of redeployed natural gas lines that will no longer be required for their original purpose by this time. The Federal Network Agency is expected to approve the core hydrogen network in the middle of 2024.

The current NDP Gas runs until 2030 and envisages increasing gas transmission capacities in Baden-Württemberg, especially for the supply of new gas power plants, which will make a needs-based expansion of the gas transmission grid of terranets bw necessary. The **south German natural gas pipeline (SEL)** will form part of the required expansion. As the first major natural gas pipeline in Baden-Württemberg to be connected to the European gas transmission routes, it will be constructed as a hydrogen-ready pipeline. As a result, the SEL pipeline will satisfy the requirements for providing the business location Baden-Württemberg with a CO_2-neutral energy supply.

Sustainable Generation Infrastructure segment

Installed net output for electricity generation from renewable energies in Germany[1]

in GW	2023	2022	2021	2020	2019
Solar	81.8	67.6	60.1	54.4	48.9
Onshore wind	61.0	58.0	55.9	54.3	53.2
Biomass	9.0	8.9	8.9	8.7	8.3
Offshore wind	8.5	8.2	7.9	7.9	7.6
Hydropower[2]	5.4	5.4	5.5	5.5	5.5
Gas	34.8	34.3	32.4	32.5	30.1
Hard coal	18.9	19.0	19.0	23.7	22.7
Brown coal	18.6	18.7	19.0	20.9	20.9
Nuclear power	–	4.1	4.1	8.1	9.5
Oil	4.7	4.7	4.7	4.9	4.4
Total[3]	**242.7**	**228.7**	**217.3**	**220.8**	**211.0**

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

Renewable Energies

Germany

The proportion of total electricity generation accounted for by renewable energies was around 55% in 2023 and thus significantly higher than in the previous year (previous year restated as a result of more precise analyses: 46%). This increase was mainly attributable to higher wind yields and a lower total generation volume in Germany.

The German Renewable Energies Act came into force at the beginning of 2023. It defines a target for the share of the gross electricity consumption accounted for by renewable energies in 2030 of at least 80%. In order to achieve this target, significant increases in the annual auction capacities and expansion volumes for renewable energies were also defined. The target values for the installed output from onshore wind power plants in 2030 and 2040 were increased to 115 GW and 160 GW, respectively, while the targets for photovoltaics in 2030 and 2040 were increased to 215 GW and 400 GW, respectively. In the case of offshore wind power, the target values were increased to 30 GW in 2030, 40 GW in 2035 and 70 GW in 2045. We believe that these developments validate our strategy of making renewable energies an important pillar of our business.

Onshore wind

In 2023, the installed onshore wind capacity in Germany increased by around 3 GW due to the commissioning of new wind farms. The targets set for reserved land areas for the federal states will have a positive impact on the expansion of onshore wind energy in the long term. The amendments on the protection of species in the Federal Nature Conservation Act will also have a positive effect.

Offshore wind

One offshore wind farm (Arcadis Ost) with an output of 257 MW was placed into operation in Germany in 2023. The auctions for non-centrally pre-investigated sites for a total of 7 GW of output started on 1 June 2023. EnBW participated in the North Sea auction in a joint venture with Equinor. EnBW was not successful with any of its bids in the second round of bidding. A "dynamic bidding procedure" was used for the first time to select the successful bids. In this procedure, the successful bidders are the ones willing to pay the highest amount with no funding in the form of a market premium. Two of the three sites in the North Sea, each with a capacity of 2 GW, were won by bp, while the third site in the North Sea, also with a capacity of 2 GW, and a site in the Baltic Sea with a capacity of 1 GW were secured by TotalEnergies. The new wind farms are expected to be commissioned in 2030.

Photovoltaics

The year 2023 recorded by far the highest expansion in solar PV capacities in history. The overall output of photovoltaic plants increased by around 14 GW due to the installation of new plants. In order to achieve the ambitious expansion targets by 2030, it will nevertheless be necessary to expand the number of useable areas considerably.

France

We are active on the French market through our subsidiary Valeco – a project developer and operator in the renewable energies sector. We develop and realize wind energy and PV projects in France and expect continued dynamic growth in this country in both generation sectors. Around 22 GW of onshore wind capacity is currently installed in France. The government's target is to expand this figure to between 33 GW and 35 GW by 2028. It also aims to expand the installed photovoltaic capacity from the current figure of 18 GW to between 35 GW and 44 GW. The French energy strategy includes ambitious expansion targets for offshore wind power. We are taking part in an auction for a floating wind farm off the coast of Brittany and are already prequalified for the next phase of auctions.

Great Britain

The British government has defined a target for the expansion of offshore wind power of 50 GW by 2030. The results of the fifth round of auctions in the CfD scheme (Contracts for Difference Allocation Round 5) were published in September 2023. No bids for offshore wind projects were accepted in this auction.

Sweden

The Swedish energy 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 an even more attractive proposition, especially in southern Sweden. It remains to be seen whether offshore wind power will also play an increasing role in the Swedish energy mix in future, both as an important source of electricity and in combination with the targets for integrating green hydrogen into the industrial and transport sectors.

Turkey

Our joint venture in Turkey with our partner Borusan operates wind turbines with a total output of 665 MW and is one of the largest players on the Turkish wind energy market. In addition, the joint venture operates a hydropower plant with an output of 50 MW and two solar parks with a total output of 9 MW. Turkey slightly increased the feed-in tariffs for new plants as part of the funding mechanism for renewable energies as of 1 May 2023. 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 political and economic developments in Turkey very closely.

Conventional generation: market and fuel prices

Electricity wholesale market

In 2023, the average spot market price of approximately €95.18/MWh was around €140/MWh lower than in the previous year. The average price on the forward market was also significantly lower than the average price in the previous year. The fall in prices was primarily attributable to lower market prices for gas and coal. In addition, the deployment periods for thermal power plants were reduced due to higher generation from renewable energies. Electricity generation from nuclear power in France was also significantly higher than in the previous year and this had an impact on neighboring electricity markets. The future development of electricity prices will depend on the development of fuel and CO_2 prices and trends in the electricity generation mix. Future developments in energy and climate policy will also have an important influence on the electricity market in the future.

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

in €/MWh	Average 2023	Average 2022
Spot	95.18	235.45
Rolling front year price	137.67	298.86

Gas market

In the first half of 2023, there was a significant fall in prices on the gas market. The reasons for this development were the mild winter in Europe, a drop in demand in Europe and more frequent arrivals of LNG ships in northwest Europe in comparison to the previous winter. Since June 2023, prices have risen again to some extent or experienced sideways movement. This was primarily due to extensive maintenance work in Norwegian gas production, which had to be significantly extended in some cases. In addition, there was a price-related fall in LNG deliveries to northwest Europe. Since December 2022, several LNG import terminals have been placed into operation in Germany, France and Italy and have improved the supply situation further. In the first half of 2023, LNG deliveries to northwest Europe reached new record levels. The remaining Russian gas deliveries via Ukraine and Bulgaria remained quite stable throughout the entire year. There were noticeable reductions in gas consumption in both the industrial and household sectors in comparison to the previous year, as demanded by the government in its calls to lower consumption. It is probable that the gloomy economic conditions had a negative impact on industrial demand. As a result of lower demand and a good level of supply, the gas storage facilities had relatively high fill levels at the end of the 2022/2023 winter and the feared gas shortages thus failed to materialize. The good level of supply during summer 2023 meant that the gas storage facilities in Europe were filled quickly. In addition, the mild start to the winter led to below-average demand. On 3 November 2023, the European gas storage facilities reached a fill level of 100% and were still more than 90% full on 1 January 2024. As gas use continued, storage levels fell to around 74% on 1 February 2024.

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

in €/MWh	Average 2023	Average 2022
Spot	40.55	122.98
Rolling front year price	52.01	114.21

There is still some uncertainly with respect to the remaining Russian gas deliveries via Ukraine and Bulgaria. A halt to these supplies for political reasons is possible at any time. In addition, it is unclear what impact a Bulgarian transit tax on Russian gas may have. Large volumes of LNG will continue to be needed in northwest Europe to replace the previous volumes of Russian gas. This means that an increase in the demand for LNG in other parts of the world would now have a bigger impact on the European gas markets than in the past.

Oil market

Brent oil prices (rolling front month) experienced volatile sideways movement during the course of 2023. For large parts of the year, the main drivers of this development were economic concerns and worries about the demand for oil, while the OPEC+ group tried several times to influence prices upwards with cuts to their oil production. Brent oil prices remained relatively stable until the end of June. Additional voluntary cuts in production by Saudi Arabia and Russia significantly reduced supplies on the global oil market from July onwards. These cuts in production were originally intended to last for just one month but were then gradually extended until the end of 2023. Hope among market participants of an end to rising interest rates also had an impact. On 27 September 2023, Brent oil hit its year-high price of US$96.55/bbl. However, the euphoria among market participants weakened afterwards and prices began to fall again. The war in the Middle East led to a brief rise in oil prices again following the events on 7 October 2023. The negative price trend then continued as before.

Development of prices on the oil markets

in US$/bbl	Average 2023	Average 2022
Crude oil (Brent) front month (daily quotes)	82.19	99.17
Crude oil (Brent), rolling front year price (daily quotes)	78.06	87.19

The oil market will presumably continue to be influenced by macroeconomic developments and the balance between supply and demand. Geopolitical conflicts, such as the war between Russia and Ukraine and a possible conflict with Iran, continue to pose risks for the price of oil. Prices on the forward market reflect the expectation that prices will continue to fall slightly over time.

Coal market

Coal prices were initially volatile and fell during the first half of 2023. This trend was mainly due to developments in European gas and German electricity prices. It triggered an extensive fuel switch from coal to gas in Europe, which meant that the actual physical consumption of coal fell considerably behind the expected consumption figures. Coal power plant operators suddenly had a significant oversupply of coal, while at the same time there was only limited capacity for these surplus stocks. Already agreed coal deliveries had to be delayed to a later point in time, diverted to other regions of the world or sold off on the falling market. As falling prices on the natural gas and LNG markets were a worldwide phenomenon, comparable developments were also seen in other regions with fuel switch potential. However, the global demand for coal was propped up by China, which imported record amounts of steam coal in 2023. This development was mainly driven by untypically low hydropower generation, safety inspections at coal mines in the country and a dynamic increase in the demand for electricity. Very high imports into China helped to halt falling prices on the global market from June 2023 onwards. Coal prices then generally experienced sideways movement, except for a short spike in prices in response to the war in the Middle East. Coal prices were then indirectly forced upwards by the higher prices for natural gas and LNG. These rises were seen in response to fears that Iran may block the Strait of Hormuz – which is important for, among other things, deliveries of LNG from Qatar – if the war were to spread.

Development of prices on the coal markets

in US$/t	Average 2023	Average 2022
Coal – API #2 rolling front year price	126.37	222.13
Coal – API #2 spot market price	128.52	292.08

During the heating period, the European coal market is still expected to be strongly influenced by developments in gas prices and this has led to huge uncertainty. The situation in China will also remain relevant. The forward market is anticipating that coal prices will remain at around the current level over the coming years.

CO_2 allowances

In the first half of 2023, prices for CO_2 allowances experienced sideways movement between almost €80/t CO_2 and €100/t CO_2. Prices for CO_2 allowances than fell slightly in the second half of the year. The main drivers of prices for EUA certificates in 2023 were lower emissions in the electricity sector due to a fall in fuel switch costs and lower fossil-fuel-based generation, as well as high energy prices and the flagging economy in the industrial sector. As a result of further reductions in supply imposed by the market stability reserve (MSR) and the tightening of the climate target for 2030, price increases are expected in the long term.

Development of prices for emission allowances/daily quotes

in €/t CO_2	Average 2023	Average 2022
EUA – rolling front year price	85.47	81.04

Nuclear power

Germany decided in 2011 to phase out the use of nuclear power. EnBW immediately responded to this decision by developing a comprehensive dismantling strategy. EnBW considers the dismantling of its five nuclear power plants to be part of the energy transition and is rigorously implementing its dismantling measures. Our subsidiary EnBW Kernkraft (EnKK) is the licensed operator of the nuclear power plants and is responsible for the dismantling work.

By taking this approach, EnBW has established itself as the forerunner in the dismantling of nuclear power plants in Germany. It is the first operator whose entire own nuclear power plant park is currently being dismantled: Obrigheim since 2008, Block I in Neckarwestheim and Block 1 in Philippsburg since 2017, Block 2 in Philippsburg since 2020 and Block II in Neckarwestheim since May 2023, after the latter was still in operation until April 2023 due to the amendment to the German Atomic Power Act. The entire dismantling program complies with the guidelines laid down by the Atomic Power Act and has been fully approved for all nuclear power plants by the authorities.

The EnBW Group

Finance and strategy goal dimensions

Changes to the segment reporting

One of the Polish subsidiaries was restructured at the beginning of 2023 in order to comply with the Polish energy industry regulations. The grid business at this company was previously reported in the "Smart Infrastructure for Customers" segment but will be part of the "System Critical Infrastructure" segment from the 2023 financial year onwards. The figures for the previous year have been restated.

Results of operations

Electricity sales fall considerably, gas sales increase

Electricity sales volume (without System Critical Infrastructure)

in billion kWh	Smart Infrastructure for Customers		Sustainable Generation Infrastructure		Total (without System Critical Infrastructure)		Change in %
	2023	2022	2023	2022	2023	2022	
Retail and commercial customers (B2C)	13.4	14.1	0.0	0.0	13.4	14.1	-5.0
Business and industrial customers (B2B)	20.9	22.6	0.0	0.6	20.9	23.2	-9.9
Trade	0.2	0.1	46.7	68.5	46.9	68.6	-31.6
Total	**34.5**	**36.8**	**46.7**	**69.1**	**81.2**	**105.9**	**-23.3**

In the 2023 financial year, electricity sales were significantly lower than in the previous year, which was mainly due to a decrease in trading activities. Electricity sales to retail and commercial customers (B2C) were slightly lower than in the previous year due to lower average consumption by customers. Sales to business and industrial customers (B2B) decreased, primarily as a result of reduced sales activities at GVS. Sales in the trading sector fell considerably in comparison to the same period of the previous year due to a decrease in trading activities. However, their effect on the earnings potential of the company is limited.

Gas sales volume (without System Critical Infrastructure)

in billion kWh	Smart Infrastructure for Customers		Sustainable Generation Infrastructure		Total (without System Critical Infrastructure)		Change in %
	2023	2022	2023	2022	2023	2022	
Retail and commercial customers (B2C)	13.7	15.5	0.0	0.0	13.7	15.5	-11.6
Business and industrial customers (B2B)	100.8	147.5	0.0	0.0	100.8	147.5	-31.7
Trade	2.1	1.9	431.0	343.7	433.1	345.6	25.3
Total	**116.6**	**164.9**	**431.0**	**343.7**	**547.6**	**508.6**	**7.7**

Gas sales increased in the 2023 financial year compared to the previous year, mainly as a result of higher trading activities. Adjusted for the effects of changes in the consolidated companies, gas sales were 8.1% higher than the figure in the previous year. Gas sales to retail and commercial customers (B2C) fell due to weather conditions and lower average consumption by customers. Against the backdrop of the loss of Russian gas procurement agreements and reduced sales activities at GVS, there was a significant decrease in sales to business and industrial customers (B2B) in comparison to the previous year. In contrast, sales in the trading sector increased considerably due to expanded trading activities, including in the area of LNG.

External revenue significantly lower than previous year

External revenue by segment

in € million [1, 2]	2023	2022	Change in %
Smart Infrastructure for Customers	17,249.2	18,754.5	-8.0
System Critical Infrastructure	6,327.9	6,697.4	-5.5
Sustainable Generation Infrastructure	20,832.4	30,543.2	-31.8
Other/Consolidation	21.2	7.5	–
Total	**44,430.7**	**56,002.6**	**-20.7**

1 The figures for the previous year have been restated.
2 After deduction of electricity and energy taxes.

Adjusted for the effects of the changes in the consolidated companies, external revenue was 20.5% lower than the level in the previous year. The fall in revenue was accompanied by a corresponding reduction in the cost of materials in all segments.

Smart Infrastructure for Customers: Revenue in the Smart Infrastructure for Customers segment decreased in the 2023 financial year in comparison to the previous year. Adjusted for the effects of the changes in the consolidated companies, revenue was 7.3% lower than in the previous year. The fall in revenue was mainly due to a significant decrease in sales to business and industrial customers (B2B) against the backdrop of the loss of Russian gas procurement agreements and reduced sales activities at GVS. This was offset to some extent by passing through increases in procurement prices and network user charges to customers.

System Critical Infrastructure: Revenue in the System Critical Infrastructure segment was slightly lower in 2023 than in the previous year. Adjusted for the effects of the changes in the consolidated companies, revenue was 5.6% lower than in the previous year. Income from the settlement of redispatch measures with other transmission system operators that has no impact on the result decreased. This was offset to some extent by higher income from the use of the grids, especially as a result of factoring in increased expenses for the grid reserve including the redispatch to maintain the security of supply into prices, but was not enough to fully compensate for the fall in revenue.

Sustainable Generation Infrastructure: Revenue in the Sustainable Generation Infrastructure segment fell significantly in 2023 in comparison to the previous year despite higher sales volumes for gas. This was primarily due to lower prices for trading activities. Please refer to the information on the development of electricity and gas prices on p. 61 ff..

Material developments in the income statement

The decrease of €11,571.9 million in revenue in comparison to the previous year to €44,430.7 million was mainly attributable to lower sales prices in the gas sector. Against this background, the cost of materials also fell significantly in comparison to the figure in the previous year by €15,423.1 million. Personnel expenses increased by €303.4 million, primarily due to an increase in the number of employees and wage increases as part of the collective bargaining agreement. Other operating income fell by €2,840.6 million in comparison to the previous year. This was mostly a result of higher reversals of impairment losses in the previous year, especially on our conventional generation plants, lower income from derivatives and the reversal of provisions for onerous contracts in the previous year in relation to, among other things, the early termination of an electricity procurement agreement. Other operating expenses decreased by €578.0 million, which was also a result of the valuation of derivatives in comparison to the previous year. This was offset to some extent by negative effects related to the incidents at SENEC. Amortization and depreciation increased slightly by €65.0 million compared to the value in the previous year, whereby impairment losses were around the same level as in the previous year.

The investment result in the reporting year stood at €–89.2 million, which was €366.0 million lower than the figure of €276.8 million in the previous year. The main reasons for this decrease were lower income from the dedicated financial assets and higher write-downs on entities accounted for using the equity method and on investments. The financial result deteriorated in the reporting period in comparison to the previous year by €388.7 million to €–411.3 million (previous year: €–22.6 million). This development was due mainly to interest rate effects on non-current provisions. This was offset to some extent by the result from the market valuation of securities.

Overall, earnings before tax (EBT) totaled €2,840.8 million in the 2023 financial year, compared with €2,395.4 million in the previous year.

Earnings

The Group net profit/loss attributable to the shareholders of EnBW AG fell from €1,738.0 million in 2022 by €200.4 million to €1,537.6 million in the reporting period. Earnings per share amounted to €5.68 in the 2023 financial year, compared to €6.42 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 cannot be predicted or cannot be directly influenced by us and as such are not relevant to the ongoing management of the company. The effects are presented and explained further 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. 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 and the share of the adjusted EBITDA accounted for by the segments

TOP

Adjusted EBITDA by segment

in € million [1]	2023	2022	Change in %	Forecast 2023 [2]	Adjusted forecast 2023 [3]
Smart Infrastructure for Customers	239.5	498.4	-51.9	€0.4 to €0.5 billion	€0.35 to €0.45 billion
System Critical Infrastructure	1,772.0	1,057.8	67.5	€1.6 to €1.9 billion	€1.6 to €1.9 billion
Sustainable Generation Infrastructure	4,647.6	2,616.2	77.6	€2.9 to €3.2 billion	€4.3 to €4.6 billion
Other/Consolidation	-293.9	-205.3	-43.2	–	–
Total	**6,365.2**	**3,967.1**	**60.4**	**€4.7 to €5.2 billion**	**€5.9 to €6.5 billion**

1 The figures for the previous year have been restated.
2 Forecast as published in the report from 31/12/2022.
3 Adjusted forecast as published in the report on 30/09/2023.

TOP

Share of adjusted EBITDA accounted for by the segments

in % [1]	2023	2022	Forecast 2023 [2]	Adjusted forecast 2023 [3]
Smart Infrastructure for Customers	3.8	12.6	5 to 15	0 to 10
System Critical Infrastructure	27.8	26.7	30 to 45	20 to 35
Sustainable Generation Infrastructure	73.0	65.9	55 to 70	65 to 80
Other/Consolidation	-4.6	-5.2	–	–
Total	**100.0**	**100.0**		

1 The figures for the previous year have been restated.
2 Forecast as published in the report from 31/12/2022.
3 Adjusted forecast as published in the report on 30/09/2023.

The adjusted EBITDA for the EnBW Group increased substantially in the 2023 financial year by 60.4% in comparison to the previous year, and was thus within the adjusted forecasted range, exceeding the originally forecasted range. Adjusted for the effects of changes in the consolidated companies, the adjusted EBITDA for the EnBW Group increased by 58.4%. Please refer to the explanations in the section "Non-operating EBITDA" for further information on the restatement of the figures for the previous year.

Smart Infrastructure for Customers: The adjusted EBITDA in the Smart Infrastructure for Customers segment of €239.5 million was significantly lower than the level in the previous year and our original and adjusted forecasted ranges. Adjusted for the effects of changes in the consolidated companies, the adjusted EBITDA decreased by 56.2%. This fall in earnings and the underperformance of the adjusted forecasted range were due to negative effects in the low three-digit million euro range in the operating business at SENEC as an indirect consequence of incidents. In addition, there

were negative effects of €245.6 million related to the deconsolidation of bmp greengas and the associated impairments on receivables.

System Critical Infrastructure: The adjusted EBITDA in the System Critical Infrastructure segment increased in the 2023 financial year in comparison to the previous year by 67.5% and was thus within the unchanged forecasted range. Adjusted for the effects of changes in the consolidated companies, the adjusted EBITDA increased by 67.0%. This rise in earnings was due to a substantial increase in revenue from the use of the grids as part of the higher investment in the expansion of the grids and from factoring in higher expenses for the grid reserve into prices, including redispatch to maintain the security of supply.

Sustainable Generation Infrastructure: The adjusted EBITDA in the Sustainable Generation Infrastructure segment increased considerably in 2023 in comparison to the previous year to €4,647.6 million and was thus at the upper end of the adjusted forecasted range, exceeding the originally forecasted range.

Adjusted EBITDA Sustainable Generation Infrastructure

in € million[1]	2023	2022	Change in %
Renewable Energies	1,070.9	1,107.1	-3.3
Thermal Generation and Trading	3,576.7	1,509.1	137.0
Sustainable Generation Infrastructure	**4,647.6**	**2,616.2**	**77.6**

1 The figures for the previous year have been restated.

In the Renewable Energies area, the adjusted EBITDA of €1,070.9 million was at almost the same level as in the previous year. The earnings performance at the run-of-river power plants and the expansion in wind farms and photovoltaic power plants had a positive effect. This was offset to some extent by falling prices for direct distribution of generated wind and photovoltaic power. In the area of Thermal Generation and Trading, the adjusted EBITDA increased sharply in 2023 in comparison to the previous year. On the one hand, the generated volumes could be sold through the trade at significantly higher prices in comparison to the previous year, while on the other hand, the reductions and cessation in gas supplies due to the war between Russia and Ukraine in the same period of the previous year had a negative effect, which now no longer applies.

Fall in the non-operating EBITDA in comparison to the previous year

Non-operating EBITDA

in € million[1]	2023	2022	Change in %
Expenses/income relating to nuclear power	-675.6	-591.6	14.2
Income from the reversal of other provisions	57.2	14.8	–
Result from disposals	-0.3	3.8	–
Additions to/Reversals of the provisions for onerous contracts relating to electricity and gas procurement agreements	-176.2	393.8	–
Income from reversals of impairment losses	120.9	1,499.1	-91.9
Restructuring	-47.8	-28.7	66.6
Valuation effects	481.5	-908.1	–
Other non-operating result	-386.6	123.0	–
Non-operating EBITDA	**-626.9**	**506.1**	**–**

1 The figures for the previous year have been restated.

The fall in non-operating EBITDA was primarily due to lower income from reversals of impairment losses in comparison to the previous year when there were large reversals of impairment losses on conventional generation plants. This was the result of an improvement in the profitability of coal power plants in the liquid period.

Furthermore, additions to a provision for an onerous contract in the current reporting period – mainly due to poorer medium-term income forecasts as a result of the falling electricity prices – had a negative impact on earnings. In addition, there were not only increases to provisions but also reversals of provisions for onerous contracts in the same period of the previous year. Negative effects

in the mid three-digit million euro range due to the incidents at SENEC also impacted the other non-operating result.

Valuation effects arising from certain hedging transactions, which we use to hedge against price fluctuations for underlying assets such as our power plants, offset these negative effects to some extent. In contrast to the underlying assets, these hedging transactions have to be recognized at their fair value in accordance with IFRS 9. This results in temporary earnings effects that are reversed over the course of time. As the one-sided recognition of the market value of these hedging transactions does not properly reflect the economic reality, we now recognize these effects in the non-operating result starting from the first half of 2023. This had an effect of €+373.3 million in the reporting period. The figures for the previous year have been restated accordingly. The effect in the comparative period was €–681.5 million.

Considerable increase in adjusted Group net profit

Group net profit

in € million [1]	2023			2022		
	Total	**Non-operating**	**Adjusted**	Total	Non-operating	Adjusted
EBITDA	**5,738.3**	**-626.9**	**6,365.2**	**4,473.2**	**506.1**	**3,967.1**
Amortization and depreciation	**-2,397.0**	**-710.7**	**-1,686.3**	-2,332.0	-716.8	-1,615.2
EBIT	**3,341.3**	**-1,337.6**	**4,678.9**	**2,141.2**	**-210.7**	**2,351.9**
Investment result	**-89.2**	**-277.8**	**188.6**	276.8	-35.8	312.6
Financial result	**-411.3**	**94.7**	**-506.0**	-22.6	449.6	-472.2
EBT	**2,840.8**	**-1,520.7**	**4,361.5**	**2,395.4**	**203.1**	**2,192.3**
Income tax	**-1,008.2**	**201.8**	**-1,210.0**	-551.5	-63.3	-488.2
Group net profit/loss	**1,832.6**	**-1,318.9**	**3,151.5**	**1,843.9**	**139.8**	**1,704.1**
of which profit/loss shares attributable to non-controlling interests	**(295.0)**	**(-77.0)**	**(372.0)**	(105.9)	(-185.1)	(291.0)
of which profit/loss shares attributable to the shareholders of EnBW AG	**(1,537.6)**	**(-1,241.9)**	**(2,779.5)**	(1,738.0)	(324.9)	(1,413.1)

1 The figures for the previous year have been restated.

Group net profit fell slightly in comparison to the previous year. This was due to the effects within non-operating EBITDA (please refer to the section "Non-operating EBITDA" on p. 72 f.↗ for the reasons), the investment and financial results and income taxes that had a negative impact on the earnings performance, primarily as a result of the significantly higher adjusted EBITDA (please refer to the section "Adjusted EBITDA" on p. 71 f.↗ for the reasons).

The main reasons for the decrease in the investment result were lower income from the dedicated financial assets and higher write-downs on entities accounted for using the equity method and on investments.

Furthermore, the decrease in the financial result had a negative effect on the earnings performance. This development was due mainly to interest rate effects on non-current provisions. This was offset to some extent by the result from the market valuation of securities.

Adjusted income taxes change in line with the development of adjusted EBT.

We use the amended adjusted investment result to calculate the value spread. This is calculated on the basis of the adjusted investment result less the adjusted result from investments held as financial assets of €94.0 million (previous year: €226.2 million).

Financial position

Financial management

Basis and objectives

The purpose of our financial management system is to ensure that EnBW is able to meet its payment obligations at all times without restriction. In order to minimize risk, optimize costs and increase transparency, financial transactions are managed within the Group finance department as far as possible.

The liquidity management system at EnBW is based on an efficient in-house bank approach in which liquidity is combined in an EnBW cash pool. Liquidity needs are determined using a forecasting tool and compared with corresponding liquidity sources. By applying a utilization rate for liquidity, we can derive the financing needs and then implement them. We have identified almost 100 relevant liquidity drivers for the forecast. The tool combines a deterministic approach with a risk-based approach to liquidity management. Daily operational management of liquidity is secured using a one-day, seven-day, one-month and three-month assessment. We also examine the situation over a period of twelve months in our strategic financial analysis.

In the operating business, derivatives are deployed for hedging purposes only: for example, for forward contracts for electricity and primary energy source trading. This also applies for foreign exchange and interest rate derivatives. All trading activities take place within a consistent framework using risk capital on the one hand and derived limits on the other. The value at risk (VaR) is of central importance when measuring the level of risk in proprietary trading. In the reporting year, the average value at risk was €17 million.

Details on the **risk management system** can be found in the notes to the consolidated financial statements in note (26) "Accounting for financial instruments."

Interest rate risk management involves the management and monitoring of interest-sensitive assets and liabilities. All relevant interest positions at the Group are analyzed here and used to derive an interest risk strategy. The purpose is to limit the impact of fluctuations in interest rates and interest rate risks on the results of operations and net assets. Appropriate recommendations for action for managing the interest position are resolved by an interest committee. The interest committee meets regularly and can also be convened on an ad hoc basis depending on the market situation.

Currency positions resulting from operations are closed by appropriate forward exchange contracts. Currency fluctuations from operating activities do not have any major effect on our operating result. Foreign exchange risks are monitored on a case-by-case basis within the framework of the currency management system.

As part of the EnBW-wide digital transformation, the treasury IT landscape including the payment transaction system and in-house bank has been replaced. As a result, we have achieved greater automation and more stable processes, and have also implemented new and amended governance rules.

We will continue to strive to maintain a balanced financing structure, solid financial profile and thus solid investment-grade ratings. We aim to secure our long-term access to the capital markets under competitive conditions by reaching a broader base of investors using sustainable financial instruments. Furthermore, we are digitalizing the underlying information and decision-making processes by creating a centralized data structure that can be managed and viewed using new media.

EnBW manages its financial profile using the key performance indicator debt repayment potential as the most important indicator of the company's creditworthiness. The debt repayment potential describes the retained cash flow in relation to the net debt and measures the ability of EnBW to repay its debts from its current earnings potential. This target level is reviewed on a regular basis to guarantee a solid investment-grade rating. A target value of at least 12% was valid up to now. As the result of a regular review and realignment with the latest requirements issued by the rating agencies, we are increasing this target value to at least 15%.

Further explanations of our financial terms can be found in the chapter "Strategy, goals and performance management system" on p. 32 ff.↗.

Financing strategy

We manage the financing needs of our operating activities separately from the Group's pension and nuclear obligations. 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. On this basis, we decide on further financing steps.

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 31 December 2023):

- Debt Issuance Program (DIP), via which bonds are issued: €~8.3 billion of €10.0 billion drawn
- Subordinated bonds: €~2.5 billion
- US private placement: equivalent value of US$~850 million (translation on the pricing day)
- Promissory notes: €0.5 billion
- Bonds in Swiss francs: CHF 410 million (€443 million as of 31 December 2023)
- Commercial paper (CP) program: €~2.0 billion undrawn
- Sustainability-linked syndicated credit facility: €1.5 billion undrawn, with a term until the end of June 2027 after utilizing the second extension option for an additional year
- Committed credit lines: €~0.6 billion of €~3.9 billion drawn
- Uncommitted credit lines, which can be utilized in agreement with our banks: €~0.1 billion of €~1.7 billion drawn
- Bank loans: Two loan agreements were concluded to finance the EnBW He Dreiht offshore wind farm. The bank loan of €600 million signed with the European Investment Bank in December 2022 was drawn in March 2023. In May 2023, a bank loan of €500 million was signed with a consortium of banks and a partial amount of €250 million was drawn. The loan is being guaranteed by the Danish export credit agency EIFO.
- In addition, subsidiaries have other financing activities in the form of bank loans and promissory notes.

Credit ratings

We aim to hold solid investment-grade ratings in order to:

- ensure unrestricted access to capital markets
- offer reliable opportunities for financing partners
- be regarded as a dependable business partner in our trading activities
- achieve the lowest-possible capital costs
- implement an appropriate number of investment projects and thereby maintain the future viability of the company

Development of credit ratings – rating/outlook

	2023	2022	2021	2020	2019
Moody's	**Baa1/stable**	Baa1/stable	Baa1/stable	A3/negative	A3/negative
Standard & Poor's (S&P)	**A-/stable**	A-/negative	A-/stable	A-/stable	A-/stable

As of 31 December 2023, the creditworthiness of EnBW was rated by the rating agencies Moody's and Standard & Poor's with "Baa1" and "A-," respectively. The rating outlook is stable in both cases.

In spring 2023, S&P raised the outlook to stable and gave recognition, in particular, to how EnBW had managed the financial impact of the war between Russia and Ukraine on its subsidiary VNG.

The EnBW credit rating from Moody's has been unchanged at Baa1/stable since 2021. The rating agency also recently published a detailed credit update for EnBW on 10 January 2024.

In general, both rating agencies have praised the company's solid financial basis and its balanced, integrated portfolio with a high proportion of regulated income. EnBW continues to have one of the strongest credit ratings among energy supply companies in Europe.

Assessment by the rating agencies

Moody's (10/01/2024)

- Leadership position as vertically integrated utility within Baden-Württemberg
- High share of regulated earnings under a reliable regulatory framework
- Growing share of renewable assets increases resource risk, but mostly backed by subsidies or power purchase agreements
- Track record of measures to defend credit quality and supportive stance of shareholders
- Large capital spending programme, which will constrain credit metrics and entails some execution risks
- Dynamic evolution of decarbonisation policies, which increases strain on conventional generation
- Coal phase-out target brought forward to 2028

Standard & Poor's (15/11/2023)

- Diversified and integrated position throughout the energy supply chain, which has demonstrated its resilience across different economic and geopolitical cycles
- High share of regulated EBITDA and expanding share of renewable generation provides stability and predictability to earnings and cash flow
- Investment strategy with focus on regulated infrastructure and renewable capacity deployment carries low execution risk and provides a long-term earnings base
- Financial policy, including shareholder support, geared toward protecting the "A-" rating
- Heavier carbon footprint in the short term than planned because of supply security issues, which nevertheless is profitable
- Increasing share of minority stakes as EnBW divests stakes in certain projects and subsidiaries carrying proportionally less debt, which increases cash flow leakage

Sustainability ratings

We maintain close contact with leading sustainability rating agencies and take their analyses and evaluations of the corporate strategy, company situation and business prospects into account in our decision-making process. In the selection of agencies, the main focus is placed on, among other things, transparent and plausible evaluations and efficient working processes between the rating agencies, companies, investors and sustainability analysts. We strive to continuously improve our ratings from recognized agencies in the area of sustainability. We thus aim to strengthen our position as a responsible and sustainable company and also want to address those financial investors whose investment decisions are based wholly or partially on sustainability criteria.

Further information on **sustainability ratings** can be found on our website.

Online ↗

Latest sustainability ratings

Result	A-/Leadership (2023)	B/Prime Status (2023)	A/Average (2023)	30.2/High Risk (2023)
Scale	A to D-	A+ to D-	AAA to CCC	0 to 40+
Relative position	"Thermal power generation" sector: EnBW achieved an above-average result.	"Multi utilities" sector: EnBW rated in the top 10%.	"Utilities" sector: EnBW has an average rating.	"Utilities" sector worldwide: EnBW achieved an average result.
Rating focus	Climate protection	Environmental, social and governance aspects	Environmental, social and governance aspects	Environmental, social and governance aspects

In 2023, we received good scores in important sustainability ratings within the energy sector. In the CDP Climate Change rating, we were able to improve our score in 2023 from B (Management) to A- (Leadership) and thus achieve an above-average result in comparison to the rest of the sector (scale: A/A- Leadership, B/B- Management, C/C- Awareness, D/D- Disclosure). In the Sustainalytics rating, our score was downgraded to 30.2 in December 2023. This meant that we have just fallen into the "High Risk" category (scale: 0–10 Negligible, 10–20 Low, 20–30 Medium, 30–40 High, 40+ Severe). The scores from the other sustainability ratings were at the same level as in the previous year.

Further information on the non-financial key performance indicators can be found on p. 87 ff.↗.

Capital market activities

We have sufficient and flexible access to the capital market at all times. The EnBW bonds continue 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.

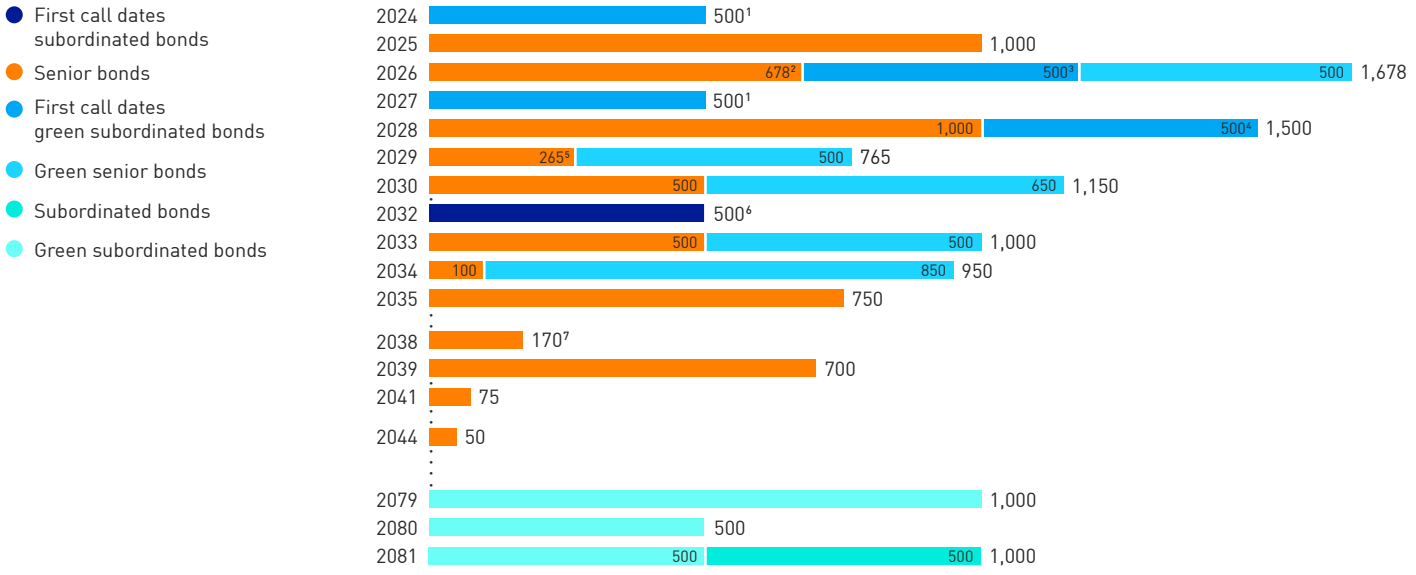
To implement our sustainable corporate strategy, we use green bonds as a sustainable financing instrument. As of 31 December 2023, we have issued green bonds with a total volume of €5 billion since 2018. We issued a green subordinated bond with a volume of €500 million on 23 January 2024. All of the green bonds are exclusively used to finance climate-friendly projects and fulfill the criteria for certification by the Climate Bonds Standard Board on behalf of the Climate Bonds Initiative.

On 17 January 2023, EnBW successfully issued two bonds with a total volume of €1.25 billion. The proceeds from the bonds will be used for implementing aspects of the company's strategy that focus on sustainability.

On 24 May 2023, EnBW issued two bonds with a total volume of 410 million Swiss francs. These bonds were issued to refinance a bond in Swiss francs from 2013 and also serve to finance and hedge EnBW's activities in Switzerland.

On 16 November 2023, EnBW issued two green corporate bonds with a total volume of €1.5 billion. These were already issued to prefinance investment in the 2024 financial year. The funds will be exclusively used to finance or refinance climate-friendly projects.

Maturity profile of EnBW bonds (as of 31 December 2023)
in € million



1 First call date: green subordinated bond maturing in 2079.
2 Includes CHF 165 million, converted into € as of 31/12/2023.
3 First call date: green subordinated bond maturing in 2080.
4 First call date: green subordinated bond maturing in 2081.
5 CHF 245 million, converted into € as of 31/12/2023.
6 First call date: subordinated bond maturing in 2081.
7 JPY 20 billion (swap in €), coupon before swap 5.460%.

Asset liability management model

We ensure the timely coverage of the pension and nuclear obligations using our asset liability management model.

The aim is to cover the Group's pension and nuclear provisions within an economically feasible period of time by means of appropriate financial assets. We ensure this using our cash flow-based asset liability management model. For this purpose, we determine the effects on the cash flow statement, income statement and balance sheet over the next 30 years. Alongside the anticipated return on financial assets, actuarial reports on pension provisions and sector-specific appraisals by external experts on costs for nuclear decommissioning and disposal are taken into account. The impact the utilization of the pension and nuclear obligations may have on the operating business is limited by taking funds from the financial assets. In the 2023 financial year, the impact on the cash flow from operating activities was around €375 million. As soon as the provisions are fully covered by the financial assets, no further funds will be taken from the cash flow from operating activities as part of the model. This model also allows simulations of various alternative scenarios.

As of 31 December 2023, the dedicated financial assets for pension and nuclear provisions totaled around €6.2 billion (previous year: €6.0 billion). Alongside the dedicated financial assets, there are plan assets to cover certain pension obligations with a market value (excluding the surplus cover from benefit entitlements) of €700.3 million as of 31 December 2023 (previous year: €714.2 million).

We strive to reach the defined investment targets with minimum risk. We also further optimized the risk/return profile of the financial assets in 2023. The main part of the dedicated financial assets is distributed as investments across nine asset classes. The financial assets are bundled in two master funds with the following investment targets:

- Risk-optimized investments, with a performance in line with market trends
- Consideration of the effects on the balance sheet and income statement
- Broad diversification of the asset classes
- Reduction of costs and simplification of administrative processes
- Consideration of sustainability aspects

The asset management department at EnBW is responsible for the sustainable alignment of medium- to long-term capital investments. It already began to rethink and sustainably realign the investment philosophy a number of years ago. This is why we take ESG criteria into account in our investment decisions. Our considerations in this regard thus focus on improving climate protection and good corporate management with respect to themes such as reputation, fraud and corruption.

As an institutional investor, we can already demonstrate today that a significant proportion of our investment is impact investment. The requirements for classification were included in the investment guidelines in accordance with article 8 of the EU Disclosure Regulation 2019/2088 for the majority of the capital investments. The solutions implemented as part of our digitalization strategy are also supporting us on this path. We have already been able, for example, to verifiably reduce CO_2 emissions and improve other ESG performance indicators in our portfolio. In the future, we plan to make our medium- to long-term capital investments CO_2 neutral – just like EnBW itself.

Net debt

As of 31 December 2023, net debt had risen by €856.1 million compared to the figure posted at the end of 2022. The increase in net financial debt in comparison to that reporting date was mainly due to the increase in collateral. The increase in net debt relating to pension and nuclear obligations resulted primarily from the decrease in the interest rate for the pension provisions.

Net debt

in € million [1]	31/12/2023	31/12/2022	Change in %
Cash and cash equivalents available to the operating business	-5,632.4	-4,626.1	21.8
Current financial assets available to the operating business	-2,941.7	-600.4	–
Long-term securities available to the operating business	-4.8	-2.4	100.0
Bonds	12,035.3	9,683.8	24.3
Liabilities to banks	3,157.4	1,969.4	60.3
Other financial liabilities	1,275.1	1,238.0	3.0
Lease liabilities	986.4	912.6	8.1
Valuation effects from interest-induced hedging transactions	-25.0	-51.0	-51.0
Restatement of 50% of the nominal amount of the subordinated bonds [2]	-1,250.0	-1,250.0	0.0
Other	-42.1	-59.7	-29.5
Net financial debt	**7,558.2**	**7,214.2**	**4.8**
Provisions for pensions and similar obligations [3]	6,030.6	5,426.0	11.1
Provisions relating to nuclear power	4,768.4	4,614.4	3.3
Receivables relating to nuclear obligations	-414.4	-372.9	11.1
Net pension and nuclear obligations	**10,384.6**	**9,667.5**	**7.4**
Long-term securities and loans to cover the pension and nuclear obligations [4]	-5,829.5	-5,642.1	3.3
Cash and cash equivalents to cover the pension and nuclear obligations	-171.7	-185.0	-7.2
Current financial assets to cover the pension and nuclear obligations	-90.2	-75.7	19.2
Surplus cover from benefit entitlements	-113.9	-106.0	7.5
Other	-34.4	-25.9	32.8
Dedicated financial assets	**-6,239.7**	**-6,034.7**	**3.4**
Net debt relating to pension and nuclear obligations	**4,144.9**	**3,632.8**	**14.1**
Net debt	**11,703.1**	**10,847.0**	**7.9**

1 The restricted liquid assets in the EEG account and Heat and Power Co-Generation Act (KWKG) account, which are only held in custody by the transmission grid operator, cannot be used for the operating business and are thus not allocated to net debt but rather to capital employed.
2 The structural characteristics of our subordinated bonds meet the criteria for half of each bond to be classified as equity, and half as debt, by the rating agencies Moody's and Standard & Poor's.
3 Less the market value of the plan assets (excluding the surplus cover from benefit entitlements) of €700.3 million (31/12/2022: €714.2 million).
4 Includes equity investments held as financial assets.

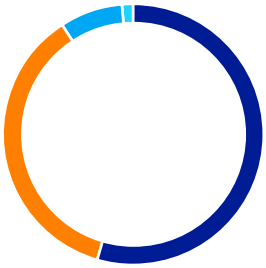
Investment analysis

Net cash investment

in € million [1]	2023	2022	Change in %
Investments in growth projects [2]	3,917.2	2,355.6	66.3
Investments in existing projects	985.4	797.8	23.5
Total investments	**4,902.6**	**3,153.5**	**55.5**
Divestitures	-13.3	-68.3	-80.5
Participation models [3]	-1,976.3	-152.6	–
Disposals of long-term loans	-18.0	-0.6	–
Other disposals and subsidies	-155.2	-164.3	-5.5
Total divestitures	**-2,162.8**	**-385.8**	**–**
Net cash investment	**2,739.8**	**2,767.7**	**-1.0**

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 €28.5 million in the reporting period (previous year: €0.0 million).
3 This includes capital reductions in non-controlling interests with short-term receivables to foreign companies. The latter was due to advance payments made in the previous year as a result of contractual regulations.

Investment by segment in % [1]



- 54.5 System Critical Infrastructure (2022: 60.5)
- 36.4 Sustainable Generation Infrastructure (2022: 27.3)
- 7.8 Smart Infrastructure for Customers (2022: 10.5)
- 1.3 Other (2022: 1.7)

1 The figures for the previous year have been restated.

Gross investment by the EnBW Group of €4,902.6 million in 2023 was around 56% higher than the level in the previous year (€3,153.5 million). 79.9% of overall gross investment was attributable to growth projects; the proportion of investment in existing facilities stood at 20.1%.

Gross investment in the **Smart Infrastructure for Customers** segment stood at €383.0 million and exceeded the level in the previous year (previous year restated: €331.4 million). As in the previous year, the investment in this segment was largely in the area of electromobility.

Gross investment in the **System Critical Infrastructure** segment of €2,671.9 million was significantly higher than the level in the previous year of €1,908.1 million (figure for previous year restated). This increase was primarily the result of higher investment by our subsidiary TransnetBW as part of the Network Development Plan Electricity and higher investment by our grid companies in the expansion of capacities and the renewal of the distribution grid.

There was gross investment of €1,783.5 million in the **Sustainable Generation Infrastructure** segment, which was a considerable increase in comparison to the previous year (€859.6 million).

Investments in Sustainable Generation Infrastructure

in %	2023	2022
Renewable Energies	24.0	20.0
Thermal Generation and Trading	12.4	7.3
Sustainable Generation Infrastructure	**36.4**	**27.3**

A total of €1,174.2 million of this investment was in the Renewable Energies area, compared to €631.7 million in the previous year. This significant increase was mostly attributable to the offshore wind sector due to the investment in our EnBW He Dreiht wind farm in the German North Sea. Investment in the Thermal Generation and Trading area stood at €609.3 million and was thus considerably higher than the level in the previous year of €227.9 million. This was largely due to our investment in fuel switch projects for converting three of our thermal power plants in Baden-Württemberg from coal to gas (also making them hydrogen-ready in the process).

Other gross investment increased slightly from €54.4 million in the previous year to €64.2 million and mainly involved capital contributions at other investments and investment in the central IT system.

Total **divestitures** were significantly higher overall than in the previous year. The item "divestitures" was lower than the level in the previous year when it included the impact of our exit from the offshore wind power business in the USA. Under participation models, divestitures mainly comprised the sale of our minority shareholdings in our subsidiary TransnetBW and our EnBW He Dreiht offshore wind farm. In the previous year, they mainly comprised the sale of minority shares in our solar portfolio. Other disposals were slightly below the level in the previous year.

We also take climate goals into account in our investment decisions. Significant investment projects undergo additional steps to evaluate their sustainability. This additional information flows into the approval processes carried out by the investment committee and Board of Management (p. 36).

Liquidity analysis

Condensed cash flow statement

in € million	2023	2022	Change in %
Cash flow from operating activities	**899.7**	1,804.8	-50.1
Cash flow from investing activities	**-5,797.0**	-2,734.9	112.0
Cash flow from financing activities	**4,419.3**	734.6	–
Net change in cash and cash equivalents	**-478.0**	**-195.5**	**144.5**
Change in cash and cash equivalents due to changes in the consolidated companies	**6.4**	0.3	–
Net foreign exchange difference and other changes in cash and cash equivalents[1]	**-8.9**	17.7	–
Change in cash and cash equivalents	**-480.5**	**-177.5**	**–**

1 The figures for the previous year have been restated due to the aggregation of line items.

Despite a substantial increase in cash-relevant EBITDA in comparison to the previous year, cash flow from operating activities was significantly lower than in 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 a sharp decrease in trade payables in comparison to the same period of the previous year when there was an significant increase in trade payables. In contrast, lower cash outflows in inventories in comparison to the previous year had a positive impact on the net current assets. Higher income tax paid in comparison to the previous year also had a negative impact on the cash flow from operating activities in the reporting period.

Cash flow from investing activities returned a significantly higher outflow of cash in the reporting period compared to the previous year. The main reason for this development was higher capital expenditure on property, plant and equipment, especially in the System Critical Infrastructure and Sustainable Generation Infrastructure segments. Cash flow from investing activities was also impacted by higher net investment as part of the portfolio management of securities and financial investments.

Cash flow from financing activities returned a considerably higher cash inflow than in the previous year. This was primarily due to the higher net increase in financial liabilities as part of liquidity management, mainly as a result of issuing bonds, and an increase in cash received for changes in ownership interest without loss of control. In the reporting year, this was attributable to investments by partners in the EnBW He Dreiht offshore wind farm and the transmission grid operator TransnetBW. In the previous year, the company sold shares in a solar portfolio. An increase in cash inflow for alterations of capital in non-controlling interests also had an impact.

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 [1]	2023	2022	Change in %
EBITDA	**5,738.3**	**4,473.2**	**28.3**
Change in provisions excluding obligations from emission allowances	**203.9**	36.2	–
Non-operating valuation effects from derivatives [2]	**-481.5**	908.1	–
Other non-cash-relevant expenses/income [2]	**735.2**	-1,478.3	–
Income tax paid	**-906.7**	-227.9	–
Interest and dividends received	**529.8**	427.0	24.1
Interest paid for financing activities	**-421.2**	-318.8	32.1
Dedicated financial assets contribution	**104.9**	-92.2	–
Funds from operations (FFO)	**5,502.7**	**3,727.3**	**47.6**
Declared dividends	**-671.3**	-510.8	31.4
Retained cash flow	**4,831.5**	**3,216.5**	**50.2**

1 The figures for the previous year have been restated.
2 The non-operating valuation effects from derivatives contain effects on the cash flow statement of €-108.2 million (previous year: €226.6 million) in the item "Other non-cash-relevant expenses/income". Other non-cash-relevant expenses/income included in the calculation of the retained cash flow were adjusted by the corresponding amount.

Valuation effects due to temporary fluctuations in the value of certain derivatives are recognized in non-operating EBITDA and are included in the item EBITDA in the cash flow statement. These effects cannot be taken into account when calculating the operational earnings power of EnBW. Funds from operations (FFO) and retained cash flow have thus been adjusted for the described effects since the reporting for the first half of 2023. These effects totaled €–373.3 million in the reporting period. The figures for the previous year have been restated accordingly. The effect in in the comparative period was €681.5 million.

Funds from operations (FFO) were higher than in the previous year, mainly as a result of higher EBITDA. There was also a higher balance of non-cash-relevant expenses and income. This was primarily caused by valuation effects on inventories and their associated derivatives in the reporting year and higher reversals of impairment losses on property, plant and equipment in the previous year. In the reporting year, these developments were offset above all by the non-operating valuation effects from derivatives and higher income tax paid.

Higher declared dividends in comparison to the previous year reduced the retained cash flow. Nevertheless, the retained cash flow was still considerably higher than in the previous year because of the positive contribution of the FFO. 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.

Adjusted working capital

in € million [1]	2023	2022	Change in %
Change in assets and liabilities from operating activities	**-4,762.8**	**-1,224.9**	**–**
Change in liquid assets in the EEG and the KWKG account	**2,098.5**	-724.2	–
Non-operating valuation effects from derivatives	**373.3**	-681.5	–
Adjusted change in operating assets and liabilities	**-2,291.0**	**-2,630.6**	**-12.9**
Net balance of inventories and obligations from emission allowances	**(-398.9)**	(-2,624.8)	(-84.8)
Net balance of trade receivables and payables, services not yet invoiced and payments on account that have been made and received	**(-1,053.7)**	(1,868.0)	–
Net balance of other assets and liabilities	**(-838.4)**	(-1,873.8)	(-55.3)

1 The table shows the reconciliation of the cash-relevant change in adjusted working capital.

Alongside the retained cash flow and net investment, the change in working capital has a major influence on net debt. As the liquid assets in the EEG account and Heat and Power Co-Generation Act (KWKG) account are only held in custody by the transmission grid operators, they are not included in the calculation of net debt. Therefore, the adjusted working capital is corrected for any changes in the liquid assets in the EEG account and KWKG account.

The change in liquid assets for received and deposited collateral relating to non-operating valuation effects which arise due to temporary fluctuations in the value of derivatives is not a component of the retained cash flow but nevertheless has an influence on net debt. The adjusted working capital is corrected to properly take the change in liquid assets into account.

TOP

Debt repayment potential

in € million [1]	2023	2022	Change in %
Retained cash flow	4,831.5	3,216.5	50.2
Net debt	11,703.1	10,847.0	7.9
Debt repayment potential in %	**41.3**	**29.7**	**–**

1 The figures for the previous year have been restated.

An adjustment to the comparative figure for retained cash flow in the previous year of €681.5 million to take account of corrections for valuation effects on certain derivatives led to an adjustment in the debt repayment potential as of 31 December 2022. As a result, this performance indicator increased for the previous year by 6.3 percentage points.

In the reporting year, the retained cash flow was higher than the forecasted range of €2.5 billion to €3.0 billion, mainly due to the increase in cash-relevant EBITDA. As a result of the increase in retained cash flow, the debt repayment potential was substantially higher than the target value of between 18.0% and 21.0% in the 2023 reporting year.

Net assets

Condensed balance sheet

in € million	31/12/2023	31/12/2022	Change in %
Non-current assets	39,512.0	36,984.0	6.8
Current assets	25,206.9	32,511.9	-22.5
Assets held for sale	0.0	7.8	-100.0
Assets	**64,718.9**	**69,503.7**	**-6.9**
Equity	15,853.0	12,769.3	24.1
Non-current liabilities	30,712.7	28,064.5	9.4
Current liabilities	18,153.2	28,669.9	-36.7
Equity and liabilities	**64,718.9**	**69,503.7**	**-6.9**

As of 31 December 2023, total assets were €4,784.8 million lower than the figure at the end of the previous year. Non-current assets increased by €2,528.0 million between the two reporting dates, which was mainly due to higher capital expenditure on property, plant and equipment. This was offset to some extent by the decrease in other non-current assets caused by a fall in derivatives. Current assets decreased by €7,305.0 million. This was also primarily due to the decrease in derivatives as a result of the slight fall in prices on the energy trading markets. There was also a decrease in inventories. In contrast, there was an increase in financial assets.

As of 31 December 2023, equity increased by €3,083.7 million as a result of the high Group net profit. This was offset to some extent by the fall in other comprehensive income, which was mainly due to the reduction in the cash flow hedge reserve. The equity ratio increased from 18.4% to 24.5% between the two reporting dates. Non-current liabilities rose by €2,648.2 million. This was primarily attributable to the issuing of bonds. Non-current provisions also increased, largely caused by the fall in the discount rate for the pension provisions from 3.7% at the end of 2022 to 3.15% as of the reporting date in 2023. This was offset to some extent by the decrease in derivatives. Current liabilities fell by €10,516.7 million. This was mainly due to a significant decrease in derivatives and collateral received. In addition, there was a substantial decrease in trade payables in comparison to the previous year.

TOP

Value spread

Value spread is calculated by deducting the weighted average cost of capital before tax (WACC) from ROCE. The cost of capital before tax represents the minimum return on average capital employed (calculated on the basis of the respective quarterly figures for the reporting year and the year-end figure for the previous year). A positive value spread is achieved when the return on capital employed (ROCE) exceeds the cost of capital. The cost of capital is determined based on the weighted average cost of equity and debt together. The value of equity is based here on a market valuation and thus deviates from the value recognized in the balance sheet. The cost of equity is based on the return of a risk-free investment and a company-specific risk premium. The latter is calculated as the difference between a risk-free investment and the return for the overall market, weighted with a company-specific business field risk. The terms according to which the EnBW Group can raise long-term debt are used to determine the cost of debt.

Value spread by segment 2023

	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Generation Infrastructure	Other/ Consolidation	Total
Adjusted EBIT including the adjusted investment result[1] in € million	76.0	1,148.0	3,950.3	-360.8	4,813.5
Average capital employed in € million	1,802.6	13,336.7	11,571.0	599.7	27,310.0
ROCE in %	**4.2**	**8.6**	**34.1**	**–**	**17.6**
Weighted average cost of capital before tax in %	10.0	6.3	8.3	–	7.4
Value spread in %	**-5.8**	**2.3**	**25.8**	**–**	**10.2**

1 Amended adjusted investment result of €94.6 million, adjusted for taxes (investment result/0.703 - investment result; with 0.703 = 1 - tax rate 29.7%).

Value spread by segment 2022[1]

	Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Generation Infrastructure	Other/ Consolidation	Total
Adjusted EBIT including the adjusted investment result[2] in € million	345.0	432.4	1,960.8	-263.4	2,474.8
Average capital employed in € million	1,514.3	12,410.9	8,178.4	586.9	22,690.5
ROCE in %	**22.8**	**3.5**	**24.0**	**–**	**10.9**
Weighted average cost of capital before tax in %	9.2	6.2	7.3	–	6.8
Value spread in %	**13.6**	**-2.7**	**16.7**	**–**	**4.1**

1 The figures for the previous year have been restated.
2 Amended adjusted investment result of €86.4 million, adjusted for taxes (investment result/0.703 - investment result; with 0.703 = 1 - tax rate 29.7%).

There are various factors that influence value spread. ROCE and value spread depend not only on the development of the operating result but above all on the capital employed. Large-scale investments tend to significantly increase the capital employed in the early years, while the effect on income that boosts value, however, only filters through over a lengthier period of time, often long after the investments were initially made. This is especially true of capital expenditure on property, plant and equipment relating to the construction of new power plants, which do not have any positive effect on the operating result of the Group until after they are commissioned. Capital expenditure on power plants, on the other hand, is already taken into account in the capital employed during the construction phase. In a comparison of individual years, the development of ROCE and value spread is, to a certain extent, cyclical in nature, depending on the investment volume.

In the 2023 financial year, the value spread rose in comparison to the previous year to 10.2% and thus exceeded our expectations for the 2023 financial year (forecast for 2023: 2.5% to 3.5%). The reason for this development was the increase in ROCE. The considerable increase in adjusted EBIT including the adjusted investment result in comparison to the previous year more than compensated for the increase in capital employed, whereby ROCE increased by 6.7 percentage points to 17.6%. The risk-adjusted weighted average cost of capital rose in comparison to the previous year to 7.4%.

Smart Infrastructure for Customers: The value spread in the Smart Infrastructure for Customers segment decreased by 19.4 percentage points in 2023 compared to 2022. This was due to the significant decrease in adjusted EBIT including the adjusted investment result. At the same time, the average capital employed was higher than the level in the previous year, which was mainly attributable to investment in the charging infrastructure.

System Critical Infrastructure: The value spread in the System Critical Infrastructure segment increased by 5.0 percentage points in comparison to 2022. The adjusted EBIT including the adjusted investment result was €715.6 million higher than the figure in the previous year. This compensated for the effects of the increase in capital employed due to investment above all in the transmission and distribution grids and the slight increase in risk-adjusted weighted average cost of capital to 6.3% in comparison to the previous year.

Sustainable Generation Infrastructure: The value spread in the Sustainable Generation Infrastructure segment was 25.8%, which was 9.1 percentage points higher than the value in the previous year. Adjusted EBIT including the adjusted investment result increased to €4.0 billion. The increase in capital employed was mainly due to the decrease in liabilities from stock market securities.

The **remuneration report** is available as a separate report on our website.

Online

Performance indicators relevant to remuneration

The performance indicators relevant to remuneration are derived as follows:

EBT relevant to remuneration

in € million [1]	2023	2022
EBT	**2,840.8**	**2,395.4**
Less outstanding items for derivatives allocated under trading within EBITDA	**-481.5**	908.1
Less the measurement of financial assets and outstanding items for derivatives allocated under trading within the financial result	**-16.1**	199.5
Less changes to the inflation rate and discount rate for nuclear provisions	**-202.9**	-418.0
EBT relevant to remuneration	**2,140.3**	**3,085.0**

1 The figures for the previous year have been restated.

Funds from operations (FFO) relevant to remuneration

in € million [1]	2023	2022
Funds from operations (FFO)	**5,502.7**	**3,727.3**
Less income tax paid	**906.7**	227.9
Funds from operations (FFO) relevant to remuneration	**6,409.4**	**3,955.2**

1 The figures for the previous year have been restated.

Intangible assets and property, plant and equipment (net) relevant to remuneration

in € million	2023	2022
Intangible assets	**3,166.2**	3,218.2
Property, plant and equipment	**25,429.8**	22,705.3
Investment properties	**38.3**	40.1
Investment cost subsidies	**-9.5**	-8.8
Construction cost subsidies	**-1,020.0**	-991.8
Intangible assets and property, plant and equipment (net)	**27,604.8**	**24,963.0**
Average intangible assets and property, plant and equipment (net) [1]	**25,876.6**	**23,520.3**

1 Average calculation based on the relevant quarterly values for the reporting year and the year-end value for the previous year.

ROA (return on assets) relevant to remuneration

in € million [1]	2023	2022
EBIT	**3,341.3**	**2,141.2**
Less outstanding items for derivatives allocated under trading within EBITDA	**-481.5**	908.1
Less changes to the inflation rate and discount rate for nuclear provisions	**-64.1**	169.9
EBIT relevant to remuneration	**2,795.7**	**3,219.2**
Average intangible assets and property, plant and equipment (net)	**25,876.6**	23,520.3
ROA (return on assets) relevant to remuneration in %	**10.8**	**13.7**

1 The figures for the previous year have been restated.

Other performance indicators relevant to remuneration

	2023	2022
Expansion of renewable energies (electrical output in MW)	**283.8**	344.6
LTIF for companies controlled by the Group	**2.4**	2.6

The **LTIF** is explained in the LTIF section and the **expansion of renewable energies** is explained in the section on the environmental goal dimension in this chapter.

The remuneration of the members of the Board of Management is described in full in the **remuneration report,** which is available as a separate report at www.enbw.com/corporate-governance.

Customers and society goal dimension

Reputation

A strong reputation is an important factor for the sustainable success of a company. The good social reputation of a company reflects the trust placed by the general public and relevant stakeholders in the competent and responsible actions of that company.

We assume our responsibilities for the economy and society and aspire to be a driver of the energy transition. In the process, we want to gain social acceptance and improve our reputation. A good reputation signals the willingness of society and its different stakeholder groups to cooperate with and invest in the company.

We aim to continuously improve our reputation. A stakeholder team comprising representatives from all important areas of the company communicates and maintains regular dialog with relevant stakeholder groups both directly and indirectly (p. 42 ff.).

Reputation Index

Reputation is measured using the key performance indicator Reputation Index using a standardized survey that is carried out by an external market research institute. It is measured in accordance with the requirements of the EnBW Group standard for market research and surveys (p. 33 f.).

TOP

Key performance indicator

	2023	2022	Change in %	Forecast 2023
Reputation Index	55	58	-5.2	57 – 60

The Reputation Index fell in 2023 by three index points in comparison to the previous year. It is thus once again at the same level as in 2021, although below our forecasted range for 2023 of between 57 and 60 points. The reason for this was that values decreased in the decision-maker target groups. There was also a slight adjustment to the composition of one of the decision-maker target groups: The level of awareness for EnBW in this group is lower. We assume that the index was negatively influenced by the effects experienced throughout the industry, whereby there was an increase in reputation indices across the sector in 2022, possibly due to the war between Russia and Ukraine. This effect fell away in the reporting year.

More details on reputational risks can be found in the "Report on opportunities and risks" on p. 135.

Customer proximity

You can find our **company website** here.

Online

In 2023, **digitalization** became even more important for our end-customer business both with respect to electricity and gas sales and also e-mobility. The main focus shifted here from customer acquisition via digital channels to digital customer communication and increasingly covers the provision of digital services for existing customers. 50% of EnBW customers and 78% of Yello customers are now happy to receive their contractual documents and invoices in paperless form. This figure thus increased by around 6% for EnBW customers in comparison to the previous year (previous year: 47%). Also, 88% of EnBW customers (excluding the basic supply of energy and reserve supplies) and 97% of Yello customers who concluded a new contract via digital and digitally supported channels have selected paperless customer interaction. Our advances in the area of digitalization are also being demonstrated by the increase in use of our "zuhause+" app. It helps our customers to monitor their energy consumption and keep an eye on the resulting costs. More than 220,000 customers have now installed the app on their mobile devices. Yello customers have been able to use the new Yello app since May 2023. It has replaced the previous kWhapp and has now been installed on more than 390,000 customer devices.

Our aim is to rigorously anchor **sustainability** in our sales processes (e.g., with respect to our products and services). In doing so, we hope to generate economic, ecological and social value and strengthen our market position even further. Our initial focus has been placed above all on the area of climate protection. We were able to implement further initiatives in 2023 and we present the most important ones in the section "Selected activities" (p. 89 ff.).

Customer Satisfaction Index

Our customers lie at the heart of our philosophy and actions. We aim to build long-term relationships with our customers by offering an intelligent combination of products and services, developing new product worlds, communicating transparently and delivering the highest-quality service possible. Maintaining a high level of customer satisfaction is key. The Customer Satisfaction Indices for EnBW and Yello are compiled from customer surveys carried out by an external provider (p. 33 f.).

TOP

Key performance indicator

	2023	2022	Change in %	Forecast 2023
Customer Satisfaction Index for EnBW/Yello	130/161	139/166	-6.5/-3.0	127 – 139/ 150 – 161

The Customer Satisfaction Index for EnBW fell by 6.5% to a value of 130 in 2023. The satisfaction of EnBW retail customers was thus at a good level and within our forecasted range. A good level is reached when 50% of those surveyed indicate that overall they are particularly satisfied with EnBW. This is the case from 114 points upwards. The fall in the Customer Satisfaction Index in 2023 was due to an especially challenging market environment. A tense economic climate with persistently high inflation has caused retail customers to also have an increasingly negative view of energy suppliers and their pricing policies. We initiated various different measures to improve customer satisfaction. These included developing a sustainable range of products and pushing forward the expansion of our digital and analog range of services. We offer special services, such as the EnBW zuhause+ app, to help our customers properly understand and reduce their energy costs. We believe that constant investment in our national marketing campaign with a focus on our Germany-wide e-mobility services is having an additional positive effect on the image of the company with respect to innovation and sustainability.

The satisfaction of Yello customers fell slightly in 2023 to an index value of 161 but still remains at an outstanding level despite the difficult market conditions. An outstanding level is reached when 70% of those surveyed indicate that overall they are particularly satisfied with Yello. This is the case from 159 points upwards. To improve customer satisfaction, Yello implemented a series of measures in 2023 to improve the quality of its digital and analog service processes.

The **customer test panel "Power-helden"** gives us feedback on our products, services and performance.

Online

Another tool for evaluating and improving customer satisfaction is the **customer test panel "Power-helden"** (power heroes). It is currently made up of a group of around 1,500 people of all ages and social and educational backgrounds who source their energy from the EnBW Group or third-party providers. We use questionnaires, user tests and interviews to gain insights that can flow into the optimization, creation and monitoring of products and processes across the Group.

Further details are available in the "Report on opportunities and risks" on p. 135.

Selected activities

2023 was mainly characterized by the **implementation of regulatory requirements** resulting from the energy crisis. The German government passed numerous laws and ordinances in this area, such as the December emergency relief payment, the electricity and gas price brake, the amendment to the energy price brake ("Repair Act"), the reduction in value added tax for gas and district heating and various allocations (p. 59). There were also comprehensive changes to the Act on Metering Point Operation (Messstellenbetriebsgesetz, MsbG) that also necessitated adjustments to our processes and systems. Thanks to our high degree of digitalization and agile working practices, we were able to implement all of the legal requirements on time. This helped to reduce the financial burden on our customers by around €100 million in 2023.

We provide **information on how to save energy** on our website.

Online

In response to the **challenges faced on the energy market** due to the war between Russia and Ukraine, EnBW and Yello supported their customers by offering a **gas saving bonus** for the 2022/2023 heating period. Customers who reduced their gas consumption by 10% between October 2022 and April 2023 were rewarded with a bonus of €100 in the second quarter of 2023. This bonus helped customers cushion increasing costs and gave them an extra incentive to save energy.

Information on developments with respect to **sustainability at Yello** can be found here.

Online

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 is accounted for by green energy now stands at 100% (EnBW excluding the basic supply of energy). 63% of the total customer base are now supplied with green electricity by both brands. Taking offsetting measures into account, Yello and EnBW were able to save a total of around 1,380,000 t of CO_2 emissions in 2023.

To help people in Germany make the **switch over to sustainable heating technology,** EnBW has been working together with Vaillant, one of the leading suppliers of heat pumps, since May 2023. We can thus offer potential customers individual advice and also a range of heat pumps from Vaillant specialist partners, together with an appropriate heat pump tariff from EnBW. EnBW is using this partnership to expand its range of products and services for customers in the rapidly growing market for sustainable heating technology.

Further information on **electromobility** is available online.

Online

EnBW is the market leader among both charging infrastructure operators and electromobility providers in Germany via its subsidiary EnBW mobility+. It operates the biggest quick-charging network in the country and is continuing to expand it at a rapid pace. In 2023, EnBW mobility+ became the first company to reach the milestone of 1,000 quick-charging stations nationwide. In order to **expand the charging infrastructure** for electromobility, we are not only investing in our own stations but also in stations that we are jointly developing with our partners. We once again concluded more long-term, nationwide cooperation agreements with renowned companies in 2023 and were able to place more than one new quick-charging station per working day into operation.

More information on the **EnBW Wallbox** for charging e-cars at home can be found under the following link.

Online

Alongside smaller charging stations, we are also installing **large quick-charging parks** with eight or more high-capacity charging points and quick-charging parks with solar roofs. EnBW mobility+ completed the construction of more than one large charging park per month on average in 2023 and opened 15 new roofed charging parks across Germany, including what is now our second-largest quick-charging park to date with 32 high-capacity charging points in Großburgwedel, north of Hannover. For the first time, we have also equipped this charging park with other services for vehicles, such as vacuum cleaners. At the quick-charging park in Chemnitz, we were able to install the first charging points with an output of 400 kW in the second half of 2023. By the end of 2023, there were more than 4,000 quick-charging points installed that can be used simultaneously. EnBW mobility+ significantly increased its annual investment in e-mobility in the 2023 financial year from more than €100 million to around €200 million.

In September 2023, EnBW presented its mobility and charging services on the Open Space at IAA MOBILITY in Munich. Among other things, it presented the **"NextLevel charging park" concept** and revealed how the sustainable charging parks of the future will look. This concept not only focuses on environmental goals but also on, for example, improving inclusion by offering low-barrier charging points.

EnBW mobility+ **won the German Sustainability Award** for the "Traffic infrastructure" sector.

Online

In our role as an **electromobility provider,** we are able to offer our customers access to more than 500,000 charging points in 17 European countries via the EnBW HyperNetwork and the EnBW mobility+ range of products and services (as of 31 December 2023). The EnBW mobility+ app had been downloaded more than 2.3 million times in total by the end of 2023.

In fall 2023, we launched the **"Charging power for everyone" digital campaign** with the aim of attracting young women to the EnBW brand. We want to demonstrate in our campaign – which includes a song performed by the well-known female singer Elif and other artists – that women are not only engaged in the supposedly male-dominated realm of electromobility but are also a real force for pushing forward sustainability.

Our subsidiary **SENEC,** based in Leipzig, is a specialist in equipping customers so that they are able to meet their own energy needs with solar electricity. EnBW and SENEC have been offering a complete integrated home energy management system called "Cloud pro" since June 2023 that allows homeowners to directly sell their surplus electricity at the green electricity tariffs offered by EnBW. In November 2023, SENEC made the decision to replace a large number of existing storage systems with a new battery technology based on lithium iron phosphate (LFP). This decision was taken in response to a total of six incidents with SENEC storage systems based on lithium ion batteries in 2022 and 2023. SENEC is due to begin replacing the affected modules free of charge in summer 2024.

Information on our **contracting services** and reference projects is available on this website, which was newly designed in 2023.

Online

In the area of **contracting,** we provide industry, the real estate sector and public clients with sustainable and efficient energy infrastructure implemented directly at the customer's site. We create customized energy concepts for the provision of energy with either no CO_2 emissions or only low emissions – a service that is now in ever greater demand. In 2023, we concluded a 15-year contracting agreement with an international corporation. We will build a new and highly efficient energy and media supply at the customer's site in Lower Saxony that is projected to reduce CO_2 emissions by 80%. The energy concept involves an extensive plan to convert the heat supply from natural gas combustion to heat pumps and biomass, marking an important step toward decarbonization and a climate-neutral supply of useful energy in the future. We also modernized the **heating supply** for a care home with neighboring apartments for senior citizens and for a nursery for a local authority customer in Baden-Württemberg. At least 50% of the annual heating requirements of around 2,000 MWh will be covered by a local heating system powered by renewable energy sources. The new plant comprises a wood pellet boiler system and two combined heat and power plants. These measures will be enhanced by a smart energy and billing management system. The modernization work should reduce CO_2 emissions by around 520 t per year. An important component of our long-term contracting agreements is the ongoing monitoring and optimization of plant operation. We enhance applications and business processes as part of our digitalization approach that automatically collect, link and evaluate data from the plant. To support the heating transition, we are working together with the municipal sales department to prepare bids for contracting projects to realize heating concepts and local heating networks.

Information on the **Local Authority Energy Day 2023** can be found in the special edition of our KommPlus magazine.

Online

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 with our participating interests and other public utilities. Local authorities are also able to invest in Netze BW using our **"EnBW connects"** participation model. A total of 214 local authorities have currently 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. The German Buildings Energy Act that obligates cities and local authorities to develop a heating plan came into force on 1 January 2024. Against this background, we already started to expand our range of consultancy services in 2023 to include **local authority heating planning** to specifically identify areas of potential and develop customized heating concepts that can actually exploit this potential. In this context, we have been offering a quick check service to local authorities since February 2024 to determine their need for heating grids. We also intend to develop an efficient solution for the simplified heating planning process that is required by law for municipalities with less than 10,000 residents. In addition, Netze BW is gradually offering additional digital services for local energy management to its partners via its established local authority platform. Since 2023 this includes, for example, a digital carbon footprint tool that local

authorities can use to create a transparent presentation of their greenhouse gas emissions. As a result, we can provide comprehensive support to local authorities during all of their decision-making processes dealing with the theme of heating and push forward the implementation of the energy transition at a local level (p. 60).

The main telecommunications activities at EnBW AG are bundled together in **EnBW Telekommunikation** with its subsidiaries NetCom BW and Plusnet. Expanding the fiber-optic network continues to be a main focus of the corporate strategy of **NetCom BW.** Aside from carrying out any necessary expansion of the broadband network together with cities, local authorities and municipal associations, NetCom BW is working more intensely on the implementation of self-financed projects – it concluded many new cooperation agreements with local authorities in 2023. While the pre-marketing process is still being carried out in some cities and municipalities, NetCom BW has now been able to successfully conclude this process with 28 local authorities. The construction work for these expansion projects is now being gradually completed. Work is also continuing on the integration of the network operations and end-customer business of the company Telekommunikation Lindau that started in 2022. In the Lindau region, the company recently created the necessary conditions for offering NetCom BW products on the network. In addition, the FTTC product portfolio has been expanded to include broadband with up to 150 Mbit/s, making the product range even more attractive. In October 2023, the customer sales department started work on migrating customers from Telekommunikation Lindau to the NetCom BW network. Furthermore, NetCom BW also launched its new brand identity in October 2023 with the goal of positioning itself even more strongly as an independent telecommunications network operator within the EnBW Group.

A newly designed website that forms part of a brand relaunch provides an overview of the portfolio of telecommunication and Internet services offered by **NetCom BW.**

Online ↗

Plusnet continued to push forward the expansion of the fiber-optic network in selected undersupplied industrial areas in 2023 and is financing this expansion itself. The company, based in Cologne, has now grown its sales area for the expansion of the fiber-optic network to around 40 local authorities in North Rhine-Westphalia, Hesse, Rhineland-Palatinate and Bavaria. By 1 August 2023, Plusnet had expanded its fiber-optic product range in the respective expansion areas to include Internet and telephony products for retail customers. Furthermore, Plusnet continued its transformation towards becoming a fiber-optic-based business and continued the development of its own Netbridge network platform. This platform enables Plusnet to integrate fiber-optic networks from various providers across Germany into one virtual network and open them up to all market participants (open access). In view of the fragmented fiber-optic landscape in Germany, this is an important lever for facilitating sustainable business practices as it allows the network load to be managed efficiently. As part of its realignment towards fiber-optic networks, Plusnet also launched a new brand identity in October 2023 and is positioning itself as a provider of modern communication solutions for large customers and local authorities.

Plusnet has a new brand identity. Further information on its products and services can be found here.

Online ↗

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 takes on responsibility for the general planning and for the supply and future operation of the technical infrastructure, including the integration of, e.g., mobility concepts, digital parking space management and smart services. In 2023, we were able to generate 20 new contracts covering around 2,300 residential units and commercial districts with total commercial space of around 119 hectares. Three projects are in the commissioning phase, another three are being implemented and in the first quarter of 2024 we finished the preparations for starting construction on a further three projects. As a member of "IBA'27 Friends," we are supporting the International Building Exhibition 2027 in Stuttgart. Our concepts will provide important answers to the key question being posed at the exhibition: "What will the future of construction look like?" We are developing and planning sustainable and cross-sector supply concepts within four IBA projects that will provide space for over 5,000 people to live and work, including the "Backnang West" district covering an area of 17 ha, which itself will be home to around 650 residential units and approx. 1,500 workplaces.

We present our **services in the area of sustainable districts and our latest projects** here.

Online ↗

We are supporting the **International Building Exhibition IBA'27** in Stuttgart.

Online ↗

Supply reliability

As an energy company and in cooperation with our distribution grid companies, we are tasked with guaranteeing a secure and reliable supply of electricity and gas to our customers. We face additional challenges now, and will do in the future, due to the increasing amount of decentralized generation, with volatile feed-ins as a result of changing weather conditions, and the electrification of road traffic. Our grid companies are preparing their distribution grids so that they can handle this decentralized energy world. To this end, they are expanding the existing conventional infrastructure to integrate smart grid technologies so that they can better monitor and manage the generation, distribution and storage of energy. This work includes, for example, the further expansion of local transformer stations with remote monitoring and control systems to reduce the time it takes to find faults, as well as the introduction of an app-based malfunction alert system. In addition, the launch and implementation of an AI-based modernization strategy will enable the targeted replacement and repair of the various plants. This system uses artificial intelligence to improve the detection of material damage and avoidable breakdowns before they even occur. As a result, the grid companies will be able to reduce unscheduled downtimes and thus improve supply reliability.

Further information on the **expansion of the grids at Netze BW.**

Online ↗

Our grid companies are responsible for the secure and reliable operation of the distribution grids. The processes are managed by the respective grid control center, which is also responsible for coordinating any work to rectify faults in the grid in its region. As part of the investment and maintenance programs, our grid companies are upgrading their grids and expanding them according to demand. Netze BW continued its comprehensive expansion and renewal program for its distribution grids that started in 2022. These measures will help to improve supply reliability. The overall annual budget for the realization of all investment and maintenance measures is approved by the Board of Management of the EnBW Group. The measures are carried out over one or multiple years and are realized independently by our grid companies. Some of the investment budget is used for the gradual expansion of smart grids. The growing use of smart grid technology allows us, on the one hand, to optimize our investment processes and, on the other hand, to improve the security of supply in our grids and with it the satisfaction of our customers and our reputation. Besides the reliability and security of supply, the efficiency of the measures is also taken into account when making investment decisions.

SAIDI

We record all unscheduled interruptions to supply at our distribution grid operators for electricity and gas. This data flows into the "System Average Interruption Duration Index" (SAIDI) for each grid. It states the average duration of supply interruptions per end consumer per year (p. 33 f.↗).

TOP Key performance indicator

	2023	2022	Change in %	Forecast 2023
SAIDI electricity in min./year[1]	19.3	16.6	16.3	15 – 20

1 SAIDI electricity includes all unscheduled interruptions to supply that last more than three minutes for the end consumer.

We managed to keep the figure for the supply reliability of the electricity distribution grid within the forecasted range in the 2023 financial year despite a significant event of the category "force majeure." The increase of 2.7 minutes was mainly due to an exceptional storm in Baden-Württemberg on 11 July 2023. The massive damage it left behind caused disruptions in more than 100 local authorities in our supply area. In contrast, the increasing digitalization and gradual modernization of our distribution grids has had a positive impact on supply reliability.

At our gas distribution grid operators, the average duration of unplanned supply interruptions per end consumer (SAIDI Gas) was below 2 min./a in the 2023 financial year. There was a change to the segment allocation for the calculation of SAIDI Gas in 2023. The adjusted figure for 2022 was below 6 min./a.

Environment goal dimension

Our Group environmental targets – which are integrated into the Group strategy – relate to the expansion of renewable energies and to making our contribution to climate protection. These targets are measured using the key performance indicators "installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE" and CO_2 intensity. Our Group environmental goals are supplemented by activities and targets for the implementation of environmental themes in the EnBW Sustainability Agenda (p. 28 f.). Alongside EnBW AG, the main subsidiaries dealing with environmental issues include Energiedienst (ED), Stadtwerke Düsseldorf (SWD), Pražská energetika (PRE) and Netze BW. These and other subsidiaries have an environmental management system certified according to DIN EN ISO 14001 or validated according to EMAS, as does EnBW AG. We have thus created the prerequisites for ensuring that environmental requirements are systematically and continuously taken into account. The system is used to manage guidelines and regulations, define and monitor environmental targets and establish the necessary testing processes. The consistent implementation and further development of the environmental management system ensures that any material negative impacts on the environment can be avoided as well as possible. Risks generally exist in the area of environmental protection due to the operation of power and heat generation plants and infrastructure facilities and the possible consequences this could have for the air, water, soil and nature. We counter these risks using organizational and procedural measures to reduce their impact, as well as through emergency planning and hazard prevention measures.

You will find a detailed presentation of the **EnBW Sustainability Agenda** and our **climate-neutrality strategy** here.

Online

You can download the **Environmental Declaration of Netze BW** here.

Online

Expansion of renewable energies

Installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE

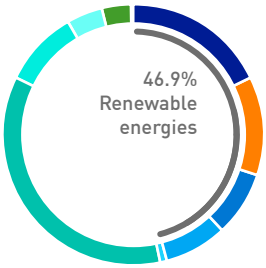
TOP

Key performance indicator

	2023	2022	Change in %	Forecast 2023
Installed output of renewable energies (RE) in GW and the share of the generation capacity accounted for by RE in %	5.7/46.9	5.4/41.7	5.6/12.5	5.8 – 6.0/ 47.0 – 48.0

In 2023, the installed output of renewable energies increased by 300 MW to 5.7 GW. The share of the generation capacity accounted for by RE increased to 46.9%. This meant that these key performance indicators were almost within their forecasted ranges. We placed several new solar parks and especially wind farms into operation in Germany. We also added new output in the areas of photovoltaics and onshore wind farms in France. We have thus continued to push forward the expansion of electricity generation from renewable energy sources in accordance with our strategy. Expanding renewable energies to between 6.5 GW and 7.5 GW by 2025 is one of the key measures in the EnBW Sustainability Agenda (p. 28 f.). Our thermal output decreased as planned due to the final decommissioning of our Neckarwestheim II nuclear power plant in April 2023.

Installed output
in %



- 17.9 Wind (2022: 15.4)
- 12.4 Pumped storage (with natural flow of water) (2022: 11.6)
- 8.0 Run-of-river (2022: 7.7)
- 7.8 Photovoltaics (2022: 6.4)
- 0.7 Other renewable energies (2022: 0.6)
- 35.5 Brown and hard coal (2022: 33.2)
- 9.5 Gas (2022: 8.9)
- 4.5 Pumped storage (2022: 4.2)
- 3.7 Other thermal power plants (2022: 12.0)

Generation capacity[1] (as of 31/12)

Net electrical output[2] in MW	2023	2022
Renewable Energies	**5,728**	**5,444**
Run-of-river power plants	982	1,008
Storage/pumped storage power plants using the natural flow of water[2]	1,517	1,513
Onshore wind	1,212	1,031
Offshore wind	976	976
Photovoltaics	956	832
Other renewable energies	85	84
Thermal power plants[3]	**6,498**	**7,622**
Brown coal	875	875
Hard coal	3,467	3,467
Gas	1,161	1,166
Other thermal power plants[4]	450	1,569
Pumped storage power plants that do not use the natural flow of water[2]	545	545
Installed output[5]	**12,226**	**13,066**
of which renewable in %	46.9	41.7
of which low CO_2 in %[6]	14.0	13.1

1 Generation capacity includes long-term procurement agreements and partly owned power plants.
2 Output values irrespective of marketing channel, for storage: generation capacity.
3 Including pumped storage power plants that do not use the natural flow of water.
4 Following the final decommissioning of Neckarwestheim II on 15/04/2023, the nuclear power plants are reported under "other thermal power plants" from the Integrated Annual Report 2023 onwards and the figures for the previous year have been restated in accordance with the current presentation. The output reported for Neckarwestheim II under "other thermal power plants" in 2023 is 0 MW. The output reported for nuclear power in the previous year is 1,223 MW.
5 In addition, power plants with an installed output of 1,706 MW were registered for decommissioning. However, they were classified as system-relevant by the Federal Network Agency and TransnetBW and are thus used by TransnetBW as reserve grid capacity.
6 Excluding renewable energies; only gas power plants and storage power plants that do not use the natural flow of water.

Own generation[1,2] by primary energy source

in GWh	2023	2022
Renewable Energies	**12,680**	**11,744**
Run-of-river power plants	5,211	4,676
Storage/pumped storage power plants using the natural flow of water	676	687
Onshore wind	2,425	1,927
Offshore wind	3,218	3,331
Photovoltaics	869	825
Other renewable energies	281	298
Thermal power plants[3]	**13,872**	**30,340**
Brown coal	3,501	6,348
Hard coal	4,584	10,606
Gas	2,767	2,764
Other thermal power plants[4]	2,126	9,541
Pumped storage power plants that do not use the natural flow of water	894	1,081
Own generation	**26,552**	**42,084**
of which renewable in %	47.8	27.9
of which low CO_2 in %[5]	13.8	9.1

1 Own electricity generation includes long-term procurement agreements and partly owned power plants.
2 Generation volumes are reported without the volumes for positive redispatch that cannot be controlled by EnBW. Own generation including positive redispatch in 2023 was 29,013 GWh.
3 Including pumped storage power plants that do not use the natural flow of water.
4 Following the final decommissioning of Neckarwestheim II on 15/04/2023, the nuclear power plants are reported under "other thermal power plants" from the Integrated Annual Report 2023 onwards and the figures for the previous year have been restated in accordance with the current presentation. The generated volume of electricity from nuclear power reported under "other thermal power plants" in 2023 is 1,975 GWh (previous year: 9,390 GWh).
5 Excluding renewable energies; only gas power plants and storage power plants that do not use the natural flow of water.

In 2023, own generation of electricity was considerably below the previous year's level at 26.6 TWh. This development was primarily attributable to the significantly lower deployment of our thermal generation plants as a consequence of prices on the market and the final decommissioning of our Neckarwestheim II nuclear power plant in April 2023. Renewable energy generation increased in comparison to the previous year. This was due to the addition of new power plants and better wind conditions, as well as higher generation at the hydropower plants in comparison to the previous year, which was a year characterized by low water levels. The proportion of own generation from renewable energy sources thus increased substantially in comparison to the previous year to 47.8%.

CO_2 intensity/climate protection

CO_2 intensity

TOP

Key performance indicator

	2023	2022	Change in %	Forecast 2023
CO_2 intensity in g/kWh [1]	347	491	-29.3	368 – 442 (-25% to -10%)

1 The calculation for this performance indicator does not include nuclear generation and the share of positive redispatch that cannot be controlled by EnBW. In the reporting year, this performance indicator includes generation volumes of 24,576 GWh (previous year: 32,693 GWh). The amount of CO_2 emissions from controllable electricity generation included in the performance indicator is 8,536 thousand t (previous year: 16,038 thousand t). If the share of positive redispatch that cannot be controlled by EnBW is taken into account, CO_2 intensity would be 393 g/kWh for the reporting year (previous year: 508 g/kWh). The CO_2 intensity including nuclear generation for the reporting year was 366 g/kWh (previous year: 401 g/kWh). We publish a five-year comparison of the performance indicators in our "Multi-year overview" on p. 310.

The CO_2 intensity of our own electricity generation fell in comparison to the previous year by 29.3% to 347 g/kWh and thus slightly exceeded the forecast revised in the third quarter for a decrease of between 10% and 25%. In comparison to 2022, generation from renewable energy sources increased due to favorable wind conditions and higher generation from hydropower. In addition, our coal power plants were deployed to a much lower extent due to prices on the market. Another factor was the shutdown of our Heilbronn hard coal power plant 7 due to damage. The CO_2 intensity was 36.6% lower in 2023 in comparison to the reference year of 2018 (548 g/kWh). We were thus still within our target corridor in 2023 for a reduction in CO_2 intensity of between 380 and 440 g/kWh by 2025.

We also refer you to the details provided in the "Report on opportunities and risks" (p. 135 f.↗).

Carbon footprint of EnBW

EnBW calculates and reports on its carbon footprint in accordance with the international Greenhouse Gas Protocol standard and takes into account Scope 1, Scope 2 and Scope 3 emissions.

The Scope 1 emissions from burning fossil fuels are calculated based on the guidelines issued within the European Emission Trading System (EU ETS). These guidelines are mainly based on the EU regulation on the monitoring and reporting of greenhouse gas emissions (in short: Monitoring Regulation, MRR) (EU Regulation 2018/2066). The emission factors are taken from the current "Guidance for preparing monitoring plans and emission reports for stationary installations" from the German Emissions Trading Authority (DEHSt) and publications issued by the German Environment Agency (UBA). The CO_2 equivalents of the greenhouse gases are calculated based on their global warming potential GWP100 according to the Sixth Assessment Report (AR6) from the IPCC.

We measure market-based Scope 2 emissions using specific emission factors according to the designation of the electricity and heating supplies to our plants and buildings. In order to determine location-based Scope 2 emissions, we apply the energy designations used in the respective country, such as the Bundesmix (federal mix) of the general electricity supply according to section 42 German Energy Industry Act.

We are currently working with a general emissions factor of 29 g CO_2eq/kWh for the upstream Scope 3 emissions of our gas sales and the gas consumption at our gas power plants based on information from the German Environment Agency and the DBI Gas and Environmental Technology Institute. We calculate the upstream CO_2 emissions for procured fuel used for the generation of power and heating in our power plants using GEMIS factors. The Scope 3 emissions for our flights and train trips are based on data we receive from the booking agents and the German rail company Deutsche Bahn. For the gas combustion of our customers, we use an emissions factor of 201 g CO_2/kWh natural gas in accordance with Annex 2 of the Emissions Reporting Ordinance 2030.

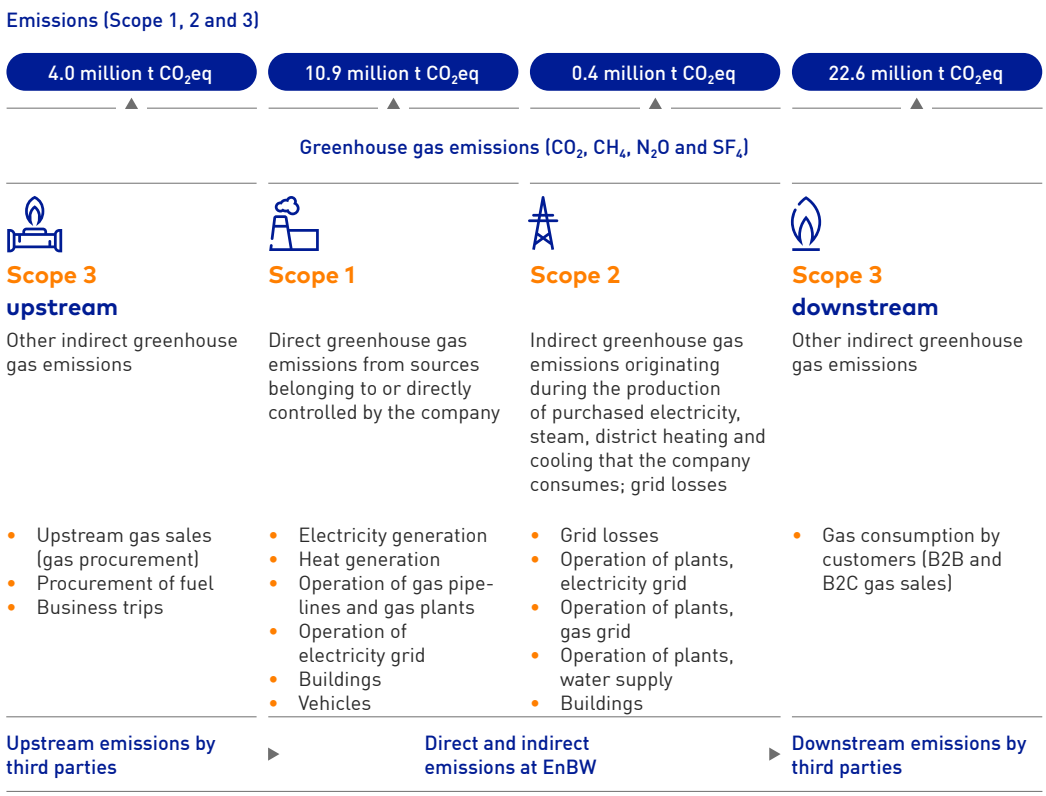
EnBW also provides information on the performance indicator "CO_2 emissions avoided" when reporting its carbon footprint. A key goal of the energy transition is to protect the climate by reducing greenhouse gas emissions and using energy efficiently. "CO_2 emissions avoided" give another measure of EnBW's contribution to the achievement of this target. The activities carried out by EnBW in this area – both internally and also with our customers – support the implementation of the energy transition.

Direct CO_2 emissions are determined mainly by the deployment of our power plants. The volume of electricity generated by our thermal generation plants fell in comparison to the previous year and led to a corresponding decrease in direct CO_2 emissions from 17.5 million t CO_2eq in 2022 to 10.9 million t CO_2eq in 2023. Lower indirect CO_2 emissions from grid losses were the main reason for the decrease in Scope 2 CO_2 emissions from 0.5 million t CO_2eq to 0.4 million t CO_2eq. Scope 3 CO_2 emissions are mainly influenced by the gas consumption of our customers and thus by gas sales in the B2C and B2B sectors. As a result of lower gas sales (p. 69↗), Scope 3 emissions fell significantly in the 2023 financial year from 37.7 million t CO_2eq in the previous year to 26.6 million t CO_2eq. The increase in CO_2 emissions avoided due to the rise in electricity generation from renewable energies was almost completely compensated for by the fall in biogas activities so that CO_2 emissions avoided of 9.9 million t CO_2eq in 2023 were almost at the same level as in the previous year.

Carbon footprint [1]

in thousand t CO_2eq/in %	2023	2022
Direct CO_2 emissions (Scope 1)	**10,910/100.0**	**17,545/100.0**
Electricity generation – not controllable [2]	2,545/23.3	2,906/16.6
Electricity generation – controllable [3]	7,431/68.1	13,465/76.7
Heat generation	676/6.2	773/4.4
Operation of gas pipelines/plants [4,5]	188/1.7	328/1.9
Operation of electricity grid	31/0.3	32/0.2
Buildings	9/<0.1	11/<0.1
Vehicles	28/0.3	28/0.2
Other [6]	1/<0.1	2/<0.1
Indirect CO_2 emissions (Scope 2) [7]	**421/100.0**	**516/100.0**
Grid losses	364/86.2	449/87.0
Operation of plants, electricity grid	11/2.6	7/1.3
Operation of plants, gas grid [5]	25/6.0	40/7.7
Buildings	10/2.4	11/2.1
Operation of plants, data and telecommunications network	7/1.6	6/1.2
Other [8]	5/1.2	4/0.8
Indirect CO_2 emissions (Scope 3)	**26,576/100.0**	**37,675/100.0**
Upstream indirect CO_2 emissions (Scope 3)	**3,973/14.9**	**5,894/15.6**
Upstream gas sales	3,320/12.5	4,729/12.6
Procurement of fuel for power and heat generation plants	643/2.4	1,151/3.1
Upstream gas consumption, gas plants	6/<0.1	11/<0.1
Business trips	3/<0.1	3/<0.1
Downstream indirect CO_2 emissions (Scope 3)	**22,603/85.1**	**31,781/84.4**
Gas consumption by customers	22,603/85.1	31,781/84.4
CO_2 emissions avoided	**9,874**	**9,984**
CO_2 intensity of business journeys and in traveling CO_2/km	**155**	**163**

1 The figures may not add up due to rounding differences.
2 Includes the CO_2 emissions for electricity generation from redispatch and reserve power plant deployment.
3 CO_2 emissions from electricity generation excluding redispatch and reserve power plant deployment.
4 The figures for the previous year have been restated.
5 The methane emissions from the gas grids included here were calculated using the method developed by the Oil and Gas Methane Partnership (OGMP).
6 Includes non-automotive fuel consumption (e.g., emergency generators).
7 Market-based method. According to the location-based method, the Scope 2 emissions were 921 thousand t CO_2eq in 2022 and 872 thousand t CO_2eq in 2023.
8 Contains Scope 2 emissions from electricity consumption at water plants and own/operational consumption at charging infrastructure for e-mobility.



SO_2 intensity, NO_x intensity and waste water intensity

Alongside the two key performance indicators "installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE" and CO_2 intensity, we have also defined further environmental targets for reducing harmful emissions and minimizing the volumes of cooling water and waste water. Our target is to reduce the SO_2 intensity and NO_x intensity of our own electricity generation by 2025 by between 15% and 25% and by between 10% and 20%, respectively, in comparison to the reference year 2018. In terms of our waste water intensity, we have set ourselves a reduction target of between 20% and 30% by 2025 in comparison to the reference year 2018. The calculation of the three key performance indicators SO_2 intensity, NO_x intensity and waste water intensity is carried out using emissions of SO_2 and NO_x and the volumes of cooling water and waste water discharged from our own electricity generation at the EnBW Group together with the volume of electricity generated across the Group without the contribution made by the nuclear power plants. The performance indicators are calculated as the ratio between the emissions or volumes of waste water and the generated volume of electricity. They thus describe the specific amount of SO_2 or NO_x released or the cooling water and waste water discharged per kilowatt hour.

SO_2 intensity, NO_x intensity and waste water intensity

	2023	2022	Change in %	Target for 2025 [4]
SO_2 intensity in mg/kWh [1]	204	259	-21.2	-15% to -25%
NO_x intensity in mg/kWh [1]	224	286	-21.7	-10% to -20%
Waste water intensity in l/kWh [1, 2, 3]	28.0	30.2	-7.3	-20% to -30%

1 The calculation for this performance indicator does not include nuclear generation and the share of positive redispatch that cannot be controlled by EnBW.
2 Waste water is the total of the amounts of cooling and waste water that are discharged into surface water.
3 Procurement contracts are not included in the calculation of the performance indicator.
4 Based on the reference year 2018.

The SO_2 intensity and NO_x intensity of our own electricity generation decreased in comparison to the previous year by 21.2% to 204 mg/kWh and by 21.7% to 224 mg/kWh, respectively. The waste water intensity of our own electricity generation fell in comparison to 2022 by 7.3% to 28.0 l/kWh. The reduction in these three performance indicators in comparison to the previous year is also due to the increase in generation from renewable energy sources and the lower deployment of our coal power plants as described previously. SO_2 intensity, NO_x intensity and waste water intensity in 2023 were 30.9%, 33.7% and 9.0% lower in comparison to the reference year 2018, respectively (295 mg/kWh, 337mg/kWh and 30.8 l/kWh, respectively). In 2023, we were thus within our target corridors for the reductions in SO_2 intensity, NO_x intensity and waste water intensity by 2025 in comparison to 2018.

Energy consumption

Energy consumption

	2023	2022
Total final energy consumption in GWh [1]	1,146	1,072
Proportion of renewable energies in final energy consumption in % [2]	20.6	20.2
Energy consumption of buildings per employee in kWh per employee [3, 4]	5,795	7,308

1 Includes final energy consumption of production excluding electricity and heat generation losses and including pump energy, energy consumption of grid facilities (electricity, gas and water) excluding grid losses, energy consumption of buildings and vehicles.
2 For electricity consumption for which the proportion of renewable energies is unknown, the Bundesmix (federal mix) label for electricity in the respective reporting year is assumed. For fuels, a proportion of 5% bioethanol is generally assumed.
3 The figure for the previous year has been restated.
4 Calculations based on assumptions and estimates. Only those companies with relevant consumption data have been taken into account.

Total final energy consumption includes the consumption of final energy for our business activities. The uptake of energy from renewable sources increased so that the proportion of renewable energies in final energy consumption rose from 20.2% to 20.6% in comparison to the previous year.

You can find numerous other **environmental performance indicators** on our website.

Online ↗

The energy consumption of our buildings covers the energy required for heating rooms and providing hot water and electricity. The temporary reduction in room temperature to 19 °C in accordance with the "German Ordinance on Securing the Energy Supply through Rapid Impact Measures" (EnSikuMaV), which was compulsory until the end of the heating period in spring 2023, and other measures to save energy in the short term led to a decrease in the energy consumption of buildings per employee from 7,308 kWh in 2022 to 5,795 kWh in 2023.

Selected activities

Energy-efficient real estate management: We aim to reduce **CO_2 emissions** and improve energy efficiency in our real estate portfolio. The portfolio managed by EnBW Real Estate GmbH comprises about 130 properties with approximately 300 buildings and a net floor space of around 690,000 m². EnBW Real Estate, the subsidiary responsible for most of the real estate activities of EnBW AG, has been set the target of reducing the specific energy consumption of existing buildings by 10% by 2025 and by 20% by 2030, based on the reference year of 2018. We had achieved a reduction of around 24% at the benchmark sites by the end of 2023 and thus exceeded the target. The temporary reduction in room temperature to 19 °C in accordance with the "German Ordinance on Securing the Energy Supply through Rapid Impact Measures" (EnSikuMaV) and other measures to save energy in the short term meant we were able to exceed the target in 2023. Following the expiry of the measures in the EnSikuMaV, the room temperature was reset to the normal level and we are thus continuing to pursue our existing target unchanged.

A program of measures to achieve a "climate-neutral real estate portfolio" was launched in 2023. The program covers around 250 buildings and the following measures: approximately 30 energy-focused building refurbishments, including a switch to heat pumps in some cases, the expansion of more than 90 PV plants, a comprehensive switch to LED lighting, digital metering systems and the implementation of a building automation platform. Reducing CO_2 emissions and energy consumption are also a priority in the renovation of our sites. The preliminary planning stage for the energy-focused refurbishment of the buildings in Mühlacker and Altbach has been concluded and we are now focusing on the in-depth architectural and energy-efficiency plans. Based on the preliminary plans for the Mühlacker site, we will achieve an EG 40 EE standard (energy-efficient building level 40 with renewable energies) and reduce CO_2 emissions by around 90%. Our two new construction projects in Oberndorf and Osterburken will also comply with the EG 40 EE standard and in combination with a PV plant will generate more energy than they consume themselves, thus making an important contribution to improving energy efficiency in our real estate portfolio. The installation of the first PV plants in Esslingen, Biberach and Veringenstadt with an output of around 900 kWp has already been completed and they will be connected to the grid in 2024. Work to replace lighting and meters is also underway.

To ensure that we achieve our strategic target of a climate-neutral real estate portfolio, we are implementing and installing **monitoring and control systems** by the end of 2024 that will provide us with transparent and relevant information that can be used in the form of performance indicators to give us flexible control of these sites and processes.

Climate-friendly internal mobility: In order to make a contribution to climate-friendly mobility, we are planning to replace all of the conventional-drive fleet vehicles used for work purposes by employees at EnBW AG with **fully electric vehicles** by 2025. There were still 134 conventional-drive vehicles at the end of 2022 but this figure had fallen to 65 by the end of 2023. At the end of 2023, we thus already had 154 fully electric vehicles in the EnBW AG fleet. Our subsidiary PRE has also introduced a program to switch its fleet over to electric vehicles to help it achieve its goal of climate neutrality. It plans to increase the proportion of electric vehicles in its fleet of passenger vehicles to 37% by 2025, 50% by 2030 and 100% by 2035. In 2023, PRE replaced ten combustion motor cars in the fleet with ten newly purchased electric cars. This means that 28.4% of the vehicle fleet at PRE is currently fully electric. ED Netze is also working on the full electrification of all vehicles that are technically suitable by 2030.

Further information on how we use our **solar parks** to **protect species** can be found here.

Online ↗

Biodiversity: To promote biodiversity and help preserve species, we carried out a number of activities in 2023. We started the **close-to-nature design** of the EnBW site in Biberach and completed the first phase by the end of the year. The close-to-nature design of the entire company premises will be realized in 2024. As part of the "UnternehmensNatur" (CompanyNature) project funded by the Federal State of Baden-Württemberg, we discussed and exchanged ideas on this transformation with NABU and the Baden-Württemberg Land Agency. Our main focus was to assess how we can use biodiversity measures to create valuable habitats for various endangered species of flora and fauna on our site. EnBW will use the redesign of the Biberach site as a template for further close-to-nature design projects across the entire Group.

The holistic measures developed to improve biodiversity and climate resilience at the site in Biberach were used as the basis for the development of so-called **biodiversity modules** in 2023. These modules comprise independent packages of measures for promoting a particular aspect of biodiversity and will make it quicker and easier to implement biodiversity measures at other EnBW sites in the future. Lessons learned from the development of these modules were also taken into account in 2023 in the planning processes for various new constructions. This included, for example, green facades, green roofs, water retention systems, and nesting and breeding sites. The aim is to turn these new sites into close-to-nature working environments for employees from the outset and create the best possible conditions for animals and plants.

As part of the **blooming transformer station** project, our subsidiary Netze BW has been using the free spaces around transformer stations to promote biodiversity and help to preserve species since 2019. The aim is to create natural flower meadows at every transformer station that will become home to a large number of different species usually found in the natural environment at the respective sites. A further ten transformer stations were transformed into "buzzing transformer stations" using seeds typical to the region in 2023 and are now providing a rich habitat for more than 3,000 species of butterflies, 500 species of wild bees and thousands of other species of insects native to Germany. These habitats boast up to 60 different plant species per 10 m², providing food, protection and a place of retreat for native insects. Netze BW has already created flower meadows at 49 sites covering a total area of almost 122,000 m² and is thus actively contributing to the conservation and proliferation of flower pollinating insects.

Another project to promote biodiversity was carried out by ODR in the second half of 2023 in cooperation with the Ostalb-Heidenheim Farmers' Association. Colorful flower borders covering a distance of over 5 km have been planted along the edge of fields. These **biotopes** will provide food and shelter to beetles, butterflies and bees and thus support the pollination of our wild plants and arable crops.

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

Online

As part of the **"Insect-friendly green areas"** project, SWD developed measures in 2023 to allow for the insect-friendly greening of spaces. These included the obligatory inspection of all outdoor spaces to determine whether they could be greened for the benefit of insects, as well as the opportunity for employees to use one hour of their working week to voluntarily care for and maintain green areas.

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. This funding program was jointly launched by the Baden-Württemberg State Institute for the Environment, Measurements and Nature Conservation (LUBW) and EnBW. It is part of the project "The economy and business for nature," which is a component of the initiative "Active for biological diversity" that has been developed by the state government of Baden-Württemberg. It still remains the only conservation program from a company nationwide that not only funds the protection of one single species but two whole groups of species across the state. We funded nine project applications in 2023 and have thus successfully realized 149 projects in total over the past 13 years. The measures have helped to improve the habitats of native amphibians and reptiles so that their populations can start to grow again in the medium to long term.

-81%

reduction in paper usage in 2023 compared to the reference year of 2019.

Reduction in paper consumption: We have set ourselves the goal of significantly reducing paper consumption and want to reduce the volume of paper procured centrally at EnBW AG by up to 90% by 2025, based on the reference year of 2019. Mainly as a result of our digitalization initiatives, we were able to reduce our internal paper consumption by around 71 t and customer-driven paper consumption by around 540 t in 2023, which represents a reduction in paper consumption of 81% since 2019. Alongside the higher number of employees working from home, the further digitalization of our business processes at EnBW has also contributed to the reduction in paper consumption. We have launched a program to provide tailored consulting services for different areas of the company so that we can further reduce paper consumption in those processes with specific requirements. We also provide workshops in which digital alternatives can be identified or used for training purposes where necessary to make further savings in paper consumption.

Further environmental data, including on the **Global Reporting Initiative,** is available on the Internet.

Online

Alongside the key performance indicators in the environment goal dimension, other environmental targets are defined in the EnBW Sustainability Agenda (p. 28 f.). We utilize a broad range of additional environmental performance indicators for measuring, managing and reporting on the other results of our environmentally relevant activities. Selected activities and performance indicators are described in this section. Other **environmental performance indicators** can be found in our "Multi-year overview" (p. 312) and on our website.

Employees goal dimension

Using our HR strategy 2025 "People as the main focus," which is based on the EnBW 2025 corporate strategy (p. 26 ff.), we want to create the conditions that give the people at EnBW and our company itself the opportunity for growth, development, a future and thus success. The key tasks of HR are recruiting employees for the company, managing their development and accompanying them through the transformation, encouraging loyalty to the company among employees and maintaining and fostering their motivation, satisfaction and employability.

Employee engagement

People Engagement Index (PEI)

We use an employee survey (EnMAB) to measure the People Engagement Index (PEI) as a key performance indicator. The PEI allows us to draw conclusions not only on the satisfaction of employees, but also on how motivated and engaged they are in their work (p. 34).

TOP

Key performance indicator

	2023	2022	Change in %	Forecast 2023
People Engagement Index (PEI) [1]	82	81	1.2	> 78

1 Variations in the group of consolidated companies (all companies with more than 100 employees are considered [except ITOs]).

The employee survey EnMAB was held from 9 October to 27 October 2023. The survey achieved its highest coverage to date, being answered by around 23,400 employees, including trainees and students. On the basis of this survey, the PEI reached 82 points in 2023 on a scale of 0 to 100. It stood at 81 points in the previous year. According to an assessment by the service provider, an international benchmark index compiled using similar questions at numerous companies from various different sectors stood at 74 points in 2023. Our figures remained very high in comparison with other companies in 2023 in the "Engagement" and "Well-being and respect" categories.

We also refer you to the details provided in the "Report on opportunities and risks" (p. 136).

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 part of the strategic theme "Culture of sustainability" in the EnBW Sustainability Agenda.

The HR strategy focuses here on six strategic themes: People-centered transformation, Employer brand & recruiting, Leadership & skills, Qualification@EnBW, Diversity, Equity & Inclusion as well as HR processes, services & digitalization. We have allocated the following activities to these six themes:

People-centered transformation: In the **"BestWork"** initiative, we are reshaping our working world and making it fit for the future. Our aim here is to improve both the quality of our work and the satisfaction of employees in equal measure. 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. In the second stage of "BestWork" under the motto "CooperationSpaces," we are optimizing workspaces and technical equipment for the form of cooperation selected by each team and for hybrid collaboration. Employees are due to move into their newly designed workspaces by the end of the first half of 2024. In 2023, we already introduced new digital services to support location-independent cooperation in teams. Another component of this initiative was added in 2023 with **"BestWork Health."** It follows

a holistic approach to health with the aim of promoting the physical and psychological health of employees within the redesign of working processes and environments and thus helping to create the best possible quality of work and life for employees. In this context, we will collate existing health measures and develop further health-related measures. The first event held within "BestWork Health" was Mental Health Day in October 2023, which provided information on preventative measures in the area of mental health.

Our corporate video for the **employer campaign "A job transition for the energy transition"** can be found here.

Online

Further information on the new **employer campaign** can also be viewed online.

Online

Employer brand & recruiting: EnBW is on track for growth. This will require us to secure new talent as we need enough specialists to cover the energy transition and the associated expansion of corresponding business fields. Against this background, EnBW launched a new employer campaign under the motto "A job transition for the energy transition" in 2023. The aim is to maintain awareness for and improve the attractiveness of EnBW as an employer nationwide and mobilize specialists for the energy transition. We posted advertising images and a corporate video on social and online media across Germany for this purpose. A matching website also helped to support the visibility and reach of the campaign. We are continuously improving and updating our recruitment processes. For example, we have optimized our competence-based selection process for specialists and managers and made our processes for the recruitment of apprentices and students more efficient by introducing online tests.

Leadership & skills: The growth of our company is closely linked to the personal development of every individual person. Our digital learning and development platform **"LernWerk"** enables employees to organize their own personal development independently. Themes such as sustainability, grid technology training, health management, data analytics and artificial intelligence can be found in so-called knowledge hubs. "LernWerk" not only includes content to be consumed digitally but also promotes active application of content via, among other things, physical exchange formats. For example, managers can register for the "Leadership Development Journey" (LDJ) program for which new modules are constantly being developed. Since the beginning of the LDJ, 70% of all managers at EnBW AG have already participated in at least one LDJ module. One of the new modules added in 2023 was "New to leadership." It is aimed at all managers and designed to help them strengthen their understanding of their leadership role to give them the mindset and skill set that they need to carry it out.

Qualification@EnBW: On 31 December 2023, there was a total of 1,212 trainees and students working in the EnBW Group. Our 20-month EnBW Corporate Trainee Program started in April 2023 and will also help to tackle the skills shortage. In addition, 152 apprentices and 73 dual students joined EnBW and Netze BW in September 2023. Our young talent also includes the participants on the career integration program, who have started their technical apprenticeships after successfully completing their entry qualifications. EnBW has been increasingly utilizing virtual reality (VR) and augmented reality (AR) for **training** and is cooperating with the start-up Holo-Light (p. 51) in this area. Trainees are able to use smart glasses and VR software to prepare themselves to deal with, for example, hazardous situations, without actually being exposed to any real danger when they are in the virtual world. EnBW is also utilizing gamification approaches in its training, such as in the "E-Quiziert" learning app.

Further information on the **Dual Vocational Training Preparation Program** can be found here.

Online

We have been offering a multistage **career integration program** to refugees and migrants since 2016, in which 38 people are currently serving a technical apprenticeship. 46 participants have now completed their training as either an industrial mechanic, electronics technician, plant mechanic or mechatronics engineer and 43 of them have been awarded a permanent contract. As part of this program, Netze BW participated for the first time in the Dual Vocational Training Preparation Program (AVdual) initiated by the Baden-Württemberg Training Alliance in 2023. AVdual aims to provide more young people with the opportunity to start their apprenticeship immediately after leaving school. Two of the eight participants in the AVdual program have been accepted on the career integration program so far. 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.

Diversity, Equity & Inclusion (DE&I): Diversity is a fixed component of our corporate culture and a key element of the HR strategy. Against the background of demographic change and the associated shortage of qualified workers, we not only need new recruitment strategies but also diverse and resilient teams. In this context, we took the first steps in the implementation of our new Strategy for Diversity, Equity & Inclusion, in short the **DE&I strategy,** in 2023. In particular, this strategy will help make us more attractive as an employer, increase the innovative strength of EnBW and further promote the themes of sustainability and competitiveness.

Proportion of female managers at EnBW AG

in %	2023	2022
First level below the Board of Management	15.4	11.1
Second level below the Board of Management	24.7	23.1

The Board of Management has set the goal of further increasing the **proportion of women** at both management levels below the Board of Management in the period from 1 January 2021 to 31 December 2025. At both the first level (top management) and second level (upper management), the proportion of women should increase to at least 20%. This target was not yet achieved in the 2023 financial year in top management. Nevertheless, it was possible to increase the proportion of women from 11.1% in the previous year to 15.4% in 2023. In upper management, the proportion of women increased from 23.1% in the previous year to 24.7% in 2023, which meant that the set target was achieved at the second level. We will continue to develop measures based on the HR strategy to achieve and stabilize the set targets.

HR processes, services & digitalization: We launched the "EnABLE HR" project with the aim of establishing a future-oriented process and IT-system environment for human resources work. We will use **intelligent system solutions** to relieve employees in the HR department of the burden of administrative, manual and repetitive tasks, for example, by offering a comprehensive range of self-service solutions. In 2023, the focus was placed on preparing and implementing the new IT systems, which was carried out step by step in the individual project units. In addition, workshops were held for various specialist departments to generate feedback and ideas based on the practical use of the systems. These will be used to help shape the newly designed IT solutions.

Selected activities at our key subsidiaries: In order to strengthen its attractiveness as an employer in a difficult job market, **Energiedienst (ED)** continued its initiatives in 2023. It established a new learning platform with the aid of the new software Workday and expanded its range of training courses for employees. The comprehensive transformation program "HR transformED," which has now been largely concluded, was another focus for the company. The main emphasis of the HR work at **Pražská energetika (PRE)** was the expansion and digitalization of HR processes. In addition, a trainee program has been launched to recruit specialists – above all students from the fields of electrical engineering and information technology – for the company. In 2023, **Stadtwerke Düsseldorf (SWD)** focused on securing the specialist workers to meet its needs. In this context, SWD launched an employer branding initiative to attract qualified specialists from technical and IT fields. It also increased the number of technical apprenticeships at the company. To push forward cultural change at the company, all managers have also been invited to participate in the journey of development "Lead our future." **VNG** launched a management development program under the motto "Leadership Excellence 2030+" to support the transformation process at the company. Meanwhile, the "Next Work" program was continued with the aim of developing the future working world at VNG in the dimensions of culture, space, technology and services.

Other issues

In accordance with the **collective bargaining agreement** from 4 April 2023, the first wage increase of 5.5% came into force and was backdated to 1 March 2023. The wages for the different pay scales were increased by a further 3.0% with effect from 1 January 2024. Remuneration for trainees increased by €180 per month, backdated to 1 March 2023, and then increased by a further €70 per month on 1 January 2024. The collective bargaining agreement is valid for 14 months until 30 April 2024.

EnBW provides a comprehensive range of services to promote the **health** of its workforce. This includes, among other things, preventative medical services, vaccinations, physiotherapy treatments and psychological counseling. The sickness ratio stood at 4.8% in 2023 and was thus 0.5 percentage points lower than the figure in the previous year.

We publish more **performance indicators for employees** on our website.

Online ↗

Other performance indicators

Employees [1]

	31/12/2023	31/12/2022 [2]	Change in %
Smart Infrastructure for Customers	5,711	5,248	8.8
System Critical Infrastructure	11,635	11,638	0.0
Sustainable Generation Infrastructure	7,563	7,151	5.8
Other	3,721	2,943	26.4
Total	**28,630**	**26,980**	**6.1**
Number of full-time equivalents [3]	26,943	25,339	6.3

1 Number of employees excluding apprentices/trainees and inactive employees.
2 The figures for the previous year have been restated.
3 Converted into full-time equivalents.

As of 31 December 2023, the EnBW Group had 28,630 employees, which was 1,650 more than at the end of 2022. This increase was primarily due to the intake of new employees in strategic growth fields. The increase in the number of employees in the Smart Infrastructure for Customers segment was primarily due to the increased demand for energy and storage solutions, the expansion of broadband and the billing service. The increase in the number of employees in the Sustainable Generation Infrastructure segment was mainly in the areas of Thermal Generation and Trading and Renewable Energies. Digitalization and transformation processes as well as intercompany restructuring increased the number of employees in "Other." The employee turnover ratio stood at 9.3% in 2023 and was thus 1.4 percentage points higher than the figure in the previous year.

Occupational safety

In the area of occupational safety, we have set ourselves the goals of avoiding accidents and work-related illness and creating a safe working environment. The Group guidelines "Occupational safety and health protection" describe the responsibilities and tasks related to occupational safety and define the processes. The EnBW guidelines for occupational safety and health protection are also described in this document. The Group Occupational Safety Working Group (AK KAS) has the task of regulating issues uniformly within the Group that affect all companies. It is headed by the Chief Operating Officer Sustainable Generation Infrastructure at EnBW and has the power to make binding decisions in accordance with the company's rules of procedure.

Through training and programs of measures, we work continuously on minimizing **danger in the workplace** which could result in accidents or work-related illnesses. In 2023, 86 managers participated in the training course "Responsibilities and liability with respect to occupational safety" that was organized by the Group occupational safety department. Other training courses for managers on the theme of occupational safety were also held at numerous Group companies.

The Group-wide **Quentic software** is now being used in 31 Group companies with around 18,500 employees. In 2023, we developed a digital solution to improve the user friendliness of Quentic even further: It will be possible to enter information on unsafe situations and personal injury via the EnBW News app in the future. Since July 2023, any employee exposure to carcinogenic and mutagenic substances such as asbestos and ceramic mineral fibers is documented centrally in Quentic.

LTIF

The key performance indicator LTIF (Lost Time Injury Frequency) is used to measure the number of LTI (Lost Time Injuries) according to the definition on p. 34. Every company included in the LTIF for companies controlled by the Group receives an individual target from the Board of Management – the fulfillment of this LTIF target flows into the assessments for the achievement of targets in each case. The companies can also set their own individual targets that go beyond those set by the Board of Management.

TOP

Key performance indicator

	2023	2022	Change in %	Forecast 2023
LTIF for companies controlled by the Group [1, 2, 3]	2.4	2.6	-7.7	2.1 – 2.3
LTIF overall [1, 2]	3.7	4.1	-9.8	3.5 – 3.7

1 LTIF indicates how many LTI occurred per one million working hours performed. Further information on the calculation of this performance indicator can be found on p. 34.
2 The LTIF for companies controlled by the Group excluding waste management and LTIF overall, which includes the area of waste management, only includes companies with more than 100 employees excluding external agency workers and contractors.
3 Newly fully consolidated companies are not included for a maximum transition period of three years.

The key performance indicator LTIF for companies controlled by the Group improved in the 2023 financial year and fell to 2.4. The average days of absence per accident increased slightly and stands at 13.8 (previous year: 13.1) for the companies controlled by the Group. This means that the severity of the accidents is almost unchanged. The LTIF overall – including our subsidiaries in the area of waste management – also fell in the reporting period to 3.7. The average days of absence per accident increased slightly – from 13.1 in the previous year to 14.2 days. Following the relatively poor figures in the previous year, due to among other things increased workloads due to the energy crisis, LTIF overall and LTIF for companies controlled by the Group are once again moving in the direction of the levels seen in 2020 and 2021.

There were no fatal accidents in the 2023 financial year, neither among our own employees nor employees of third-party companies working on behalf of the EnBW Group.

We also refer you to the details provided in the "Report on opportunities and risks" (p. 136).

Selected activities

Alongside the activities on a Group-wide level, individual companies have also been independently implementing other measures for achieving targets with respect to occupational safety:

In September 2023, the integrated management system for the areas of occupational safety, environment and energy at **Netze BW** was recertified in accordance with DIN EN ISO 14001, EMAS, DIN EN ISO 50001 and DIN ISO 45001. The concept phase of the "Occupational Safety Initiative 2.0" (InA 2.0), which aims to improve the occupational safety culture, was also concluded and a central safety committee was established after the completion of the pilot phase.

In the area of **conventional generation,** an external consultancy company was commissioned in 2023 to analyze the development of occupational safety at the various different sites. The measures derived as a result will now help to once more reduce the recent rise in the number of accidents. Furthermore, "Occupational Safety Days" were held again for employees at these sites. The "100 days without accidents" campaign also continued in the reporting year and this goal was achieved a total of eight times at different locations.

In the area of occupational health and safety, **EnBW Kernkraft (EnKK)** held training courses for employees and managers in 2023 to raise more awareness for the theme of resilience. One of the main focuses in 2023 was the further development of the exposure register in cooperation with EnBW.

Gesellschaft für nukleares Reststoffrecycling (GNR, company for the recycling of residual nuclear material) has introduced a tool for documenting employee qualifications using the Quentic software. In order to raise awareness for occupational safety, the "5 minutes for occupational safety" concept has been launched to enable teams to regularly discuss developments relevant to occupational safety.

EnBW Ostwürttemberg DonauRies (EnBW ODR) and its subsidiary **Netze ODR** continued its training campaign "Management responsibility to show leadership with respect to occupational safety" in 2023. The campaign was launched in the previous year in cooperation with the Employers Liability Insurance Association for Energy, Textile, Electrical and Media Products. Further training courses for managers were held as part of this campaign.

Valeco opened a discussion forum called "Safety minutes" in 2023 to promote the exchange of information about occupational safety at a management level and to support the development of sets of specialist instructions. A new tool for registering unsafe situations was also a main focus. In order to avoid accidents on the way to and from work, Valeco helped raise the awareness of its employees for occupational safety with a campaign on the theme of cycling. Furthermore, Valeco was certified as a "bicycle friendly employer" in this context.

Stadtwerke Düsseldorf (SWD) continued its "Personal drive" project at the company Netzgesellschaft Düsseldorf in 2023 with campaign days on the theme of electrical risks. In the "New Corporate Governance AS/GS" project, work started on the implementation of the measures developed for improving the control and management structure for occupational safety and health protection at SWD. Part of this work is to establish appropriate measures for transferring knowledge to managers. A new online form designed to act as an electronic log for recording small injuries was introduced in 2023. SWD's activities in the area of occupational safety were rounded off by its "Safety Officer Day 2023," which was held as part of the "RheinSchiene" project and attended by around 300 safety officers and guests.

Energiedienst (ED) introduced the occupational safety software "SAM" in 2023. It not only features various tools dealing with the theme of occupational safety but importantly also provides a better overview of any completed and pending training courses and briefings. The initiatives carried out in 2023 also included a rescue exercise at the Schwörstadt hydroelectric power plant in cooperation with the fire department and DLRG (German Lifeguard Association).

VNG held a variety of activities to promote occupational safety in the 2023 financial year. For example, the VNG subsidiary BALANCE Erneuerbare Energien started using the 6S lean method to evaluate its plants so that it will be able to guarantee a continuously high level of productivity and safety. VNG Gasspeicher had its integrated quality, environment, safety and health protection management system recertified in November 2023 and thus was once again able to show that it fulfills the requirements for DIN EN ISO 9001, ISO 14001 and ISO 45001.

At **Pražská energetika (PRE),** the main focus in the reporting year was placed on the further training of employees with respect to occupational safety. Employees were provided with updated training documents on how to handle certain chemicals and with training courses in accordance with the current legal requirements.

EU taxonomy

The European Commission presented the EU Green Deal in December 2019. It includes the target of reducing net emissions from greenhouse gases in the European Union to zero by 2050. A key element of the EU Green Deal is the EU taxonomy, a classification system used to define "environmentally sustainable" economic activities. The aim is to use defined requirements to classify economic activities EU-wide with respect to their contribution to six environmental objectives in order to encourage the development of sustainable financing products. The six environmental objectives are:

1. Climate change mitigation
2. Climate change adaptation
3. Sustainable use and protection of water and marine resources
4. Transition to a circular economy
5. Pollution prevention and control
6. Protection and restoration of biodiversity and ecosystems

The EU Taxonomy Regulation distinguishes between "taxonomy-eligible" and "taxonomy-aligned" activities:

- An activity is **taxonomy-eligible** if taxonomy criteria exist for the activity and it matches the taxonomy description of the activity, irrespective of whether it fulfills the criteria.
- An activity is **taxonomy-aligned** if it fulfills the taxonomy criteria for the activity. In this case, it makes a significant contribution to the respective environmental objective (fulfills the technical screening criteria), causes no significant harm to any of the other environmental objectives (fulfills the technical screening criteria to do no significant harm, DNSH) and observes and complies with the minimum safeguards for occupational safety and human rights.

Alongside the two previously reported environmental objectives "climate change mitigation" and "climate change adaptation," the reporting obligation this year also covers the other four environmental objectives "sustainable use and protection of water and marine resources," "transition to a circular economy," "pollution prevention and control" and "protection and restoration of biodiversity and ecosystems" for the first time.

The formulations and terms contained in the EU taxonomy are subject to uncertainty with respect to their interpretation and need further clarification. Our own interpretation is presented below: The EU Taxonomy Regulation requires the presentation of the proportions of total revenue generated by a company that are achieved using products and services associated with taxonomy-aligned economic activities and thus make a substantial contribution to the environmental objectives. EnBW believes that it is appropriate to allocate expenditure related to assets or processes associated with taxonomy-aligned economic activities to capex and opex if the measures relevant to capex and opex are implemented such that the technical screening criteria and minimum safeguards are fulfilled. In terms of our fuel switch projects, our assumption at the present time is that these plants will be taxonomy-aligned. However, it will only be possible to assess final compliance with the technical screening criteria at a later point in the implementation of these projects. Associated investment will thus be reported as part of a capex plan.

EU Regulation 2021/2139 that defines the criteria for evaluating whether an economic activity makes a substantial contribution to "climate change mitigation" or "climate change adaptation" was amended in 2023. The existing technical screening criteria were modified in this regard and new climate-related economic activities and associated technical screening criteria were added in EU Regulation 2023/2485. Companies are only obligated to carry out an evaluation of the taxonomy eligibility of these activities for the 2023 financial year. The same applies to the disclosure obligations with respect to environmental objectives 3 to 6. According to the Environmental Delegated Act adopted this year, companies are only obligated to disclose the revenue, capex and opex for this reporting year that are taxonomy-eligible in the sense of the four other environmental objectives.

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

Online

Implementation of the EU Taxonomy Regulation in the EnBW Group

We have accompanied and supported the development and introduction of the taxonomy from the very beginning. In particular, this included our participation in related expert groups and our reporting on selected taxonomy-aligned economic activities in the EnBW Group at an early stage for the 2020 financial year.

Since the 2021 financial year, we have already been reporting in full on the taxonomy alignment of our activities based on all of the final taxonomy criteria that were available at the time the Integrated Annual Report was prepared, insofar as it was possible to report on them and uncertainties with respect to the interpretation of the criteria have been removed. We reported on the obligatory key performance indicators revenue, capex and opex as well as voluntarily publishing information on the other performance indicators that are relevant to the ongoing management of the EnBW Group: adjusted EBITDA and capex including the proportion for entities accounted for using the equity method (expanded capex).

Full information on the taxonomy-eligible and taxonomy-aligned economic activities according to Annex II of the delegated act for the EU taxonomy can be found on p. 147 ff.. The templates for the activities in the areas of nuclear energy and fossil gaseous fuels are presented below (p. 151 ff.).

Activities examined for the EU Taxonomy Regulation

Smart Infrastructure for Customers	System Critical Infrastructure	Sustainable Generation Infrastructure
• E-mobility	• Electricity distribution grids • Electricity transmission grids • Water grids • Water supply • Gas distribution grids • Gas transmission grids	• Onshore wind • Offshore wind • Solar • Run-of-river • Biomass • Pumped storage • District heating • Electricity generation from gas • Combined heat and power

We only report on activities that are taxonomy-eligible with respect to the EU's environmental objective of "climate change mitigation." Based on the EnBW business model, no activities could be identified that are taxonomy-eligible with respect to the EU's environmental objectives "climate change adaptation," "sustainable use and protection of water and marine resources," "transition to a circular economy," "pollution prevention and control" and "protection and restoration of biodiversity and ecosystems."

Economic activities that could potentially be allocated to the environmental objective "climate change mitigation" and another environmental objective (e.g., the water grids) were allocated to the environmental objective "climate change mitigation." The reason for this is that the contribution made to reducing greenhouse gas emissions was defined as the more relevant environmental contribution and is also closely associated with the EnBW corporate strategy.

The new climate-related economic activities and modified technical screening criteria published by the EU in the 2023 financial year were also analyzed for their relevance to EnBW. The amendments to Annex I and II of Delegated Regulation (EU) 2023/2485 require neither a change to the current evaluation of the taxonomy eligibility or alignment of EnBW's climate-related economic activities nor do they necessitate the addition of new taxonomy-eligible economic activities in the EnBW reporting.

The taxonomy alignment of the economic activities listed above was derived – using the findings from previous years as a basis – by determining that they fulfilled the taxonomy criteria. This was carried out by a central project team, working together with relevant experts from the specialist departments in the EnBW Group. We describe our fundamental approach to the analysis of the taxonomy alignment of our taxonomy-eligible economic activities below. A description of the activity and an overview of how they fulfill the respective technical screening criteria for a substantial contribution to climate change mitigation and do no significant harm to other EU environmental objectives is provided in table form at the end.

Firstly, each taxonomy-eligible business activity was assessed individually to see whether it complies with the criteria for making a substantial contribution to climate change mitigation. This assessment was carried out in principle at the level of the respective plant, insofar as the substantial contribution to climate change mitigation was not considered to have been complied with by the individual activities per se.

No significant harm to the other EU environmental objectives

In the next step, we assessed whether any significant harm was being done to the other five environmental objectives ("climate change adaptation," "sustainable use and protection of water and marine resources," "transition to a circular economy," "pollution prevention and control" and "protection and restoration of biodiversity and ecosystems"). The results of the DNSH criteria assessment for each economic activity can be found in the table (p. 110 ff.↗).

Compliance with minimum safeguards

The **EnBW Declaration on Human Rights** is available to download in PDF format.

Online ↗

In the third and final step, we assessed the economic activities at a Group level with respect to their compliance with the minimum social safeguards for human rights and occupational safety (prequalification process [p. 52 f.↗], information on occupational safety [p. 104 ff.↗] and the "Report on opportunities and risks" [p. 130 ff.↗]).

Identifying and classifying economic activities

The **technical screening criteria for the EU taxonomy** can be found here.

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In the following table, taxonomy alignment is derived at the level of the respective activity. Each activity was initially assessed to see whether it made a substantial contribution to climate change mitigation. In the second step, the activity was analyzed to see whether it did any significant harm to the achievement of the other EU environmental objectives. The analysis of whether the activity could potentially do harm to the second environmental objective "climate change adaptation" was carried out centrally at a Group level in cooperation with the risk management department (p. 135 f.↗). At the same time, appropriate measures were taken to further develop climate risk management throughout the entire Group in the future and also integrate it into the decentralized structures. This is why the following table focuses on the environmental objectives 3 to 6. The activities for which a closer examination of the environmental objectives is necessary are to be found in the respective technical screening criteria.

Economic activities according to the EU taxonomy and a description of the activity	Substantial contribution to climate change mitigation	No significant harm to the EU environmental objectives 3 to 6 (insofar as the criteria are relevant)
4.1 Electricity generation via photovoltaic technology → Construction and operation of solar parks to generate electricity **4.3 Electricity generation from wind power** → Construction and operation of wind farms to generate electricity	• In the case of photovoltaic and wind activities and with respect to the requirement for a substantial contribution to climate change mitigation, it is not currently necessary to test compliance with any criteria because energy generation of this type will always remain significantly below the current threshold of 100 g CO_2eq/kWh, even when analyzed over the entire life cycle.	• The vast majority of components for photovoltaic and wind energy power plants are designed for a very long service life, are recyclable and have a residual value at the end of their period of use (steel, aluminum, copper). • These plant components can either be recycled within the EnBW Group or sold to third parties for further use. • Environmental impact assessments (EIA) are carried out in accordance with the legal regulations.
4.5 Electricity generation from hydropower[1] → Construction and operation of run-of-river power plants to generate electricity	• Hydropower plants make an important contribution to climate change mitigation due to their very low greenhouse gas intensity. • The reference values from the German Environment Agency (UBA) were used as the basis for assessing the substantial contribution of run-of-river power plants, which at 2.702 g CO_2eq/kWh lie significantly below the taxonomy threshold of a maximum of 100 g CO_2eq/kWh. • These plants thus comply with the wording of the requirements for economic criteria 4.5 because compliance with the taxonomy threshold for the life cycle emissions could be verified using the UBA reference values. • The publication of the reference values by the UBA complies with the requirements (which are not specified in more detail) for "verification" by an independent third party, especially as the values are not determined by EnBW.	• Prior to the process for reissuing expired permits in accordance with water law, a preliminary environmental impact assessment must be carried out. Depending on the results of this assessment, it may be necessary to subsequently complete an environmental impact assessment. • The obligatory implementation of the requirements in the European Water Framework Directive is key, both for the award of new permits according to water law and also potentially at any time when the authorities subsequently issue official directives for existing permits. • Potential mitigation measures, such as fish ladders that enable fish to descend the river, are implemented in agreement with the responsible authorities subject to appropriate deadlines.
4.9 Transmission and distribution of electricity → Construction and operation of transmission and distribution grids for electricity	• The electricity grids make a substantial contribution to climate change mitigation because they are part of the synchronous grid of continental Europe (transmission grid) or its downstream grids (distribution grids). • The distribution grid in Germany also fulfills the criteria that the majority of the connections made in the past five years were for renewable energies.	• A waste management plan is in place that ensures maximal reuse or recycling at end of life in accordance with the waste hierarchy. • Legal regulations are complied with when constructing overground power lines. • Compliance with the 26th Federal Immission Control Ordinance (BImSchV) ensures fulfillment of the criteria for electromagnetic radiation. • No oils containing PCBs are used in new equipment. The process to replace oils containing PCBs in old equipment was concluded at the beginning of the 1990s. • Environmental impact assessments are carried out in accordance with the legal regulations.
4.10 Storage of electricity[1] → Construction and operation of pumped storage power plants for the storage of electricity	• There are no criteria that must be assessed with respect to a substantial contribution to climate change mitigation for pumped storage activities.	• The same procedure is followed as for run-of-river power plants when the process to reissue expired permits according to water law is pending. The same applies to the implementation of the requirements in the European Water Framework Directive and corresponding mitigation measures. • A waste management plan is in place that ensures maximal reuse or recycling at end of life in accordance with the waste hierarchy.
4.13 Manufacture of biogas and biofuels for use in transport and of bioliquids[1] → Manufacture of biogas for feeding into the gas grid and operation of CHP power plants with bioenergy	• Agricultural biomasses that comply with the sustainability requirements in EU Directive 2018/2001 are used to produce the biogas. Among other things, environmental surveys are carried out for this purpose. • The criterion that no food or feed crops may be used for activity 4.13 only applies to the production of biofuels according to article 2 no. 33 Renewable Energy Directive and not to the production of biogas in general (article 2 no. 28 Renewable Energy Directive). • The greenhouse gas emission savings (depending on the production route) are at least 65% in comparison to the relative fossil fuel comparator set out in Annex V of EU Directive 2018/2001. • If processes for the anaerobic digestion of organic materials are used in the plants, the biogas is only used for specific purposes. Monitoring and contingency plans are also in place to minimize methane leakage.	• In order to do no significant harm to the environmental objectives "sustainable use and protection of water and marine resources" and "protection and restoration of biodiversity and ecosystems," there are structural safety measures in place to prevent any pollution of groundwater. • General preliminary assessments are also carried out to determine whether the activity is subject to an environmental impact assessment. As this activity is not subject to an EIA, the responsible authorities believe that there is no significant negative impact on the environment. • Biogas power plants are not constructed in sensitive ecological areas. Bodies representing the public interest can raise their concerns in the resolution procedure for the submitted building applications. • Pollution prevention and control is ensured by compliance with the legal regulations. In addition, the best available technology is used for any replacement investment.

1 The KPIs for activities 4.5 and 4.10 and for 4.13 and 4.20 are combined in each case.

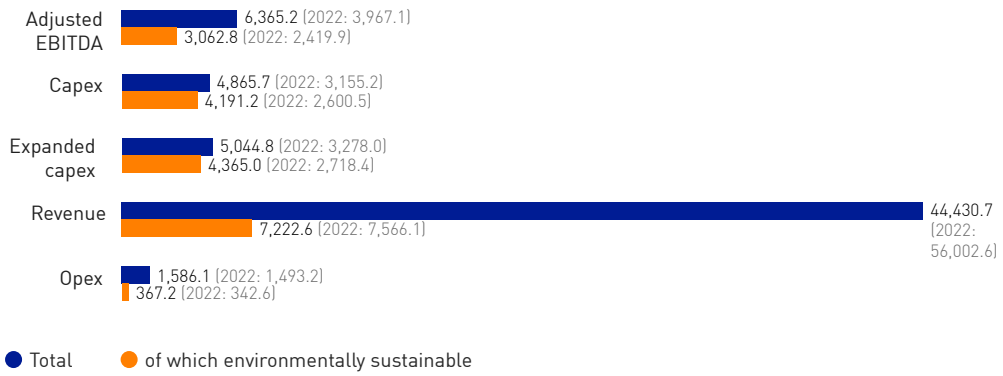
Economic activities according to the EU taxonomy and a description of the activity	Substantial contribution to climate change mitigation	No significant harm to the EU environmental objectives 3 to 6 (insofar as the criteria are relevant)
4.14 Transmission and distribution networks for renewable and low-carbon gases → Construction and operation of gas grids	• This criteria set covers investment in new grids for the transport of hydrogen and other low-carbon gases, as well as investment in existing grids to increase the blend of hydrogen or other low-carbon gases in the gas system.	• The criteria for energy-efficient components are complied with by using the best available technology according to the latest standards for the new construction and repair of the gas grid. In particular, this includes the pipelines, fittings and leakage monitoring systems. • Environmental impact assessments are carried out in accordance with the legal regulations.
4.15 District heating/cooling distribution → Construction and operation of district heating grids	• The district heating grids make a substantial contribution to climate change mitigation because they use more than 50% renewable energies, 50% waste heat, 75% CHP heat or 50% of a combination of these energies and heats and are thus classified as efficient according to the EU regulations.	• The district heating grid has no impact on water bodies during normal operation. In the event of a leakage, the damaged section is separated locally from the rest of the grid using fittings. The technology does not allow for the emptying of the district heating water into water bodies. • The criteria for energy-efficient components are complied with by using the best available technology according to the latest standards for the new construction and repair of the district heating grids. In particular, this includes the pipelines, fittings and leakage monitoring systems. • Environmental impact assessments are carried out in accordance with the legal regulations.
4.20 Cogeneration of heat/cool and power from bioenergy[1] → Operation of biogas CHP power plants to generate electricity and heat	• The agricultural biomass used in the activity complies with the criteria laid down in EU Directive 2018/2001. Among other things, sustainability certificates are obtained for this purpose. • Forest biomass, sewage sludge and biowaste are not used and thus it is not necessary to assess any criteria in this area. • The greenhouse gas emission savings from the use of biomass in the combined heat and power plants is at least 80% in relation to the GHG emission-saving methodology and fossil fuel comparator set out in Annex VI to EU Directive 2018/2001.	• As is the case for the manufacture of biogas and biofuels, structural safety measures, in particular, are in place to prevent any pollution of the groundwater. • The process for carrying out EIAs is the same as for the manufacture of biogas and biofuels. • Biogas power plants are not constructed in sensitive ecological areas. Bodies representing the public interest can raise their concerns in the resolution procedure for the submitted building applications. • Pollution prevention and control is ensured by compliance with the legal regulations. In addition, the best available technology is used for any replacement investment.
4.29 Electricity generation from fossil gaseous fuels → Construction and operation of gas power plants to generate electricity	• Direct GHG emissions of the activity averaged over 20 years are 160 to 549 kg CO_2eq/kW depending on the scenario and are thus lower than 550 kg CO_2eq/kW of the power plant's capacity. • The combined cycle gas turbine (CCGT) power plants compensate for shortfalls in the electricity supply from renewable energies and ensure the security of supply. The new power plants are replacing hard coal power plants. The aim is to switch over 100% to hydrogen by 2035 at the latest. A mix with biogases is not planned. • The generation capacities do not exceed the capacity of the previously installed power plants by more than 15%. • The power plants are located in Germany. The Federal Republic of Germany has made the commitment to phase out coal-fired generation by 2038 so that the requirements in the EU taxonomy for these activities are fulfilled. • Measurement equipment to monitor physical emissions is installed in accordance with the legal regulations.	• Preliminary assessments are carried out to determine whether the activity is subject to an environmental impact assessment and any subsequent EIAs are carried out where necessary in a project-specific manner in accordance with the Environmental Impact Assessment Act (UVPG). Otherwise, the respective projects are not approved. • The BAT conclusions (BAT is the abbreviation for best available techniques) from the EU have been transposed into German law. All of the planned power plants comply with limits at least in line with requirements in the currently valid version of the 13th BImSchV and thus also the BAT conclusions.

1 The KPIs for activities 4.5 and 4.10 and for 4.13 and 4.20 are combined in each case.

Economic activities according to the EU taxonomy and a description of the activity	Substantial contribution to climate change mitigation	No significant harm to the EU environmental objectives 3 to 6 (insofar as the criteria are relevant)
4.30 High-efficiency co-generation of heat/cool and power from fossil gaseous fuels → Construction and operation of CHP power plants	• The activity achieves primary energy savings of at least 10% compared with the reference values for the separate production of heat and electricity. Direct GHG emissions are 234 to 252 g CO_2eq/kWh of energy output. • The CCGT power plants compensate for shortfalls in the electricity supply from renewable energies and ensure the security of supply. The new power plants are replacing hard coal power plants. The aim is to switch over 100% to hydrogen by 2035 at the latest. A mix with biogases is not planned. • The generation capacities do not exceed the capacities of the previously installed power plants. • A reduction in GHG emissions during the life cycle and in comparison to the previously installed hard coal power plants of 55% is achieved. • The power plants are located in Germany. The Federal Republic of Germany has made the commitment to phase out coal-fired generation by 2038 so that the requirements in the EU taxonomy for these activities are fulfilled. • Measurement equipment to monitor physical emissions is installed in accordance with the legal regulations.	• Preliminary assessments are carried out to determine whether the activity is subject to an environmental impact assessment and any subsequent EIAs are carried out where necessary in a project-specific manner in accordance with the Environmental Impact Assessment Act (UVPG). Otherwise, the respective projects are not approved. • The BAT conclusions from the EU have been transposed into German law. All of the planned power plants comply with limits at least in line with requirements in the currently valid version of the 13th BImSchV and thus also the BAT conclusions.
5.1 Construction, extension and operation of water collection, treatment and supply systems → Construction and operation of water grids	The net average energy consumption of the water grids operated by the EnBW Group is lower than 0.5 kWh/m^3 of water.	• The water passing through the grid complies with the requirements of the Drinking Water Ordinance and is monitored by the authorities – the criteria in this ordinance are stricter than those in the taxonomy. • Environmental impact assessments are carried out in accordance with the legal regulations.
6.15 Infrastructure enabling low-carbon road transport and public transport → Construction and operation of charging infrastructure for e-vehicles	There are no criteria that must be assessed with respect to a required substantial contribution to climate change mitigation for activities related to charging infrastructure for e-vehicles.	• Water is only found at our sites in the form of rainwater. We do not use any surface waters nor do we extract any groundwater. • The construction of charging infrastructure for e-vehicles is not included in the activities subject to an environmental impact assessment in Annex 1 to the Environmental Impact Assessment Act (UVPG): Legislators apparently assume that these activities per se do not do any significant harm to ecosystems and biodiversity. An EIA can be requested during the official approval process, although this has never occurred up to now.

The following graphic provides an overview of the proportions of the adjusted EBITDA, capex, extended capex, revenue and opex accounted for by the taxonomy-aligned economic activities:

Proportion of taxonomy-aligned economic activities of the EnBW Group
in € million[1]



1 The figures for the previous year have been restated.

The following proportions were determined:

KPIs for the taxonomy-aligned business activities of the EnBW Group 2023

in € million/in %	Total	Proportion of taxonomy-aligned business activities	Proportion of taxonomy-eligible but not taxonomy-aligned economic activities	Proportion of taxonomy non-eligible business activities
Adjusted EBITDA	6,365.2	3,062.8/48.1	51.2/0.8	3,251.2/51.1
Capex	4,865.7	4,191.2/86.1	2.9/0.1	671.6/13.8
Expanded capex	5,044.8	4,365.0/86.5	2.9/0.1	676.9/13.4
Revenue	44,430.7	7,222.6/16.3	555.6/1.3	36,652.5/82.5
Opex	1,586.1	367.3/23.2	2.5/0.2	1,216.3/76.7

KPIs for the taxonomy-aligned business activities of the EnBW Group 2022[1]

in € million/in %	Total	Proportion of taxonomy-aligned business activities	Proportion of taxonomy-eligible but not taxonomy-aligned economic activities	Proportion of taxonomy non-eligible business activities
Adjusted EBITDA	3,967.1	2,419.9/61.0	247.4/6.2	1,299.8/32.8
Capex	3,155.2	2,600.5/82.4	2.5/0.1	552.2/17.5
Expanded capex	3,278.0	2,718.4/82.9	2.5/0.1	557.1/17.0
Revenue	56,002.6	7,566.1/13.5	1,639.5/2.9	46,797.0/83.6
Opex	1,493.2	342.6/22.9	2.5/0.2	1,148.1/76.9

1 The figures for the previous year have been restated.

Proportion of taxonomy-aligned adjusted EBITDA in the segments 2023

in € million/in %	Total	Proportion of taxonomy-aligned business activities	Proportion of taxonomy-eligible but not taxonomy-aligned economic activities	Proportion of taxonomy non-eligible business activities
Smart Infrastructure for Customers	239.5	-27.0/-11.3	0.0/0.0	266.5/111.3
System Critical Infrastructure	1,772.0	1,350.0/76.2	0.0/0.0	422.0/23.8
Sustainable Generation Infrastructure	4,647.6	1,739.8/37.4	51.2/1.1	2,856.6/61.5

Proportion of taxonomy-aligned adjusted EBITDA in the segments 2022[1]

in € million/in %	Total	Proportion of taxonomy-aligned business activities	Proportion of taxonomy-eligible but not taxonomy-aligned economic activities	Proportion of taxonomy non-eligible business activities
Smart Infrastructure for Customers	498.4	-50.6/-10.2	0.0/0.0	549.0/110.2
System Critical Infrastructure	1,057.8	781.2/73.9	0.0/0.0	276.6/26.1
Sustainable Generation Infrastructure	2,612.2	1,689.3/64.6	247.4/9.5	679.5/26.0

1 The figures for the previous year have been restated.

Proportion of taxonomy-aligned expanded capex in the segments 2023

in € million/in %	Total	Proportion of taxonomy-aligned business activities	Proportion of taxonomy-eligible business activities	Proportion of taxonomy non-eligible business activities
Smart Infrastructure for Customers	458.2	183.3/40.0	0.0/0.0	274.9/60.0
System Critical Infrastructure	2,754.5	2,664.2/96.7	0.0/0.0	90.3/3.3
Sustainable Generation Infrastructure[1]	1,755.2	1,517.5/86.5	2.9/0.2	234.8/13.4

1 The figures may not add up due to rounding differences.

Proportion of taxonomy-aligned expanded capex in the segments 2022[1]

in € million/in %	Total	Proportion of taxonomy-aligned business activities	Proportion of taxonomy-eligible business activities	Proportion of taxonomy non-eligible business activities
Smart Infrastructure for Customers	404.9	174.1/43.0	0.0/0.0	230.8/57.0
System Critical Infrastructure	2,005.8	1,926.4/96.0	0.0/0.0	79.4/4.0
Sustainable Generation Infrastructure	821.4	617.9/75.2	2.5/0.3	201.0/24.5

1 The figures for the previous year have been restated.

The adjusted EBITDA from taxonomy-aligned activities was €3,062.8 million and thus significantly higher than in the previous year. Despite the exceptionally high result in the area of Generation and Trading in 2023, the proportion of adjusted EBITDA for the Group accounted for by taxonomy-aligned activities was almost 50%. The adjusted EBITDA from taxonomy-aligned activities in the Smart Infrastructure for Customers segment was slightly improved in comparison to the previous year but remains comparatively low because the e-mobility business area is still being developed. The adjusted EBITDA from taxonomy-aligned activities in the System Critical Infrastructure segment increased to €1,350.0 million. This was mainly due to the substantial increase in revenue from the use of the grids as part of the higher investment in the expansion of the grids and from factoring in the higher expenses for the grid reserve and redispatch into prices. The proportion of adjusted EBITDA for the System Critical Infrastructure segment accounted for by taxonomy-aligned activities of 76.2% was slightly higher than the level in the previous year. The adjusted EBITDA from taxonomy-aligned activities in the Sustainable Generation Infrastructure segment of €1,739.8 million was higher than the level in the previous year. This was attributable to the positive earnings performance at the run-of-river power plants and pumped storage power plants, as well as the expansion in wind farms and photovoltaic power plants. The proportion of adjusted EBITDA for this segment accounted for by taxonomy-aligned activities of 37.4% was below the level in the previous year due to the exceptionally high result in the area of Generation and Trading.

The capex for taxonomy-aligned activities was €4,191.2 million and the proportion of capex accounted for by taxonomy-aligned activities was 86.1%, which was around 61% higher (about €1.6 billion) than the figure for the previous year. Almost half of this increase (around 46%) was attributable to higher investment in the electricity transmission and distribution grids. The investment made by our Group subsidiary TransnetBW as part of the Network Development Plan Electricity was higher, as was the investment in our electricity distribution grids made by our grid companies. Around 34% of the increase was attributable to the activity "electricity generation from wind power." In the area of offshore wind power, we invested heavily in our He Dreiht wind farm in the German North Sea in 2023. This wind farm is due to be commissioned in 2025. Around 18% of the increase was attributable to investment in our three fuel switch projects in Baden-Württemberg, which as things currently stand fulfills the EU criteria for a taxonomy-aligned activity.

The proportion of expanded capex for the Smart Infrastructure for Customers segment accounted for by taxonomy-aligned activities stood at 40.0% (previous year: 43.0%) and is thus relatively low because there are still no criteria in the EU taxonomy for many business activities, such as for the sale of commodities. The proportion in the System Critical Infrastructure segment of 96.7% was at the same level as in the previous year (96.0%) and relatively high because the electricity, gas and water grids, which account for almost the entire segment, comply with the EU taxonomy criteria. In the Sustainable Generation Infrastructure segment, the proportion of 86.5% was thus higher than

in the previous year (75.2%). The activities in the Renewable Energies area are fully taxonomy-aligned as in the previous year. The increase in this proportion is mainly attributable to the investment for our three fuel switch projects in Baden-Württemberg, which was higher in 2023 than in the previous year. The proportion of expanded capex accounted for by taxonomy-aligned activities was 86.5% based on the total investment by the EnBW Group in the context of the EU taxonomy.

Revenue from taxonomy-aligned activities of €7,222.6 million in 2023 was slightly lower than in the previous year. This development was primarily due to lower income from the settlement of redispatch measures with other transmission system operators in the System Critical Infrastructure segment that has no impact on the result. The proportion of total revenue accounted for by taxonomy-aligned activities increased slightly in comparison to 2022 to 16.3% because Group revenue from trading activities was lower than in the previous year, mainly as a result of lower prices on the electricity and gas markets.

The opex for taxonomy-aligned activities of €367.3 million was slightly higher than the figure in the previous year. Expenditure on maintenance and repair services was almost unchanged in comparison to 2022.

Accounting policies

The proportion of sustainable **investment (capex)** predominantly refers to assets associated with taxonomy-aligned activities. In contrast to cash-relevant investment reported in the investment analysis section of the report (p. 80 f.↗), non-cash-relevant activities are also relevant for taxonomy reporting. In accordance with our current interpretation, investment in our fuel switch projects, which are assigned to the economic activities 4.29 and 4.30 and make a contribution to the environmental objective of climate change mitigation, has been included in a capex plan and is reported separately below. The planned investment for these projects was defined using our investment approval process (p. 36↗) and was presented to the Board of Management for approval. However, the taxonomy alignment of the power plants can only be verified following an evaluation of all of the technical screening criteria as the project progresses. The investment measures have a planning horizon of six years. The expected level of investment in the period 2022 to 2027 is €1.7 billion, of which a total of €0.4 billion has been invested up to now. To calculate the percentages, investment is included according to the following IFRS standards:

- Additions to property, plant and equipment (IAS 16)
- Additions to intangible assets (IAS 38)
- Additions to investment property (IAS 40)
- Additions to right-of-use assets from leases (IFRS 16)

The numerator for investment taken into account according to the taxonomy comprises the following:

Composition of the capex numerator

in € million	2023	2022
Additions to property, plant and equipment [1,2]	3,929.4	2,316.5
of which additions as part of a capex plan	(348.7)	(60.9)
Additions to intangible assets	81.7	123.9
Additions to right-of-use assets from leases [2]	162.0	150.4
Additions to property held as a financial investment	0.0	0.0
Additions resulting from business combinations	18.1	9.7
Total	4,191.2	2,600.5

1 This includes additions to provisions recognized for the decommissioning and dismantling of property, plant and equipment in the reporting period of €12.4 million (31/12/2022: €34.1 million).
2 The figures for the previous year have been restated.

The capex figures for the comparative period have been adjusted due to changes in the segment reporting (p. 69↗) and additions to right-of-use assets from leases according to IFRS 16.

The additions to calculate the denominator can be found in notes 10 (without consideration of the column "Goodwill"), 11, 12 and 14 (column for "Investment properties") of the notes to the consolidated financial statements.

To determine the KPI for sustainable **revenue,** the net revenue that makes a contribution to the environmental objective of climate change mitigation is divided by the total net revenue for the Group. Further information on net revenue can be found in the section on external revenue on p. 70 f. and in note 1 of the notes to the consolidated financial statements.

Composition of the revenue numerator

in € million	2023	2022
Revenue from contracts with customers	6,792.0	7,231.6
Other revenue	430.6	334.5
Total	7,222.6	7,566.1

The denominator to determine the KPI for **opex** in the sense of the Taxonomy Regulation comprises the following direct, non-capitalized costs:

- Research and development
- Building renovation measures
- Short-term leases
- Maintenance and repair costs

The numerator equals the part of the opex that is related to assets or activities associated with taxonomy-aligned economic activities. The expenditure included in the denominator covers the expenditure categories presented in the following table. The numerator for calculating the opex KPI is determined as follows:

Composition of the opex numerator

in € million	2023	2022
Maintenance and repair costs [1]	365.9	341.5
Short-term leases (not recognized as right-of-use assets)	0.9	0.7
Research and development costs	0.5	0.4
Total	367.3	342.6

1 Includes building renovation measures.

As well as the KPIs required by the Taxonomy Regulation, we are also voluntarily reporting information on the environmentally sustainable **adjusted EBITDA** and **capex including the proportion for entities accounted for using the equity method** pursuant to IFRS 11 and IAS 28 **(expanded capex).** The sustainable adjusted EBITDA is the proportion of total adjusted EBITDA that makes a contribution to the environmental objective of climate change mitigation (p. 71 f.). With this KPI, we can create a direct link to our key performance indicator adjusted EBITDA that is relevant for the management of the company. Detailed information on this performance indicator can be found in the section on adjusted EBITDA on p. 71 f..

By reporting the expanded capex, we are disclosing all of our sustainable investment, irrespective of whether it is made within the EnBW Group. The numerator for the KPI for expanded capex is determined by taking the capex numerator from the Taxonomy Regulation and expanding it to include additions for entities accounted for using the equity method, whereby sustainable additions from acquisitions and capital increases are taken into account:

Composition of the expanded capex numerator [1]

in € million	2023	2022
Capex numerator according to EU taxonomy	4,191.2	2,600.5
Additions to entities accounted for using the equity method	173.8	117.9
Total	4,365.0	2,718.4

1 The figures for the previous year have been restated.

EnBW AG

The financial statements of EnBW AG have been prepared in accordance with the regulations in the German Commercial Code (HGB), the German Stock Corporation Act (AktG) and the law governing the electricity and gas industries in Germany (German Energy Industry Act – EnWG). The regulations for large corporations apply.

The financial statements as audited by EY GmbH & Co. KG Wirtschaftsprüfungsgesellschaft, as well as the management report of EnBW AG contained in the Group management report, will be published in the company register.

The full **financial statements of EnBW AG** are available to download on our website.

Online

For statements that are necessary to understand the position of EnBW AG and that are not explicitly described in the following sections, especially those relating to the strategy of the company and economic and political conditions, please refer to the information provided for the EnBW Group (p. 26 ff. and p. 58 ff.).

The annual net profit, which indicates the company's ability to pay a dividend, is an important performance indicator for EnBW AG.

Results of operations of EnBW AG

Condensed income statement of EnBW AG

in € million [1]	2023	2022	Change in %
Revenue	116,487.0	134,746.7	-13.6
Cost of materials	-111,978.5	-132,374.8	-15.4
Amortization and depreciation	-230.0	-201.9	13.9
Other operating result	-1,564.1	-762.2	-105.2
Earnings before interest and taxes	**2,714.4**	**1,407.8**	**92.8**
Financial result	-457.6	-108.1	–
Tax	-656.4	-326.4	-101.1
Net profit	**1,600.4**	**973.3**	**64.4**

1 In accordance with German commercial law.

EnBW AG reported an annual net profit of €1,600.4 million. The improvement in comparison to the previous year was mainly influenced by the €1,306.6 million in higher earnings before interest and taxes, the decrease in the financial result of €349.5 million and the decrease in the tax result of €330.0 million.

Earnings before interest and taxes of EnBW AG is primarily determined by the revenues generated from electricity and gas sales, as well as by the associated cost of materials. The decrease in revenue of €18,259.7 million was offset by a decrease in the cost of materials of €20,396.3 million.

Revenue (after the deduction of electricity and energy taxes) of €116,487.0 million primarily includes revenue from electricity sales of €24,821.0 million and gas sales of €88,750.9 million. Electricity and gas sales comprise both the trading business, involving deliveries to trading partners and stock exchanges, and sales activities in the form of the direct delivery of energy to end customers.

The trading business recorded a decrease of €18,961.3 million in revenue in 2023 to €112,728.0 million. While gas revenues fell as a result of lower trading volumes, electricity revenues increased despite lower volumes due to higher prices secured on the markets. The decrease overall in revenue in the trading business was offset by the fall in the cost of materials of €20,564.7 million to a total of €109,187.7 million.

Revenues from sales activities were split into €1,902.4 million for electricity and €408.7 million for gas, which represented an overall increase of €314.0 million.

In the retail and end-customer sector (B2C), sales were lower than the level in the previous year, which was mainly attributable to conditions in the energy industry and the associated energy-saving measures actively taken by customers. Electricity sales fell by 0.4 billion kWh to 6.0 billion kWh, while sales in the gas business fell by 0.5 billion kWh to 3.5 billion kWh. Increased revenues in both the B2C electricity and B2C gas sectors were primarily due to price effects resulting from the market situation in the reporting year.

The cost of materials includes costs for electricity procurement of €20,966.0 million and costs for gas procurement of €86,838.8 million.

Alongside scheduled amortization and depreciation, the amortization and depreciation item includes impairment losses of €17.9 million, which relate to intangible assets.

The decrease in the other operating result was primarily attributable to reversals of impairment losses made in the previous year, which amounted to €1,018.7 million, and not made in the reporting year and a fall in income from reversals of provisions of €79.3 million, which was mainly related to provisions for onerous contracts for electricity procurement agreements. In addition, rents for gas transport increased by €154.4 million, expenses for gas storage facilities increased by €68.3 million and impairments on receivables increased by €118.3 million. This was offset to some extent by an increase in income from the disposal of assets of €511.2 million. EnBW sold minority shareholdings in He Dreiht GmbH & Co. KG and EnBW Übertragungsnetz Immobiliengesellschaft mbH & Co. KG, which holds 100% of the shares in TransnetBW GmbH. In addition, there was a drop in services provided by foreign subsidiaries for the trading activities of EnBW AG.

The decrease in the financial result was mainly due to higher impairment losses on financial assets of €1,009.9 million and higher interest expenses for affiliated entities of €159.2 million. This was offset to some extent by the improved investment result in particular.

The tax expense in the financial year was €656.4 million, which was €330.0 million higher than in the previous year. The taxes mainly comprise expenses for advance income tax payments of €233.2 million, additions to the provisions for corporate income tax and trade tax of €145.0 million and reversals of provisions for tax audit risks of €23.6 million. The tax result also includes out-of-period expenses for income taxes of €20.7 million, compared to out-of-period income for income taxes of €46.5 million in the previous year. The option of recognizing a surplus of deferred tax assets was not exercised.

Net assets of EnBW AG

Balance sheet of EnBW AG

in € million[1]	31/12/2023	31/12/2022	Change in %
Assets			
Non-current assets			
Intangible assets	277.4	313.6	-11.5
Property, plant and equipment	1,384.8	1,050.0	31.9
Financial assets	25,735.8	26,869.7	-4.2
	27,398.0	28,233.3	-3.0
Current assets			
Inventories	1,846.9	2,340.0	-21.1
Receivables and other assets	5,796.9	7,288.0	-20.5
Securities	230.0	0.0	–
Cash and cash equivalents	6,457.2	3,142.5	105.5
	14,331.0	12,770.5	12.1
Prepaid expenses	4,674.3	6,744.7	-30.7
Surplus from offsetting	47.1	31.9	47.6
	46,450.4	47,780.4	-2.8
Equity and liabilities			
Equity			
Subscribed capital	708.1	708.1	–
Treasury shares	-14.7	-14.7	–
Issued capital	(693.4)	(693.4)	–
Capital reserve	776.0	776.0	–
Revenue reserves	2,822.5	2,022.5	39.6
Retained earnings	1,155.4	652.9	77.0
	5,447.3	4,144.8	31.4
Extraordinary items for investment cost subsidies and grants	24.0	25.9	-7.3
Provisions	14,903.6	15,149.9	-1.6
Liabilities	21,118.8	23,203.2	-9.0
Deferred income	4,956.7	5,256.6	-5.7
	46,450.4	47,780.4	-2.8

1 In accordance with German commercial law.

The net assets of EnBW AG as of 31 December 2023 are significantly influenced by the non-current assets (particularly the financial assets) and receivables and other assets as well as cash and cash equivalents. These are mostly offset by liabilities and provisions relating to nuclear power and for pensions and similar obligations.

Financial assets primarily consist of shares in affiliated entities of €17,622.9 million, loans to affiliated entities of €3,333.4 million, securities held as non-current assets of €2,717.1 million and investments of €2,054.5 million. The decrease of €1,133.9 million in financial assets was mainly due to amortization and depreciation of €1,144.3 million. In addition, EnBW sold minority shareholdings in He Dreiht GmbH & Co. KG and EnBW Übertragungsnetz Immobiliengesellschaft mbH & Co. KG, which holds 100% of the shares in TransnetBW GmbH. This was offset to some extent by payments into the capital reserves at shares in affiliated entities and the issuing of loans to affiliated entities of €658.4 million.

Trade receivables of €1,416.5 million mainly comprise receivables from trading activities and consumption accruals for electricity and gas deliveries not yet invoiced.

Receivables from affiliated entities increased by €478.2 million to €2,484.0 million. They mostly comprise receivables from intercompany settlement transactions as part of the centralized financial and liquidity management, as well as claims from profit and loss transfer agreements and short-term loans.

The decrease in other assets by €1,476.2 million to €1,852.8 million was mainly attributable to a decrease in the collateral to stock markets and trade partners of €1,790.3 million due to changes in market prices and a corresponding adjustment to the hedge strategy. As part of the sale of minority shareholdings in EnBW Übertragungsnetz Immobiliengesellschaft mbH & Co. KG, which holds 100% of the shares in TransnetBW GmbH, the majority of the proceeds were paid in cash and cash equivalents. The remaining payment will be made by 2028 at the latest.

Cash and cash equivalents of EnBW AG totaling €6,457.2 million largely consist of bank deposits. More details on the development of this item can be found in the section "Financial position of EnBW AG."

The decrease in prepaid expenses by €2,070.4 million to €4,674.3 million was primarily attributable to deferred earnings components from electricity and gas futures resulting from smaller differences between hedge prices and prices on the reporting date, as well as the adjustments to the hedge strategy.

The provisions for pensions and similar obligations held by EnBW AG to the amount of €7,018.1 million combine obligations from the company pension scheme and other company agreements made by major subsidiaries and EnBW AG. The resulting annual expenses for retirement benefits are reimbursed by the subsidiaries concerned in each case. In addition, provisions relating to nuclear power of €3,973.9 million are disclosed, which are formed to fulfill public law obligations and requirements in the operating licenses.

Of the liabilities totaling €21,118.8 million, €13,835.3 million have a residual term of more than one year. Overall, there are liabilities of €13,170.4 million to affiliated entities, which primarily result from intercompany settlement transactions within the framework of centralized financial and liquidity management, as well as from loan agreements.

The total decrease in liabilities by €2,084.4 million was primarily attributable to the fall in other liabilities by €3,611.9 million. The decrease in the collateral to stock markets and trade partners by €3,608.6 million was mainly due to changes in market prices and a corresponding adjustment to the hedge strategy. Trade payables also decreased by €516.3 million. In contrast, liabilities to affiliated entities and investments increased by €1,315.1 million and liabilities to banks rose by €807.6 million.

Non-current liabilities exist to the amount of €8,901.1 million to EnBW International Finance B.V. as part of the Debt Issuance Program (DIP), of which €3,363.4 million is from the issuing of five subordinated bonds, a private placement of bonds and promissory notes, and €1,537.8 million is from loan agreements with credit institutions. The main changes in comparison to the previous year were the taking out of two bank loans totaling €850.0 million. Furthermore, six new bonds were issued via EnBW International Finance B.V. each with a total volume of €3,256.7 million.

The decrease in deferred income by €299.9 million to €4,956.7 million was primarily attributable to deferred earnings components from electricity and gas futures resulting from smaller differences between hedge prices and prices on the reporting date, as well as the adjustments to the hedge strategy.

The aim is to cover the non-current pension and nuclear provisions with appropriate financial assets within an economically feasible time period. Overall, financial assets of €25,735.8 million are offset by long-term debt of €24,240.9 million.

In the financial year and on the reporting date, the liquidity of EnBW AG guaranteed the solvency of the company for the payment of current liabilities from the operating business at all times.

Financial position of EnBW AG

In comparison to the reporting date in the previous year, the liquidity of EnBW AG increased from €3,142.5 million by €3,314.7 million to €6,457.2 million.

The cash flows of EnBW AG fundamentally arise from both its own operating business and also the operating business of the subsidiaries, with balance payments received and made via the bank accounts of EnBW AG as part of the intercompany cash pooling system within the framework of central financing and liquidity management.

Important business transactions that had an effect on the financial position of EnBW AG in the 2023 financial year are summarized below:

In the financial year, capital measures totaling €1,137.5 million were taken at subsidiaries, mainly in the area of the grids and renewable energies. In addition, EnBW sold minority shareholdings in He Dreiht GmbH & Co. KG and EnBW Übertragungsnetz Immobiliengesellschaft mbH & Co. KG, which holds 100% of the shares in TransnetBW GmbH.

Bank loans of €850.0 million were also taken out, while six new bonds were issued via EnBW International Finance B.V. with a volume of €3,256.7 million. This was offset to some extent by repayments of bank loans totaling €70.5 million and the repayment of a bond via EnBW International Finance B.V. of €80.7 million.

As a result of the significant improvement in the earnings before interest and taxes, there were corresponding cash inflows in the financial year, especially in the trading business.

Other business transactions with a material impact on liquidity were cash outflows from margin payments of €1,834.9 million, cash outflows in connection with the utilization of the nuclear power and pension provisions of €695.1 million and interest payments to banks of €104.6 million.

There were income tax payments of €601.0 million and loans to affiliated entities increased by €658.4 million.

This was offset to some extent in the business year by cash inflows from the receipt of dividends of €360.9 million.

A total of €297.9 million was distributed to the shareholders of EnBW AG in dividends.

Overall assessment of the economic situation and development of EnBW AG

In our judgment, the development of the results of operations, financial position and net assets of EnBW AG as of 31 December 2023 is satisfactory after taking into account the effects described below that are not relevant to the ongoing management of the company. In the previous year, we anticipated an annual net profit to the order of around €2,000 million in 2023, influenced by positive effects not relevant to the ongoing management of the company of around €950 million.

The net profit/loss for 2023 was influenced by negative effects not relevant to the ongoing management of the company of around €1,200 million. In contrast, the operating business performed better than expected and was above the earnings forecast made at the start of the year.

The annual net profit for 2023 stands at €1,600.4 million and was primarily influenced by effects that arose both at EnBW AG itself and at its subsidiaries, which had an impact on EnBW AG due to profit and loss transfer agreements.

The main effect not relevant to the ongoing management of the company were additions to the provisions relating to nuclear power of €818.7 million (of which €537.2 million was reported as cost of materials of EnBW AG). Other negative effects arose from impairment losses on financial assets of €1,144.3 million, impairments on receivables of €162.1 million and additions to the provisions for onerous contracts of €136.7 million.

These effects were offset to some extent by income from the disposal of assets of €529.2 million, income from reversals of other provisions of €121.1 million, reversals of provisions for onerous contracts of €69.8 million and interest rate effects on non-current provisions of €165.8 million (of which in the interest result of EnBW: €138.0 million).

Based on the annual net profit of €1,600.4 million, and taking into account the profit carried forward of €355.0 million and the transfer into other revenue reserves of €800.0 million, there are retained earnings of €1,155.4 million.

We anticipate an annual net profit of around €1,400 million in 2024. This will be influenced by positive effects not relevant to the ongoing management of the company of around €250 million. Adjusted for these effects, the annual net profit will be around €1,150 million.

The amount that is ineligible for distribution as dividends is expected to be around €10 million as of 31 December 2024 and comprises the capitalized internally generated intangible assets and the valuation of the dedicated financial assets for pension provisions, whose fair value exceeded the acquisition costs.

Opportunities and risks

As the business performance, economic situation and opportunities and risks relating to the future development of EnBW AG do not deviate from the business performance, economic situation and opportunities and risks relating to the future development of the EnBW Group, the management report of EnBW AG is combined with that of the EnBW Group (p. 123↗).

Comments on reporting

The consolidated financial statements of EnBW AG are prepared in accordance with section 315e (1) HGB using the International Financial Reporting Standards (IFRS) set by the International Accounting Standards Board (IASB), the adoption of which is mandatory in the EU as of the reporting date. As a vertically integrated energy supply company in the sense of EnWG, EnBW AG engages in activities in electricity distribution, activities in gas distribution, other activities within the electricity sector, other activities within the gas sector and other activities outside of the electricity and gas sectors in accordance with section 6b (3) sentence 3 and sentence 4 EnWG.

EnBW share and dividend policy

Information on our **share price, dividends and shareholder structure** can be found on our website.

Online ↗

As a result of the small proportion of EnBW shares in free float, events on the financial markets and the development of the DAX generally only have a minor influence on the development of the EnBW share price. The price of EnBW shares was €89.20 at the start of 2023 and stood at €79.20 by the end of the year.

In the long term, EnBW plans to pay out no more than 40% to 60% of the adjusted EBITDA in dividends. Based on the annual net profit of €1,600.4 million, and taking into account the profit carried forward of €355.0 million and the transfer into other revenue reserves of €800.0 million, there are retained earnings of €1,155.4 million and thus dividends will be paid for the 2023 financial year. If approved by the Annual General Meeting, the dividend to be distributed for the 2023 financial year will be €1.50 per share. This corresponds to a dividend payout ratio of 15% of the adjusted Group net profit that is attributable to shareholders.

Overall assessment of the economic situation of the Group

Our integrated approach of positioning the company along the entire value-added chain of the energy industry ensures that our business model remains resilient. We have made sustainability an integral part of our corporate strategy. We continued to pursue our strategic goals by, for example, accelerating the expansion and take-up of renewable energies, expanding the grid infrastructure, starting construction at our fuel switch projects and expanding e-mobility. Organized into three segments, we want to further strengthen our profitability and continuously improve our sustainability performance at the same time. The aim is to make the company climate neutral with respect to our own CO_2 emissions (Scope 1 and 2) by 2035.

€6.4 billion
adjusted EBITDA

The operating business at a Group level performed better in 2023 than expected and was above the earnings range forecast made at the start of the year. Adjusted EBITDA increased significantly by 60.4% in comparison to the previous year. The result in the Smart Infrastructure for Customers segment was below the previous year's level and the forecasted range. However, the fall in earnings in this segment was more than compensated for by positive developments in the other two segments. The adjusted EBITDA for the System Critical Infrastructure segment increased and was within the forecasted range. In addition, the result in the Sustainable Generation Infrastructure segment rose significantly and was at the upper end of the adjusted forecasted range, exceeding the originally forecasted range. While the adjusted EBITDA for the Renewable Energies area was at the same level as in the previous year, earnings in the Thermal Generation and Trading area were significantly higher than in the previous year. Non-operating EBITDA fell considerably in comparison to the previous year. The Group net profit/loss attributable to the shareholders of EnBW AG fell from €1,738.0 million in 2022 by €200.4 million to €1,537.6 million in the reporting year. Earnings per share amounted to €5.68 in the 2023 financial year, compared to €6.42 in the previous year.

€5.0 billion
green bonds since 2018

€4.9 billion
gross investment

The financial position of the company remains sound. Solvency was ensured at all times thanks to the company's available liquidity and its internal financing capability, as well as external sources available for financing. As of 31 December 2023, net debt had risen by €856.1 million compared to the figure posted at the end of the previous year. This increase was mainly due to the increase in collateral. As a result of the increase in retained cash flow, the debt repayment potential was substantially higher in 2023 than the target value of between 18.0% and 21.0%. The value spread rose to 10.2% and thus exceeded the forecasted range. Gross investment in 2023 was around 56% higher than the level in the previous year. Around 79.9% of overall gross investment was attributable to growth projects.

46.9%
share of the generation capacity accounted for by RE

-29.3%
reduction CO_2 intensity

82 points
People Engagement Index (PEI)

In the customers and society goal dimension, the Reputation Index fell in 2023 by three index points in comparison to the previous year to 55 points and was thus once again at the same level as in 2021, although below our forecasted range for 2023 of between 57 and 60 points. The Customer Satisfaction Index for EnBW fell by 6.5% in 2023 to a value of 130 but remained at a good level. Despite a slight fall in the satisfaction of its customers, Yello was still able to maintain its index value at an outstanding level. As in the previous year, SAIDI Electricity was within the forecasted range in 2023. In the environment goal dimension, we were able to improve the share of generation capacity accounted for by renewable energies to 46.9%. The CO_2 intensity of our own electricity generation fell in comparison to the previous year by 29.3% as a result of an increase in generation from renewable energy sources and the significantly lower deployment of our coal power plants. In the employees goal dimension, the People Engagement Index (PEI) remained at a very high level in comparison with the previous year and with other companies. In the area of occupational safety, the key performance indicators for LTIF fell in comparison to the previous year.

Business at the company developed very positively in 2023. This was primarily attributable to higher income from electricity generation in the Sustainable Generation Infrastructure segment and higher income from the use of the grids in the System Critical Infrastructure segment.

Forecast

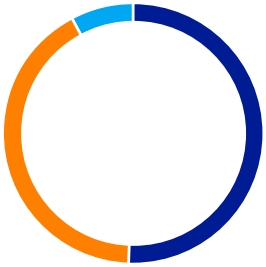
In our forecast we take a fundamental look at the expected growth and development of EnBW in the years 2024 to 2026. It should be noted that the present conditions – such as the high volatility on the markets (p. 66 ff.) – increase the level of uncertainty with which predictions about the future development of the company can be made. The expected economic, political and regulatory conditions are presented in the chapter "General conditions" (p. 58 ff.). Potential factors influencing the forecast are described in detail in the "Report on opportunities and risks" (p. 130 ff.).

Expected trends in the finance and strategy goal dimensions

Investment over a three-year period

In order to continue actively shaping the energy transition, gross investment of €24.5 billion is planned for the 2024 to 2026 period. This represents on average €8.2 billion per year. 15% of this investment will be on existing projects and 85% on growth projects. The majority of the gross investment (83%) will be in the System Critical Infrastructure segment and the expansion of renewable energies. We anticipate that more than 85% of our gross investment will be taxonomy-aligned according to the EU taxonomy.

Total investment 2024 – 2026
in %



- 50.8 System Critical Infrastructure (growth: 37.7, existing: 13.1)
- 41.6 Sustainable Generation Infrastructure / Other (growth: 39.8, existing: 1.8)
- 7.6 Smart Infrastructure for Customers segment (growth: 7.0, existing: 0.6)

Around 8% of the investment is planned for the **Smart Infrastructure for Customers** segment, of which approximately 7% will be for growth investment and 1% for investment in existing facilities. This investment is mainly intended for the expansion of electromobility, as well as for the expansion of the telecommunications infrastructure.

Around 51% of the investment will flow into the **System Critical Infrastructure** segment. Growth investment will account for approximately 38% of the overall gross investment and the remaining amount of around 13% will be for upgrading the existing grids. In order to make the transmission of renewable energies from the north to the south of Germany possible, funds have been allocated to the electricity transmission grid for the realization of two HVDC projects ULTRANET and SuedLink that involve our subsidiary TransnetBW and are part of the Network Development Plan. In addition, extensive investment in the expansion, upgrading and renewal of the existing distribution grids is planned by our grid subsidiaries. Our subsidiaries terranets bw and ONTRAS have already planned to make their first investments in the core hydrogen network in the three-digit million euro range within the three-year period.

Around €10.2 billion or 42% of the investment is planned for the **Sustainable Generation Infrastructure** segment and for other investment (other investment: 1%). Around 40% of the investment will be on growth themes and around 2% on themes related to existing facilities. Investment of around €8.0 billion for the expansion of renewable energies is planned for the period 2024 to 2026, which corresponds to 33% of gross investment. This includes funds for the realization of further offshore wind farms, such as our EnBW He Dreiht wind farm in the German North Sea. After acquiring offshore wind rights in Great Britain, we are planning to construct more offshore projects in Great Britain, for which additional investment has been allocated within the three-year period. We also plan to invest in the construction of onshore wind farms and photovoltaic parks from our comprehensive project pipeline (p. 26 f.). Furthermore, the planned investment for the Sustainable Generation Infrastructure segment includes €1.9 billion for the thermal power plants. This is primarily for the construction of our three H_2-ready gas power plants in order to guarantee the supply of district heating, in particular, from these three sites and maintain the security of supply in Baden-Württemberg in the future. Other investment mainly involves investment in the central IT system.

The investment program of the EnBW Group supports our strategy of expanding renewable energies and ensuring security of supply in the regulated areas of the transmission and distribution grids (electricity and gas), as well as the expansion of charging infrastructure for the benefit of electromobility.

In order to finance our investment for the energy transition, we intend to secure about half of the overall gross investment planned for the period 2024 to 2026 as cash returns in the form of **divestitures.** This includes entering into further strategic partnerships and securing cash inflows from existing participation models in specific areas of the company. Other divestitures will include the receipt of building cost subsidies.

TOP

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

Development in 2024 (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	
	2024	2023	**2024**	2023
Smart Infrastructure for Customers	**€0.25 to €0.35 billion**	€239.5 million	**5% to 10%**	3.8%
System Critical Infrastructure	**€1.9 to €2.2 billion**	€1,772.0 million	**35% to 50%**	27.8%
Sustainable Generation Infrastructure	**€2.6 to €3.1 billion**	€4,647.6million	**50% to 65%**	73.0%
Other/Consolidation		€-293.9 million		-4.6%
Total	**€4.6 to €5.2 billion**	**€6,365.2 million**		**100.0%**

The adjusted EBITDA of the **Smart Infrastructure for Customers** segment is expected to increase in 2024. We anticipate that the negative earnings effects seen in 2023 will largely cease to exist. Following the removal of the price brake on electricity and gas, we anticipate a strong recovery in the market for the B2B and B2C commodity business. The share of adjusted EBITDA for the Group accounted for by this segment should be slightly higher than the level in the previous year.

The expected adjusted EBITDA for the **System Critical Infrastructure** segment will be significantly higher in 2024 than in the previous year. The main reasons for this development are higher income from the use of the grids as a result of returns on increased investment activity in projects that are included in the Network Development Plan Electricity and Network Development Plan Gas, as well as a higher return on capital employed. We expect an increase in the share of adjusted EBITDA for the Group accounted for by this segment in comparison to the previous year.

The adjusted EBITDA of the **Sustainable Generation Infrastructure** segment is expected to fall in 2024. This decrease in earnings will be due to a fall in the volatility on the markets and to the sale of generated volumes at lower prices on the market, resulting in a fall in the trading result in comparison to 2023, with an impact on the Thermal Generation and Trading area. Renewable energies are expected to contribute around €1.3 billion to earnings. After all of the pumped storage power plants have now been classified as environmentally sustainable in accordance with the EU Taxonomy Regulation (p. 108 ff.↗), they will be allocated to the Renewable Energies area from 2024 onwards. The adjusted EBITDA for the Renewable Energies area including earnings from pumped storage power plants of €0.7 billion would have totaled €1.7 billion in 2023. Furthermore, the moderate expansion in power plants for the uptake of renewable energies will make a positive contribution to earnings performance. The forecasts for wind and water yields, and thus for the volume of electricity generated, are based on the long-term average. As the volumes of electricity generated in 2023 were below this level, we anticipate higher volumes in 2024 in comparison to the previous year. This will be offset to some extent by falling prices in comparison to 2023. We expect the share of adjusted EBITDA for the Group accounted for by this segment to be below the level in the previous year.

The **adjusted EBITDA for the EnBW Group** is expected to fall in 2024 and will be between €4.6 billion and €5.2 billion. We also expect the adjusted EBITDA for the Group to be at around the same level in 2025.

The expected **EBITDA** in 2024 and 2025 will develop in line with the adjusted EBITDA. We do not make any forecasts relating to material non-operating effects.

We anticipate that the **EBT relevant to remuneration** will be between €2.1 billion and €2.4 billion in 2024 and thus around the same level as in the previous year. EBT in 2025 is expected to be within the same range as in 2024. The accuracy of the forecast for EBT is dependent on exogenous factors relevant to the non-operating result that cannot be planned for, such as impairment losses, the reversal of impairment losses or impending losses on onerous contracts for electricity procurement agreements.

Assuming an adjusted EBITDA in the range of €4.6 billion to €5.2 billion, we expect to achieve a **retained cash flow** in 2024 of between €2.0 billion and €2.5 billion. Adjusted for dividend payments (including payments from investments to third parties) and income tax payments, we expect an **FFO relevant to remuneration** of between €3.5 billion and €4.0 billion. We expect that retained cash flow in 2025 will be higher than in 2024 as a result of the lower utilization of provisions.

Debt repayment potential

TOP

Key performance indicator

	2024	2023
Debt repayment potential in %	13 – 16	41.3

We expect a significantly lower debt repayment potential of between 13% and 16% in 2024. The development of the debt repayment potential is dependent on factors within net debt that are outside of the company's sphere of influence, such as the development of interest rates for non-current provisions, the performance of the dedicated financial assets and margin payments from temporary price fluctuations on the market.

Share of adjusted EBITDA accounted for by low-risk earnings

TOP

Key performance indicator

	2024	2023
Share of adjusted EBITDA accounted for by low-risk earnings in %	≥ 70	44.7

We anticipate that the share of adjusted EBITDA accounted for by low-risk earnings will increase significantly in 2024 due to the increase in adjusted EBITDA for the System Critical Infrastructure segment and a higher share of earnings accounted for by the Renewable Energies area, together with a reduction in the share of earnings accounted for by the Thermal Generation and Trading area.

Proportion of taxonomy-aligned expanded capex

TOP

Key performance indicator

	2024	2023
Proportion of taxonomy-aligned expanded capex in %	≥ 85	86.5

The proportion of taxonomy-aligned expanded capex is expected to be at least 85% in 2024. This will mainly be attributable to our investment in the EnBW He Dreiht wind farm, in the construction of the three H_2-ready gas power plants and in offshore projects in Great Britain, as well as our ongoing high investment in the expansion of the grids.

Expected trends in the customers and society goal dimension

TOP

Key performance indicators

	2024	2023
Reputation Index	54 – 58	55
Customer Satisfaction Index for EnBW/Yello	114–125/ 145–155	130/161
SAIDI electricity in min./year[1]	< 20	19.3

1 SAIDI electricity includes all unscheduled interruptions to supply that last more than three minutes for the end consumer.

Reputation Index

EnBW will strive to improve its reputation continuously and appreciably over the next few years. The Reputation Index is an important non-financial performance indicator because it is influenced by a whole series of factors important to the future viability of our company. The existing reputation management department and stakeholder team at EnBW can recommend measures for optimizing the reputation of the company.

Customer Satisfaction Index

In our opinion, various external factors could have an increasingly negative impact on the satisfaction of our customers in 2024. These include, for example, the effects of the war between Russia and Ukraine, a comparatively high rate of inflation and the negative impact of the energy and budgetary policy decisions taken in Germany at the end of 2023. As a result of the sharp decrease in the procurement price for energy, it is likely that there will be different pricing levels for new and existing customer contracts on the market. This will foster a more critical opinion of energy companies among customers. Other negative effects on prices, with a corresponding impact on customer satisfaction, could arise if energy supply chains are disrupted by new regional conflicts such as in the region around Israel and the Arabian Peninsula. Economic recovery in Europe and Asia could also lead to increased demand for energy, which would cause prices for electricity and gas to rise. In addition, more investment in the grid infrastructure is needed to push forward the energy and mobility transitions and maintain the stability of the grids. Increasingly volatile developments on the market and, for example, further market exits or insolvencies of market participants could also have negative effects on the Customer Satisfaction Index.

To improve the satisfaction of our customers, we are expanding our range of sustainable energy industry services and energy solutions even further and targeting our sales activities in this direction. In this context, we are also making the product portfolio more sustainable for our customers. We are combining traditional energy products (electricity and gas) with household and energy-related products and services. This includes, for example, continuing with the swift and comprehensive expansion of the quick-charging infrastructure in Germany and extending the EnBW HyperNetwork across Germany and Europe with our partners. We will also further exploit the opportunities offered by digitalization: New and improved digital processes will allow us to offer customized products to our customers and provide them with an even better quality of service. On this basis, we expect a slightly lower value for the Customer Satisfaction Index for EnBW of between 114 and 125 points in the 2024 financial year. Through further digitalization of customer processes, flexible offers and a clear focus on sustainability, Yello is striving to achieve a Customer Satisfaction Index of between 145 and 155 points in the 2024 financial year, slightly lower than in the previous year.

SAIDI

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 19.3 minutes in 2023. We will continue striving to achieve a value of consistently below 20 minutes in the 2024 financial year and subsequent years.

Expected trends in the environment goal dimension

TOP

Key performance indicators

	2024	2023
Installed output of renewable energies (RE) in GW and the share of the generation capacity accounted for by RE in %	6.5 – 6.8/ 56 – 57	5.7/46.9
CO_2 intensity in g/kWh [1]	390 – 450	347

1 The calculation for this performance indicator does not include nuclear generation and the share of positive redispatch that cannot be controlled by EnBW.

Installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE

We expect that the installed output of renewable energies and the share of the generation capacity of the Group accounted for by renewable energies will continue to rise in 2024. This increase will be due to the planned construction of additional onshore wind and photovoltaic power plants, as well as the increase from the addition of pumped storage power plants that do not use the natural flow of water. The reason for this reallocation as renewable energies is due to the classification of the pumped storage power plants as environmentally sustainable in accordance with the EU Taxonomy Regulation (p. 108 ff.↗). The transfer of Block 7 of the Rheinhafen steam power plant in Karlsruhe and Block 8 of the large power station in Mannheim to the grid reserve in the first half of 2024 will also increase the share of the generation capacity accounted for by RE. In subsequent years, we expect a continuous increase in the installed output of renewable energies. This will thus increase the share of the generation capacity accounted for by RE further. The expansion in renewable output is taken into account in the remuneration of the Board of Management and is a component of the Long Term Incentive (LTI).

CO_2 intensity

In 2023, CO_2 intensity fell more than expected due to low deployment of our thermal power plants on account of prices on the market and to more favorable wind and water conditions in comparison to 2022. As a result of the changed market conditions and the return to operation of our hard coal power plant Heilbronn 7 during the course of the year, we anticipate higher generation from our thermal power plants in 2024. In combination with wind yields, which are forecast using the long-term average, we anticipate that CO_2 intensity in 2024 will be 390 g/kWh in the best-case scenario and 450 g/kWh in the worst-case scenario. In comparison to the reference year of 2018 used for our target of climate neutrality, this forecast corresponds to a reduction in CO_2 intensity of between 18% and 29%. The key performance indicator CO_2 intensity will be taken into account in the remuneration of the Board of Management in future and will become a component of the Long Term Incentive (LTI).

Expected trends in the employees goal dimension

TOP

Key performance indicators

	2024	2023
People Engagement Index (PEI) [1]	≥ 78	82
LTIF for companies controlled by the Group [2, 3, 4]	2.1	2.4
LTIF overall [2, 3]	3.6	3.7

1 Variations in the group of consolidated companies (all companies with more than 100 employees are generally considered (except ITOs)).
2 LTIF indicates how many LTI occurred per one million working hours performed. Further information on the calculation of this performance indicator can be found on p. 34↗.
3 The LTIF for companies controlled by the Group excluding waste management and LTIF overall, which includes the area of waste management, only includes companies with more than 100 employees excluding external agency workers and contractors.
4 Newly fully consolidated companies are not included for a maximum transition period of three years.

People Engagement Index

The People Engagement Index (PEI) stood at 82 points in the reporting year. We were thus able to once again slightly improve on the very good result from the previous year (81 points). An international benchmark index compiled using similar questions at numerous companies from various different sectors stood at 74 points in 2023. Taking into account this global benchmark score, we are striving to achieve a target value for the PEI of at least 78 points in 2024.

LTIF

We are committed to our goal of continuously improving occupational safety within the company for both our own employees and those of our partner companies who carry out work on behalf of EnBW. Therefore, we have implemented numerous accident prevention measures. The energy crisis brought about huge changes for EnBW as an energy supply company in 2022 that continued to have a noticeable impact in 2023. As a critical infrastructure company, we have a responsibility to ensure a reliable supply of energy. Changes to working conditions and their consequences (such as an increased workload) increased the risk of accidents. We believe that this has also been reflected in the number of accidents in 2023. In 2024, we will continue the measures we introduced to improve occupational safety – especially in the area of conventional generation – in the reporting year. Despite these challenges, we are still striving to reduce the number of accidents and both the LTIF for companies controlled by the Group and LTIF overall moderately in the long term. The LTIF for companies controlled by the Group is taken into account in the remuneration of the Board of Management and is a component of the Long Term Incentive (LTI).

Overall assessment of anticipated developments by the management

We expect a fall in adjusted EBITDA for the Group in 2024 in comparison to the previous year because the adjusted EBITDA for the Sustainable Generation Infrastructure segment will normalize again. The shares of earnings accounted for by the different segments will change accordingly. We always strive to maintain a balanced financing structure, solid financial profile and thus solid investment-grade ratings. With respect to our non-financial key performance indicators, we expect a largely stable to slightly positive development in 2024.

Report on opportunities and risks

Principles of the integrated opportunity and risk management system

Opportunity and risk map

Strategic / sustainability		Operative			Financial		Compliance
Strategy	**Sustainability**	**Business activity**	**Infrastructure**	**Implementation of growth fields**	**Financial management**	**Corporate financing**	**Compliance**
Sustainable Generation Infrastructure ● ●	Climate change ● ●	Business processes	Plants / grids / storage / IT	Renewable energies ● ●	Market prices	Capital market	Corruption ●
Market developments / social trends ●	Environmental protection ●	Operating activities	Information security / confidentiality	Gas / biogas business	Liquidity management	Ratings	Antitrust law
System Critical Infrastructure	Weather / natural events ●	Products / contracts	Crime / sabotage / terrorism	E-mobility / digitalization	Earnings management		Data protection
Smart Infra-structure for Customers	Personnel ●	Operational projects		Expansion of the grids	Investment management		Fraud
	Occupational safety / health protection ●	Approvals / licenses / patents					Taxes and levies
	Human rights ●	Legislation / regu-lation / litigation ●					
	Social issues ●						
	Reputation ● ●						

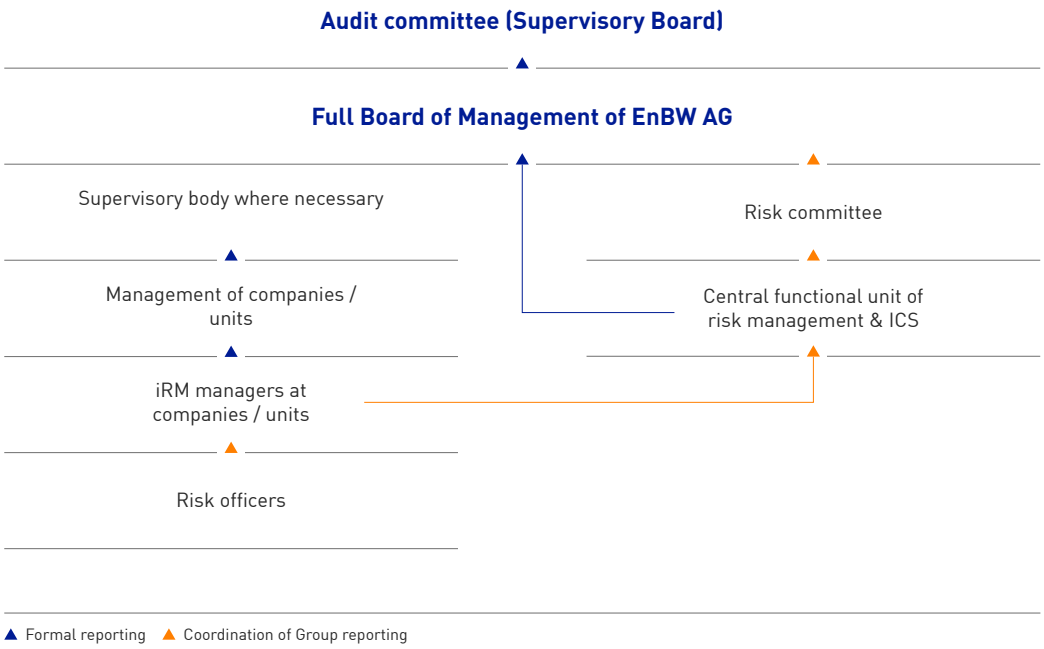
● Task Force on Climate-related Financial Disclosures (TCFD) ● Corporate Social Responsibility (CSR)

The integrated opportunity and risk management system (iRM) of EnBW is based on the internationally established COSO framework as a standard for risk management systems that span entire companies, as well as the requirements of the Institute of Public Auditors in Germany (IDW). The iRM aims, through a holistic and integrated approach, to effectively and efficiently identify, evaluate and manage opportunities and risks (including monitoring) and report on the opportunity and risk position, as well as to ensure the appropriateness and functionality of related processes. Risk management involves measures for avoiding, reducing or transferring risk through adequate accounting provisions, as well as measures for managing risk tolerance. For this purpose, we define an opportunity/risk as an event that might cause a potential over-attainment/non-attainment of strategic/sustainability, operational, financial and compliance goals in the future. The iRM process also takes into account the guidelines for a non-financial declaration. In order to identify and categorize opportunities and risks, EnBW uses, among other things, the opportunity and risk map that is established throughout the Group. The risk map is used to explicitly identify potential opportunities and risks that affect the sustainable orientation of our company. As well as focusing on the fulfillment of the requirements for a nonfinancial declaration, the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) are also taken into account.

We constantly improve and enhance the maturity of our iRM management system. This gives us the chance to react to any legal or regulatory changes and also to exploit any potential for improvement that we may have identified.

Structure and processes of the integrated opportunity and risk management system

Structure and process of the iRM system



The structures and processes of the iRM are established throughout the Group. The central risk management & ICS functional unit is responsible for specifying methods, processes and systems for the whole Group, determining the opportunity and risk position of the Group and for reporting. The central steering body is the risk committee, which – with the involvement of specially selected units/companies – is responsible for clarifying relevant issues from various Group perspectives, as well as for determining the top opportunities/risks.

Internal reports are submitted on a quarterly basis in standardized form. In the case of any significant changes, a special report based on a formalized structure is immediately issued. Opportunities and risks can have an impact on our key financial performance indicators adjusted EBITDA, debt repayment potential, share of adjusted EBITDA accounted for by low-risk earnings and proportion of taxonomy-aligned expanded capex (p. 33↗). The possible effects on the key non-financial performance indicators (p. 34↗) are discussed with those responsible in the specialist areas.

Opportunities and risks are evaluated within the medium-term planning period. A financial valuation of the opportunities and risks is carried out insofar as this is possible, and the expected values and potential ranges given by the results are considered. If they lie above uniformly defined thresholds, the opportunities and risks are generally included in the Group report on opportunities and risks. The so-called top opportunities/risks and long-term opportunities and risks that are of particular importance are then added. The top opportunities/risks are determined using global opportunity and risk trends, value drivers along the value-added chain and quantitative characteristics such as relevance classes and monetary limits.

Any opportunities and risks with a probability of occurrence of up to 50% are subject to an individual review to determine whether they should be taken into account in the next planning session. Opportunities and risks with a probability of occurrence of over 50% are usually taken into account in the planning process and, as far as possible, appropriate accounting measures are taken in the consolidated financial statements in accordance with IFRS.

Opportunities and risks are generally evaluated in relation to the current planning period. This is carried out using quantitative methods involving stochastic modeling based on appropriate probability distributions. The resulting distributions enable us to derive the risk dimensions in each case,

such as the expected level for the opportunity and risk and the variation in the expected level. Risk ranges for the 98% confidence level are applied to ensure that possible extreme scenarios for individual opportunities or risks can be identified. This represents larger financial ranges in order to cover potential extreme scenarios with a higher probability.

Building on this, we then assess the risk-bearing capacity. This is done based on the continuous quantification of risks, which are aggregated using stochastic simulations to find the total risk position. The total risk position is then measured against the coverage potential. The result is an assessment of the maximum risk that EnBW can tolerate without jeopardizing its ability to continue as a going concern. This risk-bearing capacity can be used as a management instrument and fulfills the requirements of the auditing standard IDW PS 340 new version.

Relevance filter for classifying opportunities and risks

Strategic / sustainability	Operative	Financial	Compliance	
Achievement of strategic targets, sustainability targets, e.g., climate protection, environmental protection, reputation	Achievement of business targets, functional processes, retaining added value, customer / external effects	Achievement of financial targets, generally in accordance with medium-term planning or approved (project) budgets	Compliance with legal / official regulations and internal regulations	
Relevance class 5				
One strategic / sustainability target for the EnBW Group is not achieved	• One key operational target for the EnBW Group is not achieved • The value added is massively disrupted across the company / business units / functional units	≥ €50 million (relevance threshold for functional units and EnBW Group)	Breach of legal / official regulations and / or internal regulations with negative consequences for the EnBW Group	Group reporting level
Relevance class 6				
Several or all strategic / sustainability targets for the EnBW Group are not achieved	• Several or all operational targets for the EnBW Group are not achieved • Value added throughout the whole Group is massively disrupted	≥ €250 million	Breach of legal / official regulations and / or internal regulations with serious negative consequences for the EnBW Group	

Structure and processes of the accounting-related internal control system

Principles

An accounting-related internal control system (ICS) has been established at EnBW that is designed to ensure proper and reliable financial reporting. In order to guarantee that this ICS is effective, the appropriateness and functionality of the Group-wide control mechanisms are tested regularly at the level of the individual companies and at a Group level.

If any existing weaknesses are identified in the control system and are considered relevant to the financial statements, they are remedied. This accounting-related ICS methodology is based on the COSO II standard.

Once the control mechanisms have reached a standardized and monitored degree of maturity, and no material control weaknesses can be identified, the accounting-related ICS is deemed to be effective. The materiality of control weaknesses is measured as the probability of occurrence and the extent to which there could be a potential misstatement in connection with those financial statement items concerned. The accounting-related risk management system defines measures for identifying and assessing risks that jeopardize the preparation of compliant financial statements as part of the accounting-related ICS.

Despite having established an ICS, there is no absolute certainty that it will attain its objectives or that it will be complete. In individual cases, the effectiveness of the ICS can be impaired by unforeseeable changes in the control environment, fraud or human error.

Structure

The accounting-related ICS at EnBW is organized at both a centralized and decentralized level. All key companies, business units and functional units have an ICS officer. These officers monitor the effectiveness of the ICS and evaluate any control weaknesses that may arise. An effectiveness report is prepared on an annual basis. The ICS officer at Group level assists the companies/units with the implementation of standardized procedures and also consolidates collected data.

Process

Standardized procedures are used to ensure completeness and consistency in the preparation of the financial statements and financial reporting. The accounting-related ICS defines controls designed to ensure compliance with the accounting policies used by the Group, as well as procedures and deadlines for the individual accounting and consolidation processes. During the Group consolidation process, the rigorous implementation of the four-eye principle is observed, while random samples and deviation analyses improve quality. An annual control cycle monitors whether the documentation is up to date and also checks the appropriateness and functionality of the controls. In addition, it identifies and evaluates any control weaknesses that may arise.

A risk-based selection process defines the companies/units, significant items in the financial statements and processes including their associated control measures that are relevant.

The defined processes and controls are recorded in a central documentation system. The effectiveness of the various control activities is then assessed. If any control weaknesses are identified, their effect on the financial statements is evaluated. The results are reported at both company or unit level and at Group level. Furthermore, the Group auditing department performs ICS reviews as part of its risk-oriented audit planning.

Appropriateness and effectiveness of the risk management system and the internal control system (iRM)

A statement on the appropriateness and effectiveness of the iRM process is made annually as part of the internal EnBW Group effectiveness report. The following are examined: the appropriateness and effectiveness of the risk management system at the level of the individual opportunities and risks, signed declarations by the management of important investments and business units and the notification to the internal audit department in the respective reporting year. Findings from the audit of the early risk detection system and the accounting-related ICS carried out by the auditor are presented in the effectiveness report. Financial and non-financial opportunities and risks identified by the system for the iRM process, and also risks identified in the compliance risk assessment are deemed relevant.

All of the individual opportunities and risks that are identified as being material before the application of the envisaged and implemented management instruments are used to assess the appropriateness and effectiveness of the system. Appropriateness is measured using a so-called gross evaluation. This gross evaluation is carried out with the aid of the iRM relevance filter and determines the level of opportunity and risk for each of the four categories: “strategic/sustainability,” “operational,” “financial” and “compliance.” For gross relevance class 5 and above, opportunities and risks are considered appropriate and material enough to be included in the effectiveness report. Risk officers are able to deviate from this classification and can also select a lower relevance class. Management instruments are then documented for the identified opportunities and risks, and the residual level of opportunity and risk (net evaluation) is determined as part of the regular risk reporting process. Ultimately, a self-assessment of the management of the risk is carried out by the risk officer. A second person then examines the management instruments for the specific opportunity/risk to confirm whether the management of the opportunity/risk is effective or not, and so acts as an internal control at the same time. The results flow into the report on the Group effectiveness report.

The managers of the business units and investments finally confirm that they have established a process that is appropriate in accordance with the Group guidelines for complying with the requirements for the ICS and for risk management including compliance management by signing a

corresponding declaration. The results from the effectiveness report are passed on to the auditor during the audit of the early risk detection system and also to the internal audit department. The Board of Management reports on the results to the Supervisory Board and substantiates the findings.

As of the reporting date of 31 December 2023, there were no findings for the reporting year that indicated that the risk management and internal control systems were not appropriate and effective in all material respects. It is generally accepted that an internal control system cannot fully guarantee that material misstatements in accounting will be either prevented or detected.

Non-financial declaration

As part of the non-financial declaration, we closely analyze the related opportunities and risks in the areas of compliance, social engagement and procurement, as well as in the customers and society, environment and employees goal dimensions. In order to guarantee that the requirements for a non-financial declaration are fulfilled, the established iRM methods and the associated process are used. In this context, the iRM also identifies opportunities and risks relating to climate protection and thus provides important impetus for the implementation of the recommendations of the TCFD. You can find further information on this subject on p. 146.

Risks associated with the non-financial declaration

The non-financial declaration describes, among other things, the fundamental opportunities and risks connected with the EnBW business model and the activities based upon it that could have a possible impact on any individual issue. Material individual risks with a very high probability of a serious negative impact in relation to any of the following issues do not exist at EnBW.

Compliance

The observance of relevant legal regulations and internal company rules forms the basis of our business activities. Managing compliance risks at EnBW (with a main focus on corruption, bribery, antitrust, fraud and data protection risks) is the task of the compliance and data protection management system, which comprise regular risk assessments of this type. Further information on how we handle compliance risks can be found on p. 39 ff..

Corporate citizenship

There are no risks in the area of corporate citizenship. In fact, we take our social responsibility for civic and social engagement seriously (p. 44 f.).

Procurement

Sustainable procurement – purchasing: In the area of procurement, risks cannot be excluded due to increasing levels of complexity and the growing demand and heightened public interest for human rights and sustainability in the supply chain. Purchasing utilizes an active risk management system, counters procurement risks and implements the necessary measures for safeguarding against and avoiding risk. These risks are managed using defined processes especially for prequalification and other specified processes that improve the transparency of risks in the supply chain (p. 52 f.).

Raw materials procurement – coal and gas: In the area of raw materials procurement and thus in the associated supply chain, there are above all potential human rights and environmental risks. In the procurement of raw materials, a multistage process is used to check whether human rights and environmental standards are being observed. All coal and gas suppliers as well as any potential suppliers are regularly subjected to a screening process. Other measures that form part of the assessment are carried out in direct cooperation with the compliance department. In coal mining and the production of natural gas, there are possible human rights risks related to the working and living conditions of people in the coal mining regions and natural gas producing regions. In addition, there are environmental risks for the immediate environment in each of these mining and gas producing regions. These risks are associated with an increased risk to the reputation of EnBW as a purchaser of these raw materials. We not only rigorously implement preventative and remedial measures in our raw material supply chains but also remain in constant contact with representatives from civil society, ensuring they are kept informed about any advances made and challenges faced in all themes relating to sustainability concerning the procurement of raw materials (p. 54 ff.).

Customers and society goal dimension

Reputation: All opportunities and risks, as well as non-financial issues, can have a positive or negative impact on reputation and thus on the key performance indicator Reputation Index (p. 87). The reputation management department thus identifies opportunities and risks related to reputation, develops measures to protect and improve reputation, advises the Board of Management and management and provides recommendations for action.

Customer proximity: Risks/opportunities arise due to the normalization of competition in the new and existing customer business, although they were significantly reduced by the electricity and gas price brake. Other factors are lower market prices since December 2022, although they remain high, as well as political uncertainty and volatile framework conditions. Opportunities exist above all through the provision of a broader range of customer-specific products and services, such as the expansion of the additional business (e-mobility bundles, heating packages, "digital energy consultant"), as well as through processes more oriented to the customer. EnBW also continued to expand its range of electromobility products and services in 2023, as well as its sustainable and digital energy industry services and energy solutions, while targeting its sales activities in this direction (p. 87 ff.).

Environment goal dimension

Expansion of renewable energies: Risks generally exist in the approval and auction process. These risks can result in delays to the further expansion of renewable energies. Due to the fact that the auctions are held on equal terms, we continue to expect a high level of competition. We measure the expansion of renewable energies with our key performance indicator "installed output of renewable energies (RE) and the share of the generation capacity accounted for by RE" (p. 93 f.).

CO_2 intensity / climate protection: Risks generally exist in the area of environmental protection due to the operation of power and heat generation plants and infrastructure facilities, with the possible consequences this could have for the air, water, soil and nature. The importance of climate protection is taken into account in, for example, the key performance indicator CO_2 intensity (p. 95 ff.).

We counter these risks using, among other things, an environmental management system certified according to DIN EN ISO 14001, which has been established at key subsidiaries (p. 93). We take the safety of the population and the protection of the environment very seriously. In this context, risks also exist due to external circumstances, such as extreme weather conditions. We counter these risks using comprehensive organizational and procedural measures to reduce their impact. We ensure that the risks posed by crisis and emergency situations are mitigated quickly, effectively and with a coordinated approach through regular crisis management exercises and other measures (p. 18). Through our diverse range of activities in the areas of environmental, nature and species protection, we also utilize the opportunity – beyond our core activities – to make a substantial contribution to improving environmental protection. Thanks to the positive public perception of these activities, they can also have a positive impact on our key performance indicator Reputation Index (p. 87).

At the same time, EnBW also faces potential risks due to the ongoing process of climate change. For example, more frequent extreme weather conditions leading to highly fluctuating water levels or limits being placed on emissions locally could have a negative impact, particularly on the operation of power plants and thus the security of supply (electricity grids). The operation of hydropower plants can be restricted by both a lack of, or also an abundance of, water. The output from thermal power plants that must be cooled could possibly be impacted by temperature limits on discharged water. Increasing volatility in the availability of wind, water and sun presents challenges in terms of planning certainty for the operation of power plants and the sale of volumes of electricity (p. 26 ff.). For this reason, the top opportunity/top risk of wind fluctuations has been reported since the Integrated Annual Report 2016, although these opportunities/risks have no material effect on non-financial issues. In addition, there is uncertainty due to increasing environmental restrictions for the realization of projects for sustainable generation and for the operation of power plants. These risks are managed and mitigated in internal processes using targeted control measures.

Alongside changes in physical climate parameters and other developments relating to or governed by environmental factors, regulatory guidelines and the potential changes associated with them, as well as changes in the market, also flow into the risk evaluation process. However, there are also

opportunities such as changing customer needs (p. 87 ff.) and an increasing demand for climate-friendly products such as e-mobility. These opportunities and risks are regularly and systematically identified Group-wide. The recommendations from the Task Force on Climate-related Financial Disclosures (TCFD) are continuously implemented and are communicated in the report on opportunities and risks. Building on the opportunities and risk map (p. 130), a special focus is placed on sustainability aspects – especially climate protection targets – and they are anchored deep in the risk evaluation process. We closely examine the significance of sustainability and climate protection themes for the business model and implement measures and set targets to orientate our opportunity and risk management system even more towards climate-related opportunities and risks.

Employees goal dimension

Engagement of employees: Due to the persistent level of competition on the labor market, especially for qualified and highly qualified specialists, there is a fundamental risk when recruiting employees that the company will not be able to secure a sufficient number of employees with the necessary qualifications at the right time. The more intensive measures to strengthen the company's reputation as an employer, the growing interest in jobs in the energy sector and the possibility of tapping into the international job market lessen this risk to some extent. We believe that regular anonymous employee surveys, from which we derive the People Engagement Index (PEI) as a key performance indicator, are an important tool for seizing opportunities early in the areas of employee development and employee loyalty (p. 101).

Occupational safety: Risks generally exist in the areas of occupational safety and health protection in our business activities. We counter these risks using comprehensive organizational and procedural measures, such as workplace-specific hazard analyses, to protect employees as well as possible against any adverse consequences. We also view these measures as an opportunity to preserve the capacity of our employees to do their work and to maintain the position of EnBW as an attractive employer. Occupational safety is measured in the employees goal dimension in the form of the key performance indicator LTIF for companies controlled by the Group and LTIF overall (p. 105).

Classification of opportunities and risks

The individual evaluations of the top opportunities/risks tell us – based on the level of opportunity/risk – what effects they could have with a high probability of occurrence on our key performance indicators in the finance goal dimension: adjusted EBITDA, debt repayment potential and from the 2024 financial year the two new key performance indicators share of adjusted EBITDA accounted for by low-risk earnings and proportion of taxonomy-aligned expanded capex. The top opportunities/risks are described after the implementation of risk limitation measures. The financial effects are calculated based on a 98% confidence level (which includes the probability of occurrence and the extent of the damage) and break down as follows:

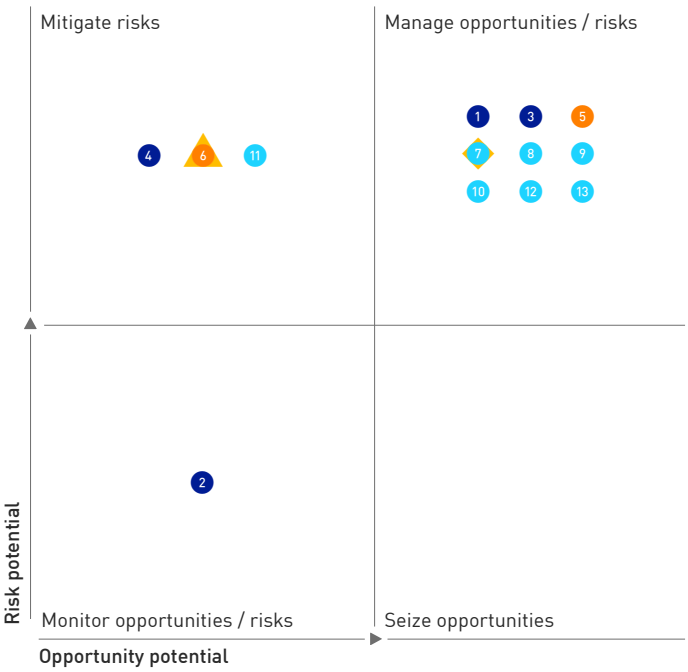
Classification of the level of opportunity/risk

	Adjusted EBITDA	Net debt
Low	< €200 million	< €600 million
Moderate	≥ €200 million to < €550 million	≥ €600 million to < €2,000 million
Significant	≥ €550 million to < €1,000 million	≥ €2,000 million to < €3,500 million
Material	≥ €1,000 million	≥ €3,500 million

Opportunity and risk position

The following diagram illustrates how the opportunity and risk position is reported to the Board of Management and the audit committee of the Supervisory Board. The arrangement of the top opportunities/risks in the quadrants indicates how EnBW can employ control measures to exploit the opportunities or to counteract the risks.

Top opportunities/risks as of 31/12/2023



Top opportunities/risks

Cross-segment

1 Market prices of financial investments
2 Discount rate applied to pension provisions
3 Margins / liquidity requirements
4 State-sponsored cyberattacks due to the war between Russia and Ukraine

Smart Infrastructure for Customers

5 Competitive environment
6 Incidents relating to battery storage systems

Sustainable Generation Infrastructure

7 Fluctuations in energy yield in the North Sea and Baltic Sea
8 Expansion of major projects
9 Hedging
10 Power plant optimization
11 Credit risk in energy trading
12 Availability of power plants
13 Dismantling of nuclear power plants

▲ New opportunity / new risk ◆ Task Force on Climate-related Financial Disclosures (TCFD)

Details on the top opportunities/risks and their potential effects on the relevant performance indicators are listed in the following section.

The following top opportunities/risks were new in 2023:

- Incidents relating to battery storage systems

Cross-segment opportunities and risks

Our company faces general risks from legal proceedings due to our contractual relationships with customers, business partners and employees. To a limited extent, we are also conducting legal proceedings relating to topics in the area of corporate law. For this purpose, adequate accounting provisions are made or, in the event of a probability of occurrence of <50%, adequate contingent liabilities. As a consequence, there is also an opportunity of positive effects on earnings if these provisions can be reversed once again. In addition, various court cases, investigations by authorities or proceedings and other claims are pending against EnBW. The chances of these being successful are, however, considered remote or as not sufficiently substantiated and are therefore not reported under contingent liabilities and other financial obligations.

In connection with these types of legal proceedings, we also recognize the water concession risk in Stuttgart. In the court proceedings dealing with the takeover of the water grid after the water concession in the state capital Stuttgart (LHS) expires, LHS and EnBW are still striving to reach an amicable settlement. These court proceedings have been ongoing since 2013 and suspended several times for mediation talks. Unfortunately, it was not possible to reach such an agreement due to a difference of opinion on the valuation. Therefore, there continues to be a risk in 2024 of losing the water grid without receipt of adequate compensation.

Strategic/sustainable opportunities and risks

Financial opportunities and risks

1 **Market prices of financial investments:** The financial investments managed through the asset management system are subject to risks that arise from price losses and other losses in value as a result of the volatile financial market environment. The significant increase in interest rates could lead to higher refinancing costs and negatively impact the level of debt as a result. To improve the opportunity/risk ratio of the portfolio, greater focus is currently being given to sustainability criteria in our investments. There is a moderate level of opportunity and risk in 2024 and 2025. This will have an impact on net debt and thus on the key performance indicator debt repayment potential.

2 **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 31 December 2023, the discount rate was 3.15%, which was down 0.55 percentage points on the rate at the end of 2022 (3.7%). Against the background of the expected development of interest rates, we identify a significant level of opportunity and risk for 2024 and a material level of opportunity and risk for 2025. This will have an impact on net debt and thus on the key performance indicator debt repayment potential.

3 **Margins/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. There is a significant level of opportunity and a moderate level of risk for 2024 with an impact on net debt and thus on the key performance indicator debt repayment potential.

4 **State-sponsored cyberattacks due to the war between Russia and Ukraine:** The war is also being accompanied by attacks in cyberspace and the risk of state-sponsored cyberattacks remains high. According to information obtained by the Federal Office for Information Security, the threat of possible 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 moderate level of risk in this area in 2024 and a low level of risk in 2025. 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. In addition, it would have an impact on the key performance indicator share of adjusted EBITDA accounted for by low-risk earnings.

Compliance opportunities and risks

Compliance risk assessments focus, in particular, on assessing risks and defining appropriate preventative measures in the compliance risk areas of corruption, antitrust law and data protection.

Risks for which we derive measures for fighting corruption and bribery primarily exist in sales activities relating to local authority/political business activities when dealing with public officials. Important preventative measures, especially training and advisory services, are described on p. 39 ff..

The incorrect handling or illicit disclosure or use of personal data poses data protection risks. These risks exist in view of the digital transformation of many business activities. Advisory and awareness services and process controls are in place to guarantee adherence to legal data protection requirements in the Group. Company-specific measures are coordinated via the compliance and data protection department.

Smart Infrastructure for Customers segment

Financial opportunities and risks

5 **Competitive environment:** There is a risk that the legislative framework could have an impact on the competitive situation and sales activities. This affects all EnBW brands in the electricity, gas and energy solutions business, in combination with the volatile procurement prices on the market. The risk of bad debt has reduced but nevertheless still exists. Opportunities currently exist, for example, in the expansion of the range of electromobility products and services, the provision of a broader range of customer-specific products and services, sustainable energy industry services and energy solutions, and through aligning sales activities more towards these products and services. There is a low level of opportunity and risk for 2024 and 2025 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.

6 **Incidents relating to battery storage systems:** In response to six incidents relating to battery storage systems produced by a subsidiary, we carried out a careful investigation of the systems and have implemented a comprehensive range of measures. Appropriate provisions were formed to cover the subsequent costs that were incurred. In terms of any remaining residual risks, there could be a low level of risk for 2024 and 2025 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.

Sustainable Generation Infrastructure segment

Financial opportunities and risks

7 **Fluctuations in energy yield in the North Sea and Baltic Sea:** There are generally opportunities and risks associated with 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 a low level of opportunity and risk for 2024 and 2025 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. In addition, there would be an impact on the key performance indicator share of adjusted EBITDA accounted for by low-risk earnings.

8 **Expansion of major projects:** There are uncertainties with respect to major projects, especially in the offshore sector, until the time the final investment decision is taken due to changes that may be made to regulatory framework conditions. There may also be additional effects arising from increasing prices and the limited availability of materials and raw materials. We have taken the decision to invest in one of our major projects. This could have an impact on the key performance indicator proportion of taxonomy-aligned expanded capex.

9 **Hedging:** When selling generated electricity volumes, EnBW is exposed to the risk of falling electricity prices and the risk of the unfavorable development of fuel prices in relation to electricity prices. The concept underlying our hedging strategy not only limits risk but also seeks to exploit opportunities. The EnBW Group has exposure to foreign exchange risks from procurement and the hedging of prices for its fuel requirements, as well as from gas and oil trading business. There is a low level of opportunity and risk for 2025 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.

10 **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. There is a low level of opportunity and risk for 2024 and 2025 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.

11 **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 monitoring credit lines very closely, conducting stress tests and introducing measures to reduce its impact. There is a low level of risk for 2024 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.

12 **Availability of power plants:** There is a general opportunity and risk that exogenous and endogenous factors will have an influence on the planned availability of our power plants and could thus increase or decrease earnings. There is a low level of opportunity and a moderate level of risk in 2024 and a low level of opportunity and risk in 2025 with respect to the pricing assumptions used for our planning. 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.

Impairment losses and impending losses on onerous contracts: As a result of changes to the conditions in the energy industry, there is a general risk that impairment losses on power plants and the formation of provisions for impending losses on onerous contracts for long-term electricity procurement agreements could have a negative impact on earnings. As a result of the reversals of impairment losses on the conventional generation plants in the 2022 financial year, there is an increased risk of impairment losses in the future. We anticipate further impairment losses on the offshore wind farms due to the fact that they will have successively fewer operating years with EEG funding in the future.

Operative opportunities and risks

13 **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 both 2024 and 2025 with an impact on net debt and thus on the key performance indicator debt repayment potential.

Changes compared to the 2022 financial year

The following opportunities/risks are no longer included in the reporting because they were taken into account in the planning, the level of opportunity/risk has reduced or they were reported under other individual themes:

- Legislative and regulatory consequences
- Non-availability of critical materials and services
- Risks to the procurement and supply chain in the sales environment
- Additional expenses for the grid reserve and redispatch

Link to the key performance indicators

The top opportunities/risks can have an impact on our key performance indicators, whereby the effects on the non-financial key performance indicators are potential and long term in nature and more difficult to measure. They have thus been shown less boldly in the following diagram.

Linking the top opportunities/risks with the key performance indicators

Top opportunities/risks	A	B	C	D	E	F	G	H	I	J	K	L	M	N
Key performance indicators														
Financial performance indicators	A Adjusted EBITDA B Debt repayment potential C Share of adjusted EBITDA accounted for by low-risk earnings D Proportion of taxonomy-aligned expanded capex				**Strategic performance indicators**			**Non-financial performance indicators**						
					Overall share of adjusted EBITDA: E Smart Infrastructure for Customers F System Critical Infrastructure G Sustainable Generation Infrastructure			H Reputation Index I EnBW / Yello Customer Satisfaction Index J SAIDI electricity K People Engagement Index (PEI) L LTIF for companies controlled by the Group / LTIF overall M Installed output of RE and share of generation capacity accounted for by RE N CO_2 intensity						
Cross-segment														
1 Market prices of financial investments		●												
2 Discount rate applied to pension provisions		●												
3 Margins / liquidity requirements		●												
4 State-sponsored cyberattacks due to the war between Russia and Ukraine	●	●	●		●	●	●							○
Smart Infrastructure for Customers														
5 Competitive environment	●	●			●			○	○		○			
6 Incidents relating to battery storage systems	●	●			●			○			○			
Sustainable Generation Infrastructure														
7 Fluctuations in energy yield in the North Sea and Baltic Sea	●	●	●				●							○
8 Expansion of major projects				●									○	○
9 Hedging	●	●					●							
10 Power plant optimization	●	●					●							○
11 Credit risk in energy trading	●	●					●							
12 Availability of power plants	●	●					●	○						○
13 Dismantling of nuclear power plants		●						○						

● Direct effect
○ Potential / long-term effect
◆ Task Force on Climate-related Financial Disclosures (TCFD)

Overall assessment by the management

The significant increase in interest rates on the capital market could have a negative impact on refinancing costs and, as a result, on the level of debt. The growing threat of state-sponsored cyberattacks around the world continues to pose a high risk and the war between Russia and Ukraine continues to exacerbate the situation. There is still uncertainty with respect to the development of political and economic framework conditions for the energy sector. These factors are also influencing the deployment and availability of our power plants. There continue to be other planning uncertainties, especially with respect to our wind power plants due to natural fluctuations in the wind yield. Although this harbors risks, it can also offer opportunities with respect to the availability and direct distribution of power plant capacities, as well as in the area of hedging.

No risks currently exist that might jeopardize the EnBW Group as a going concern.

Disclosures pursuant to sections 289a (1) and 315a (1) German Commercial Code (HGB) and explanatory report of the Board of Management

In the following, the Board of Management provides the information prescribed by sections 289a (1) and 315a (1) HGB and explains this in accordance with section 176 (1) sentence 1 AktG.

Composition of the subscribed capital and shares in capital

The composition of the subscribed capital is described and explained in the notes to the annual and consolidated financial statements in the section "Equity." Direct or indirect shares in capital that exceed 10% of the voting rights are described and explained in the notes to the annual financial statements in the sections "Shareholder structure" and "Disclosures pursuant to sections 33 ff. German Securities Trading Act (WpHG)" and the notes to the consolidated financial statements in section "Related parties (entities)." Information and explanations about the company's treasury shares are presented below and can be found in note 20 of the notes to the consolidated financial statements (p. 223).

Restrictions relating to voting rights or transferability of shares

Agreements were reached on 22 December 2015 between, on the one hand, Zweckverband Oberschwäbische Elektrizitätswerke (Zweckverband OEW) and OEW Energie-Beteiligungs GmbH and, on the other, the Federal State of Baden-Württemberg, NECKARPRI GmbH and NECKARPRI-Beteiligungsgesellschaft mbH, which include clauses relating to restrictions of authorization over EnBW shares held by these parties and a general mutual obligation of both main shareholders to maintain parity investment relationships in EnBW AG with respect to each other. Restrictions relating to voting rights no longer exist to the knowledge of the Board of Management since the aforementioned direct and indirect EnBW shareholders annulled a shareholder agreement on 22 December 2015 that had previously existed between them.

Legal provisions and statutes on the appointment and dismissal of members of the Board of Management and amendments to the Articles of Association

Pursuant to section 84 AktG in conjunction with section 31 MitbestG, responsibility for the appointment and dismissal of members of the Board of Management rests with the Supervisory Board. This competence is stipulated in article 7 (1) sentence 2 of the Articles of Association of EnBW AG. If, under exceptional circumstances, a necessary member of the Board of Management is missing, section 85 AktG requires that a member of the Board of Management be appointed by the court in urgent cases. The Annual General Meeting has the right to make changes to the Articles of Association in accordance with section 119 (1) no. 6 AktG. The specific rules of procedure are contained in sections 179 and 181 AktG. For practical reasons, the right to amend the Articles of Association was transferred to the Supervisory Board where such amendments affect the wording only. This option pursuant to section 179 (1) sentence 2 AktG is embodied in article 18 (2) of the Articles of Association. Pursuant to section 179 (2) AktG, resolutions by the Annual General Meeting to amend the Articles of Association require a majority of at least three quarters of the capital stock represented when passing the resolution, unless the Articles of Association stipulate a different majority, which, however, for any amendment to the purpose of the company can only be higher. Pursuant to article 18 (1) of the Articles of Association, resolutions by the Annual General Meeting require a simple majority of the votes cast, unless legal regulations or the Articles of Association stipulate otherwise. If the law requires a larger majority of the votes cast or of the capital stock represented when passing the resolution, the simple majority suffices in those cases where the law leaves the determination of the required majority to the Articles of Association.

Authority of the Board of Management regarding the possibility to issue or redeem shares

No authorized or conditional capital nor any authorization of the Annual General Meeting pursuant to section 71 (1) no. 8 AktG for the purchase of treasury shares by the company currently exists at EnBW AG. Therefore, the company may only acquire treasury shares on the basis of other reasons justifying such purchases in accordance with section 71 (1) AktG. As of 31 December 2023, the company holds 5,749,677 treasury shares which were purchased on the basis of earlier authorizations in accordance with section 71 (1) no. 8 AktG. The company's treasury shares can be sold on the stock exchange or by public offer to all company shareholders. The use of treasury shares, in particular their sale, in any other way can only occur within the scope of the resolution issued by the Annual General Meeting on 29 April 2004. The treasury shares held by EnBW AG do not grant the company any rights in accordance with section 71b AktG.

Material agreements of the company subject to the condition of a change of control as a result of a takeover bid and the resulting effects

The following material agreements involving EnBW AG and individual companies in the EnBW Group are subject to the condition of a change of control following a takeover bid as defined by sections 289a (1) no. 8 and 315a (1) no. 8 HGB:

The following material financing agreements of EnBW AG will become due for repayment given a change of control, insofar as the purchaser of the shares is not the Federal State of Baden-Württemberg or Zweckverband OEW or another German state-owned public law legal entity:

- sustainability-linked syndicated credit line with a volume of €1.5 billion
- committed credit lines with banks with a volume of €1.7 billion
- bilateral bank loans with a volume of around €1.8 billion
- promissory notes with a volume of €0.5 billion
- a bond issued under the Debt Issuance Program with a volume of JPY 20 billion
- a US private placement with an equivalent value of around US$0.9 billion

The following material financing agreements of Stadtwerke Düsseldorf AG (SWD AG) will become due for repayment given a change of control, including an indirect change of control, if, after the change of control, the majority of shares in SWD AG are not held directly or indirectly by German legal entities under public law and the City of Düsseldorf does not hold at least 25.05% of the shares in SWD AG:

- promissory notes with a volume of around €0.2 billion
- bank loans/credit lines with a volume of around €0.5 billion

The following material financing agreements of VNG AG will become due for repayment given a change of control, including an indirect change of control, if, after the change of control, the majority of shares in VNG AG are not held directly by German public-sector shareholders or indirectly by these shareholders via controlled legal entities:

- consortium bank loan and bilateral credit lines with a volume of €1.4 billion
- promissory notes with a volume of around €0.3 billion

In the event of a change of control, the financing instruments described above could become due for repayment under the aforementioned conditions, which would mean that the corresponding debt instruments would have to be refinanced – possibly at less favorable conditions.

Compensation agreements pursuant to sections 289a (1) no. 9 and 315a (1) no. 9 HGB

In the event of the premature termination of service on the Board of Management due to a change of control, the possibility of a severance payment for the member of the Board of Management is limited to the pro rata share of annual remuneration(s) for the residual term of the contract. However, the severance payment must not exceed three times the annual remuneration.

Note

Nos. 4 and 5 of sections 289a (1) and 315a (1) HGB were not relevant for EnBW AG in the 2023 financial year.

Indexes and tables

Index for the non-financial declaration of the EnBW Group and EnBW AG

In accordance with sections 315b and 289b German Commercial Code (HGB), the EnBW Group and EnBW AG have been obligated to issue a non-financial declaration since the 2017 financial year. We comply with the requirements by fully integrating the non-financial declaration into the Integrated Annual Report as part of the combined management report of the EnBW Group and EnBW AG. For all of the aspects required by the HGB and also other aspects that are material from the perspective of EnBW, such as standing in society, customer satisfaction and supply quality, we fulfill the obligations by providing information about concepts, results and measures, performance indicators and opportunities and risks.

Non-financial declaration of the EnBW Group and EnBW AG

Description of the business model	p. 17 f.
Materiality analysis	p. 43
EU taxonomy	p. 107 ff.

			TOP Key performance indicators		
Aspects	**Themes**	**Concepts, results and measures**	**Target achievement 2023**	**Forecast 2024**	**Opportunities and risks**
Fighting corruption and bribery	Compliance	p. 39 ff. p. 55 ff.	–	–	p. 134
Social issues	Corporate citizenship	p. 44 ff.	–	–	p. 134
Respect for human rights	Procurement	p. 52 ff.	–	–	p. 134 f.
Standing in society	Reputation	p. 42 ff. p. 87	TOP Reputation Index p. 87	p. 127	p. 135
Customer satisfaction	Customer proximity	p. 42 ff. p. 87 ff.	TOP Customer Satisfaction Index p. 88	p. 127	p. 135
Supply quality	Supply reliability	p. 92	TOP SAIDI Electricity p. 92	p. 127	p. 135
Environmental issues	Expansion of renewable energies	p. 17 ff. p. 26 ff. p. 93 ff.	TOP Installed output of RE and share of generation capacity accounted for by RE p. 93 f.	p. 128	p. 135
	CO_2 intensity / climate protection	p. 17 ff. p. 26 ff. p. 95 ff.	TOP CO_2 intensity p. 95 ff.	p. 128	p. 135 f.
Employee issues	Engagement of employees	p. 101 ff.	TOP People Engagement Index (PEI) p. 101	p. 128	p. 136
	Occupational safety	p. 104 ff.	TOP LTIF for companies controlled by the Group p. 105	p. 129	p. 136

The non-financial declaration is issued jointly for the EnBW Group and EnBW AG and, unless stated otherwise, covers the group of consolidated companies in accordance with the International Financial Reporting Standards (IFRS). Any differences between statements made for the Group and for EnBW AG are clearly identified in the text. Information on the business model can be found in the section "Business model" (p. 17 f.). We have not identified any material individual risks in the 2023 financial year that have a very high probability of a serious negative impact in relation to the relevant non-financial issues.

Further information on the **GRI content index** can be found on our website.

Online

EnBW has reported in compliance with the GRI Standards for the period from 1 January to 31 December 2023. An audit will be carried out in the second quarter of 2024 as part of the GRI content index service. Our sustainability reporting also complies with the Communication on Progress (COP) requirements for the UN Global Compact and is based to an increasing extent on the UN Sustainable Development Goals. The framework standards and the SDGs have been used as the basis for the non-financial declaration.

Information on the diversity concept can be found in the declaration of corporate management (p. 168).

EY GmbH & Co. KG Wirtschaftsprüfungsgesellschaft has audited the consolidated financial statements and the combined management report including the contents of the non-financial declaration with reasonable assurance and has thus carried out a complete audit (except for the section "Appropriateness and effectiveness of the risk management system and the internal control system (iRM)" in the "Report on opportunities and risks").

Index for the Task Force on Climate-related Financial Disclosures (TCFD)

EnBW started to implement the recommendations of the TCFD in 2017. This implementation was continued in the current financial year. The index also includes other themes besides these where we are working on the further implementation of the TCFD recommendations.

Task Force on Climate-related Financial Disclosures (TCFD)

TCFD element	Themes	Section	Page reference
Governance	• Corporate management	• Corporate governance	p. 37 f.
	• Materiality analysis	• In dialog with our stakeholders	p. 43
	• Investment guidelines	• Strategy, goals and performance management system	p. 36
		• The EnBW Group	p. 80 f.
	• Climate protection initiatives	• In dialog with our stakeholders	p. 43 f.
		• Strategy, goals and performance management system	p. 30 ff.
	• Overall assessment by the management	• Overall assessment of the economic situation of the Group	p. 123
	• Board of Management remuneration	• Corporate governance	p. 37
		• The EnBW Group	p. 86
Strategy	• Robustness of business model / scenario analysis	• Business model	p. 18 f.
	• Strategy, strategic development	• Strategy, goals and performance management system	p. 26 ff.
	• Interdependencies	• Strategy, goals and performance management system	p. 35 f.
	• Materiality analysis	• In dialog with our stakeholders	p. 43
	• Green bonds	• Strategy, goals and performance management system	p. 32
		• The EnBW Group	p. 77
	• General conditions, climate protection	• General conditions	p. 59
Risk management	• Integrated opportunity and risk management including opportunity and risk map	• Report on opportunities and risks	p. 130 ff.
	• Environment goal dimension: opportunities and risks	• Report on opportunities and risks	p. 135 f.
Performance indicators and targets	• Sustainability ratings	• The EnBW Group	p. 76
	• Key performance indicators and long-term targets	• Strategy, goals and performance management system	p. 32 ff.
	• Climate protection targets: Science Based Targets (SBT)	• Strategy, goals and performance management system	p. 30 ff.
	• Environment goal dimension: key performance indicators and other performance indicators	• The EnBW Group	p. 93 ff.
		• Forecast	p. 128

Key performance indicators for the EU taxonomy

Revenue

				Substantial contribution criteria						No significant harm to other EU objectives (DNSH)									
	Code	Revenue	Proportion of revenue	Climate protection	Climate change adaptation	The sustainable use and protection of water and marine resources	The transition to a circular economy	Pollution prevention and control	The protection and restoration of biodiversity and ecosystems	Climate change mitigation	Climate change adaptation	The sustainable use and protection of water and marine resources	The transition to a circular economy	Pollution prevention and control	The protection and restoration of biodiversity and ecosystems	Minimum social safeguards	Taxonomy-aligned proportion of revenue 2022	Category enabling activities	Category transitional activities
		in € million	in %	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	in %	E/-	T/-
A. Taxonomy-eligible activities		**7,778.2**	**17.5**																
A.1 Environmentally sustainable activities (taxonomy-aligned)		**7,222.6**	**16.3**														**13.5**		
Electricity generation via photovoltaic technology	CCM 4.1	59.6	0.1	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.1	–	–
Electricity generation via wind power	CCM 4.3	425.6	1.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.4	–	–
Transmission and distribution of electricity	CCM 4.9	4,694.8	10.6	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	9.3	E	–
Storage of electricity[1]	CCM 4.10	1,520.1	3.4	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	3.1	E	–
Production of biogas and biofuels for the transport sector and liquid biofuels[2]	CCM 4.13	116.0	0.3	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.1	–	–
District heating/cooling distribution	CCM 4.15	3.1	0.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.0	–	–
Electricity generation from fossil gaseous fuels	CCM 4.29	0.0	0.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.0	–	T
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30	0.0	0.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.0	–	T
Construction, expansion and operation of systems to extract, treat and supply water	CCM 5.1	212.7	0.5	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.4	–	–
Infrastructure for low-carbon road traffic and public transport	CCM 6.15	190.7	0.4	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.2	E	–
Revenue from environmentally sustainable activities (taxonomy-aligned) (A.1)																			
of which enabling activities		6,405.6	14.4	–	–	–	–	–	–	–	yes	yes	yes	yes	yes	yes	12.6	E	–
of which transitional activities		0.0	0.0	–	–	–	–	–	–	–	yes	yes	yes	yes	yes	yes	0.0	–	T
A.2 Taxonomy-eligible activities that are not taxonomy-aligned		**555.6**	**1.3**																
Production of biogas and biofuels for the transport sector and liquid biofuels[2]	CCM 4.13	3.8	0.0	–	–	–	–	–	–	–	–	–	–	–	–	–	0.1	–	–
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30	551.8	1.3	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0	–	–
Revenue from taxonomy-eligible activities that are not taxonomy-aligned (taxonomy non-aligned activities) (A.2)																			
Total (A.1 + A.2)		**7,778.2**	**17.5**																
B. Taxonomy non-eligible activities		**36,652.5**	**82.5**																
Revenue from non-environmentally sustainable activities (taxonomy-aligned) (B)		**36,652.5**	**82.5**																
Total (A + B)		**44,430.7**	**100.0**																

1 Including 4.5 Electricity generation from hydropower.
2 Including 4.20 Combined heat/cooling and power plants with bioenergy.

Capex [1]

				Substantial contribution criteria						No significant harm to other EU objectives (DNSH)									
	Code	Capex	Proportion of capex	Climate protection	Climate change adaptation	The sustainable use and protection of water and marine resources	The transition to a circular economy	Pollution prevention and control	The protection and restoration of biodiversity and ecosystems	Climate change mitigation	Climate change adaptation	The sustainable use and protection of water and marine resources	The transition to a circular economy	Pollution prevention and control	The protection and restoration of biodiversity and ecosystems	Minimum social safeguards	Taxonomy-aligned proportion of capex 2022	Category enabling activities	Category transitional activities
		in € million	in %	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	in %	E/-	T/-
A. Taxonomy-eligible activities		**4,194.1**	**86.2**																
A.1 Environmentally sustainable activities (taxonomy-aligned)		**4,191.2**	**86.1**														**82.42**		
Electricity generation via photovoltaic technology	CCM 4.1	74.4	1.5	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	3.00	–	–
Electricity generation via wind power	CCM 4.3	855.5	17.6	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	10.05	–	–
Transmission and distribution of electricity	CCM 4.9	2,359.1	48.5	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	51.73	E	–
Storage of electricity [2]	CCM 4.10	38.9	0.8	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.80	E	–
Production of biogas and biofuels for the transport sector and liquid biofuels [3]	CCM 4.13	11.0	0.2	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.54	–	–
Transmission and distribution networks for renewable and low-carbon gases	CCM 4.14	266.2	5.5	yes	no	no	no	no	no		yes	yes	yes	yes	yes	yes	8.42	–	–
District heating/cooling distribution	CCM 4.15	28.7	0.6	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.39	–	–
Electricity generation from fossil gaseous fuels	CCM 4.29	251.3	5.2	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.99	–	T
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30	97.4	2.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.94	–	T
Construction, expansion and operation of systems to extract, treat and supply water	CCM 5.1	27.7	0.6	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.64	–	–
Infrastructure for low-carbon road traffic and public transport	CCM 6.15	181.0	3.7	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	4.92	E	–
Capex from environmentally sustainable activities (taxonomy-aligned) (A.1)																			
of which enabling activities		2,579.0	53.0	–	–	–	–	–	–	–	yes	yes	yes	yes	yes	yes	57.4	E	–
of which transitional activities		348.7	7.2	–	–	–	–	–	–	–	yes	yes	yes	yes	yes	yes	1.9	–	T
A.2 Taxonomy-eligible activities that are not taxonomy-aligned		**2.9**	**0.1**																
Production of biogas and biofuels for the transport sector and liquid biofuels [2]	CCM 4.13	0.1	0.0	–	–	–	–	–	–	–	–	–	–	–	–	–	0.00	–	–
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30	2.8	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	0.07	–	–
Capex from taxonomy-eligible activities that are not taxonomy-aligned (taxonomy non-aligned activities) (A.2)																			
Total (A.1 + A.2)		**4,194.1**	**86.2**																
B. Taxonomy non-eligible activities		**671.6**	**13.8**																
Capex from non-environmentally sustainable activities (taxonomy-aligned) (B)		**671.6**	**13.8**																
Total (A + B)		**4,865.7**	**100.0**																

1 The figures for the previous year have been restated.
2 Including 4.5 Electricity generation from hydropower.
3 Including 4.20 Combined heat/cooling and power plants with bioenergy.

Opex [1]

				Substantial contribution criteria						No significant harm to other EU objectives (DNSH)									
	Code	Opex	Proportion of opex	Climate protection	Climate change adaptation	The sustainable use and protection of water and marine resources	The transition to a circular economy	Pollution prevention and control	The protection and restoration of biodiversity and ecosystems	Climate protection	Climate change adaptation	The sustainable use and protection of water and marine resources	The transition to a circular economy	Pollution prevention and control	The protection and restoration of biodiversity and ecosystems	Minimum social safeguards	Taxonomy-aligned proportion of opex 2022	Category enabling activities	Category transitional activities
		in € million	in %	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no	in %	E/-	T/-
A. Taxonomy-eligible activities		**369.9**	**23.3**																
A.1 Environmentally sustainable activities (taxonomy-aligned)		**367.3**	**23.2**														**22.9**		
Electricity generation via photovoltaic technology	CCM 4.1	-1.7	-0.1	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.4	–	–
Electricity generation via wind power	CCM 4.3	54.7	3.4	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	4.1	–	–
Transmission and distribution of electricity	CCM 4.9	265.7	16.8	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	15.4	E	–
Storage of electricity [2]	CCM 4.10	14.9	0.9	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	1.0	E	–
Production of biogas and biofuels for the transport sector and liquid biofuels [2]	CCM 4.13	15.9	1.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	1.0	–	–
District heating/cooling distribution	CCM 4.15	0.7	0.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.0	–	–
Electricity generation from fossil gaseous fuels	CCM 4.29	0.0	0.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.0	–	T
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30	0.0	0.0	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.0	–	T
Construction, expansion and operation of systems to extract, treat and supply water	CCM 5.1	18.8	1.2	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	1.1	–	–
Infrastructure for low-carbon road traffic and public transport	CCM 6.15	-1.7	-0.1	yes	no	no	no	no	no	–	yes	yes	yes	yes	yes	yes	0.0	E	–
Opex from environmentally sustainable activities (taxonomy-aligned) (A.1)																			
of which enabling activities		278.9	17.6	–	–	–	–	–	–	–	yes	yes	yes	yes	yes	yes	16.4	E	–
of which transitional activities		0.0	0.0	–	–	–	–	–	–	–	yes	yes	yes	yes	yes	yes	0.0	–	T
A.2 Taxonomy-eligible activities that are not taxonomy-aligned		**2.5**	**0.2**																
Production of biogas and biofuels for the transport sector and liquid biofuels [3]	CCM 4.13	0.5	0.0	–	–	–	–	–	–	–	–	–	–	–	–	–	0.0	–	–
High-efficiency co-generation of heat/cool and power from fossil gaseous fuels	CCM 4.30	2.0	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	0.2	–	–
Opex from taxonomy-eligible activities that are not taxonomy-aligned (taxonomy non-aligned activities) (A.2)																			
Total (A.1 + A.2)		**369.8**	**23.3**																
B. Taxonomy non-eligible activities		**1,216.3**	**76.7**																
Opex from non-environmentally sustainable activities (taxonomy-aligned) (B)		**1,216.3**	**76.7**																
Total (A + B)		**1,586.1**	**100.0**																

1 The figures may not add up due to rounding differences.
2 Including 4.5 Electricity generation from hydropower.
3 Including 4.20 Combined heat/cooling and power plants with bioenergy.

Contribution to the environmental objectives of the EU taxonomy

Proportion of taxonomy-aligned and taxonomy-eligible revenue for each environmental objective

	Proportion of revenue/total revenue	
in %	Taxonomy-aligned for each environmental objective	Taxonomy-eligible for each environmental objective
Climate protection	16.3	1.3
Climate change adaptation	0.0	0.0
The sustainable use and protection of water and marine resources	0.0	0.0
The transition to a circular economy	0.0	0.0
Pollution prevention and control	0.0	0.0
The protection and restoration of biodiversity and ecosystems	0.0	0.0

Proportion of taxonomy-aligned and taxonomy-eligible capex for each environmental objective

	Proportion of capex/total capex	
in %	Taxonomy-aligned for each environmental objective	Taxonomy-eligible for each environmental objective
Climate protection	86.1	0.1
Climate change adaptation	0.0	0.0
The sustainable use and protection of water and marine resources	0.0	0.0
The transition to a circular economy	0.0	0.0
Pollution prevention and control	0.0	0.0
The protection and restoration of biodiversity and ecosystems	0.0	0.0

Proportion of taxonomy-aligned and taxonomy-eligible opex for each environmental objective

	Proportion of opex/total opex	
in %	Taxonomy-aligned for each environmental objective	Taxonomy-eligible for each environmental objective
Climate protection	23.2	0.2
Climate change adaptation	0.0	0.0
The sustainable use and protection of water and marine resources	0.0	0.0
The transition to a circular economy	0.0	0.0
Pollution prevention and control	0.0	0.0
The protection and restoration of biodiversity and ecosystems	0.0	0.0

Revenue

Template 1 Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	NO
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	NO
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	YES
Row	Fossil gas related activities	
1.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	YES
2.	The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	YES
3.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	NO

Template 2 Taxonomy-aligned economic activities (denominator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**7,222.6**	**16.3**	**7,222.6**	**16.3**	**–**	**–**
8.	**Total applicable KPI**	**44,430.7**	**100.0**	**44,430.7**	**100.0**		

Template 3 Taxonomy-aligned economic activities (numerator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the applicable KPI**	**7,222.6**	**100.0**	**7,222.6**	**100.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**7,222.6**	**100.0**	**7,222.6**	**100.0**	**–**	**–**

Template 4 Taxonomy-eligible but not taxonomy-aligned economic activities

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	551.8	1.3	551.8	1.3	–	–
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**3.8**	**0.0**	**3.8**	**0.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**555.6**	**1.3**	**555.6**	**1.3**	**–**	**–**

Template 5 Taxonomy non-eligible economic activities

Row	Economic activities	in € million	%
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	139.6	0.3
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**36,512.9**	**82.2**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**36,652.5**	**82.5**

Capex

Template 1 Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	NO
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	NO
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	YES
Row	Fossil gas related activities	
1.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	YES
2.	The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	YES
3.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	NO

Template 2 Taxonomy-aligned economic activities (denominator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	251.3	5.2	251.3	5.2	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	97.4	2.0	97.4	2.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**3,842.5**	**79.0**	**3,842.5**	**79.0**	**–**	**–**
8.	**Total applicable KPI**	**4,865.7**	**100.0**	**4,865.7**	**100.0**		

Template 3 Taxonomy-aligned economic activities (numerator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	251.3	6.0	251.3	6.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	97.4	2.3	97.4	2.3	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the applicable KPI**	**3,842.5**	**91.7**	**3,842.5**	**91.7**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**4,191.2**	**100.0**	**4,191.2**	**100.0**	**–**	**–**

Template 4 Taxonomy-eligible but not taxonomy-aligned economic activities

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	2.8	0.1	2.8	0.1	–	–
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**0.1**	**0.0**	**0.1**	**0.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**2.9**	**0.1**	**2.9**	**0.1**	**–**	**–**

Template 5 Taxonomy non-eligible economic activities

Row	Economic activities	in € million	%
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0.2	0.0
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**671.4**	**13.8**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**671.6**	**13.8**

Opex

Template 1 Nuclear and fossil gas related activities

Row	Nuclear energy related activities	
1.	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	NO
2.	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	NO
3.	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	YES
Row	Fossil gas related activities	
1.	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	YES
2.	The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	YES
3.	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	NO

Template 2 Taxonomy-aligned economic activities (denominator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**367.3**	**23.2**	**367.3**	**23.2**	**–**	**–**
8.	**Total applicable KPI**	**1,586.1**	**100.0**	**1,586.1**	**100.0**		

Template 3 Taxonomy-aligned economic activities (numerator)

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
5.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	0.0	0.0	0.0	0.0	–	–
6.	Amount and proportion of taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the numerator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the numerator of the applicable KPI**	**367.3**	**100.0**	**367.3**	**100.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy-aligned economic activities in the numerator of the applicable KPI**	**367.3**	**100.0**	**367.3**	**100.0**	**–**	**–**

Template 4 Taxonomy-eligible but not taxonomy-aligned economic activities[1]

Row	Economic activities	Amount and proportion (the information is to be presented in monetary amounts and as percentages)					
		CCM + CCA		Climate change mitigation (CCM)		Climate change adaptation (CCA)	
		in € million	%	in € million	%	in € million	%
1.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
2.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
3.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
4.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
5.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	2.0	0.1	2.0	0.1	–	–
6.	Amount and proportion of taxonomy-eligible but not taxonomy-aligned economic activity referred to in Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–	–	–	–	–
7.	**Amount and proportion of other taxonomy-eligible but not taxonomy-aligned economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**0.5**	**0.0**	**0.5**	**0.0**	**–**	**–**
8.	**Total amount and proportion of taxonomy eligible but not taxonomy-aligned economic activities in the denominator of the applicable KPI**	**2.5**	**0.2**	**2.5**	**0.2**	**–**	**–**

1 The figures may not add up due to rounding differences.

Template 5 Taxonomy non-eligible economic activities

Row	Economic activities	in € million	%
1.	Amount and proportion of economic activity referred to in row 1 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.26 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
2.	Amount and proportion of economic activity referred to in row 2 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.27 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
3.	Amount and proportion of economic activity referred to in row 3 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.28 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	20.0	1.3
4.	Amount and proportion of economic activity referred to in row 4 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.29 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
5.	Amount and proportion of economic activity referred to in row 5 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.30 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
6.	Amount and proportion of economic activity referred to in row 6 of Template 1 that is taxonomy-non-eligible in accordance with Section 4.31 of Annexes I and II to Delegated Regulation 2021/2139 in the denominator of the applicable KPI	–	–
7.	**Amount and proportion of other taxonomy-non-eligible economic activities not referred to in rows 1 to 6 above in the denominator of the applicable KPI**	**1,196.3**	**75.4**
8.	**Total amount and proportion of taxonomy-non-eligible economic activities in the denominator of the applicable KPI**	**1,216.3**	**76.7**