# Half-year Financial Report 2022

EWE

## Introduction

The half-year financial report of EWE AG meets the requirements of the applicable regulations of the German Securities Trading Act [“Wertpapierhandelsgesetz”: WpHG] and, pursuant to Sec. 115 WpHG, comprises condensed consolidated interim financial statements, an interim group management report and a responsibility statement.

The condensed consolidated interim financial statements were prepared in accordance with the International Financial Reporting Standards (IFRS) applicable to interim reporting as issued by the International Accounting Standards Board (IASB) and adopted by the European Union (EU).

The half-year financial report should be read together with our financial report for fiscal year 2021. The latter contains a comprehensive discussion of our business activities and explanatory notes on the financial ratios used.

# Interim Group Management Report



# Condensed Consolidated Interim Financial Statements



# Further Information

# Business and background

## The EWE Group

### Organization and basis of reporting

We are an energy group with core activities in the fields of energy, telecommunications and information technology (IT). We operate energy grids, are active in renewable energies and tap the joint potential of energy, telecommunications and IT. The EWE Group comprises EWE Aktiengesellschaft ("EWE AG"), a stock corporation under German law, and its subsidiaries. Our Company's headquarters are located in Germany with group headquarters being located in Oldenburg. In the first half of 2022, the Group had an average of 9,992 employees (31 December 2021: 9,575 employees).

### Description of business activities

#### Renewable Energies segment

In the renewable energies area, we plan, build and operate onshore wind farms to generate renewable power, often under investment and partner models. We market our expertise in the construction and operation of wind farms internationally. We also operate offshore with our wind farms. Generation capacities (including our share in capacities from investments accounted for using the equity method) amount to 2,509.2 megawatts as of 30 June 2022 (31 December 2021: 2,514.0 megawatts).

#### Infrastructure segment

In the grids business area, we operate power grids and natural gas networks in the Ems-Weser-Elbe region of Germany as well as natural gas networks in Brandenburg, on the island of Rügen and in North Western Pomerania with a grid length totaling 141.8 thousand kilometers (situation at 31 December 2021). Thanks to very low susceptibility to failure, our distribution grids are some of the safest in Europe: compared with power outages of an average of 11 minutes per customer in Germany in 2020, outages at the EWE Group averaged just 5 minutes, and just under 6 minutes in 2021. We also operate a wide telecommunications network of 57.7 thousand kilometers (situation at 31 December 2021). The Company is continuously striving to expand broadband access in the rural areas of northwestern Germany.

In the gas storage business area, we construct, acquire and operate systems to store as well as inject and withdraw gaseous and liquid fuels, such as high-pressure natural gas, hydrogen, liquefied petroleum gas and compressed air, and provide all corresponding services. In this business area, we operate a total of 37 underground chambers (situation at 31 December 2021) in locations throughout northern Germany, such as in Rüdersdorf near Berlin, and sell storage capacity to internal and external customers. With a total storage capacity of 2.0 billion cubic meters (situation at 31 December 2021), we are one of the largest operators of gas storage chambers in the German-European natural gas market.

### Market segment

The energy and telecommunications business area combines the sale of energy and telecommunications products. The focus of telecommunications sales lies primarily in northwestern Germany, parts of Brandenburg, on the island of Rügen and the region of East Westphalia-Lippe. We support commercial customers nationwide. Through the establishment of new business activities, such as power storage, contracting solutions, electromobility and energy audits, we are currently transitioning into a service provider which – in addition to the conventional products of power, gas, heat and telecommunications – can provide customer-specific services and solutions, thereby creating new business opportunities.

The trading business area encompasses a variety of services related to procurement and sales of power and gas. Furthermore, the trading business area optimizes the entire energy portfolio of the EWE Group and offers its customers and partners a broad range of portfolio and balancing group management services. The trading business area also supports operators of wind and solar farms nationwide in directly marketing their electricity. Moreover, the trading business area serves to provide market access to our Group's sales and generation activities.

EWE AG and Telekom Deutschland GmbH, Bonn, established a joint venture, Glasfaser NordWest GmbH & Co. KG, Oldenburg, in 2020 for the purpose of expanding the fiber-optic network in northwestern Germany over the next 10 years. This is one of the largest infrastructure projects in the history of the EWE Group and will create long-term infrastructure.

### swb segment

This segment essentially encompasses our business activities in the cities of Bremen and Bremerhaven. swb and its subsidiaries are active in the fields of power, natural gas, heating, and telecommunications. Furthermore, we operate several drinking water networks and are involved in the waste water business in northwestern Germany. In the first half of 2022, the total volume of waste water purified was 8.7 million cubic meters (first half-year 2021: 8.5 million cubic meters). This segment also encompasses the continuously shrinking "Conventional Generation and Disposal" business unit which is contained exclusively within the swb segment.

### Other segment

The information technology business area includes IT consulting services with an integrated approach, particularly for the energy and telecommunications industries, the public sector, industrial companies and service providers. Our key areas of expertise lie in consulting, system integration, and applications and system management. In this context, we place a focus on energy-related software products.

In a cross-segment approach, we are also working on numerous innovations currently at varying degrees of maturity to develop a portfolio of new business models with a sharp digital focus and are penetrating new target groups and markets with additional offerings. These activities pertain to areas such as mobility, distributed generation and storage, and data-driven business models in the platform economy. They are rounded off with investments in start-ups, from which both sides derive mutual strength thanks to close cooperation.

In addition, our international activities in Poland, that is the distribution and sale of natural gas, are a key component of our business activities in the Other segment.

### Group Central Division

EWE AG manages the EWE Group as its holding company. Its duties lie in the strategic and cross-market development of the segments as well as strategic planning and ensuring the Group's financing. In addition, EWE AG performs centralized corporate services for the Group's companies.

## Economic environment

### Market development

EWE's business development is shaped by developments in the energy and telecommunications sectors as well as general global economic developments.

#### Energy market and prices

International commodity prices, particularly of oil, gas and coal, as well as the prices of $CO_2$ certificates are the predominant factors that affect price trends on the power and gas markets.

Commodities have trended upwards across the board to date in 2022, the main driver being the Russian invasion of Ukraine on 24 February 2022, which led to significant price increases and increased volatility in the energy markets. All prices mentioned below are the settlement prices unless other stated.

The leading indicator for the commodities and energy markets – the crude oil market – grew significantly in the first six months of the year. The price of the front-month contract for Brent stood at 78.98 USD/bbl at the end of the first trading day of the year, which was also its lowest price in the first half of 2022. The price peaked at 127.98 USD/bbl on 27 March before closing at 114.81 USD/bbl on 30 June 2022.

The electricity market was mainly influenced by developments in the gas and coal markets. The front-year contract for power (base load) in Germany (Base Cal 23) as the leading index closed on the European Energy Exchange (EEX) at 121.63 EUR/MWh on 3 January. The contract then fell to its lowest price so far this year of 113.59 EUR/MWh as of 13 January. After moving sideways until mid-February, when the war in Ukraine commenced the contract price rose to its maximum of 295.23 EUR/MWh, which was also the last closing price of the first half of 2022.

The gas market was shaped by a high level of anxiety and initially low storage levels as well as very scarce supply. The price for the TTF front-year contract for 2022 started at a closing price of 45.24 EUR/MWh at the end of the first trading day of 2022. Shortly afterwards it reached its lowest price so far this year at 42.75 EUR/MWh on 18 January. From mid-February onwards, prices began to rally in line with the electricity market. After an interim high on 7 March of 83.25 EUR/MWh, the price fell again for a few days, but then resumed its climb, reaching its half-year peak of 106.71 EUR/MWh on 30 June 2022.

The front-year contract for steam coal (API2 Cal 23) started at 90.80 USD/t at the beginning of 2022, which was also the lowest price so far this year. This was followed by a highly volatile and bullish phase from 24 February until mid-March this year, before the contract began a sustained upward trajectory, ending at its most recent peak of 263.56 USD/t on 21 June. The first half of the year ended at 252.00 USD/t, which represents an increase of 177.5 per cent on the first closing price.

With a 9.4 per cent increase over the past six months, the market for $CO_2$ emissions still showed the weakest development of the markets under observation, but was also very volatile. The first closing price of the year for the EUA futures Dec 23 was 84.92 EUR/t. The peak of the first half of the year was reached on 8 February at 98.30 EUR/t. The contract was quoted at its year-to-date low of 56.61 EUR/t on 7 March and then closed the first half of the year at 92.94 EUR/t.

Noticeably flagging economic growth, mild weather conditions and significant energy savings in light of sharp price increases led to a 3.5 per cent decline in energy consumption in Germany in the first six months of the current year. According to preliminary calculations by the Working Group on Energy Balances ["Arbeitsgemeinschaft Energiebilanzen": AGEB], domestic primary energy consumption totaled 203.0 million tons of coal equivalent (million TCE) in the first half of 2022.

The AGEB assumes that the high energy prices have led to short-term energy savings, but will also trigger long-term savings because investments in reducing energy consumption are more worthwhile.

Economic growth, which fell to 1.5 per cent in the first six months of 2022, only increased consumption to a limited extent. According to AGEB calculations, adjusting for the effect of mild weather, energy consumption would have fallen by only 0.5 per cent. Taking into account the temperature effect and the further reduction in the level of energy stored by consumers, energy consumption would even have risen slightly in the first half of the current year. Economic growth and demographics fueled consumption, though this effect was more than offset by the price-driven savings.

Natural gas consumption fell by a significant 14.7 per cent in the first six months of the current year, the main reason for this development being the milder weather and the high price level. In addition, less natural gas was used for electricity generation because of higher yields from renewable energies, especially in the first quarter of 2022.

The consumption of hard coal increased by 9.2 per cent in total, with the use of hard coal in power plants rising by 25.5 per cent. This development was influenced by the change in the competitive situation on the European electricity market. The iron and steel industry reduced its demand by 5.0 per cent.

Lignite consumption increased by 10.6 per cent against the same previous-year period, but was around 5 per cent lower than the comparative 2019 figure, continuing to reflect the longer-term downward trend. In the first two months of the current year, the high electricity yield from wind farms led to a decline in lignite-fired power generation, while from March to June, the demand for electricity from lignite power stations increased significantly as less electricity from wind turbines was fed into the grid. In addition, electricity from lignite-fired power stations replaced some of the electricity previously generated by the nuclear power plants shut down at the end of 2021 and contributed to supply security on the European electricity market. Nuclear power generation fell by just over half in the reporting period compared to the first half of the previous year. The sharp decline is attributable to the decommissioning of plants in Grohnde, Brokdorf and Gundremmingen and the related reduction in installed capacity.

Renewable energies contributed 4.7 per cent more in the first half of 2022. With exceptionally good wind conditions, especially in February, wind farms increased their contribution by around 18 per cent in the first six months of the year. By contrast, hydroelectric power stations supplied around 1 per cent less electricity than in the previous-year period. Solar energy increased by around 20 per cent. Biomass, which supplies more than half of renewable energy consumption, fell slightly by just under 2 per cent overall due to weather conditions. According to preliminary calculations by the AGEB, energy-related $CO_2$ emissions increased by around 1 per cent in the first half of the current year, as the reduction in nuclear power generation and in the use of natural gas for electricity generation was mainly covered by hard coal and lignite.

### Telecommunications market

The first six months of fiscal year 2022 continued to be shaped by the relentlessly tough competition in the telecommunications market for products and the expansion of fiber-to-the-home (FTTH) networks. As a result, average revenue from landline and internet products remains under pressure. Developments in the field of mobile working continued to unfold in the telecommunications market. In the private customer environment, there is still demand for higher bandwidths. The same holds true for the business customer segment.

Telecommunications is expected to continue its growth seen in the previous year with an increase of 5.3 per cent to 67.7 billion euros. Growth of 2.9 per cent (to 11.9 billion euros) and 2.7 per cent (to 6.9 billion euros) is forecast for the telecommunications end devices and telecommunication infrastructure submarkets, respectively. Investments in telecommunications services increased in the first half of 2022, up by 1.0 per cent to 48.8 billion euros. (source: bitkom, July 2022).

## Political and regulatory environment

### Europe

#### European Green Deal
At the beginning of the parliamentary term (2019 to 2024), the European Commission presented the European "Green Deal" as a top priority. The Green Deal sets out a roadmap for key strategies and measures for making the continent climate-neutral by 2050. This climate neutrality target will be incorporated into all future legislative proposals, such as the "Fit for 55" package for the energy sector that was unveiled in the second half of 2021 and the "REPowerEU" plan from May 2022. The individual initiatives associated with them have impacts on nearly all of the EWE Group's business activities.

#### Subsidizing broadband expansion
The threshold beneath which subsidies previously applied in terms of internet speed was 30 Mbit/s. This means that funding procedures were only permitted for addresses with an internet speed below this threshold. With the entry into force of the new funding program on 26 April 2021, the threshold is 100 Mbit/s until 31 December 2022. From 2023, the threshold will be abolished, i.e., the government can grant subsidies wherever there is no FTTH/B or upgraded television cable (Docxis 3.1) or where a company announces its fiber-optic network expansion plans for the next three years in the market consultation process. In the case of the subsidized expansion of vectoring, the networks can apply for protection against having to reapply for funding for the period for which the funds have been earmarked (generally seven years). The transitional period from 2021 to 2022 does not apply to socioeconomic focus areas such as schools, hospitals, traffic hubs and small and medium-sized companies comprising three or more employees. It is becoming apparent that the priority mechanism demanded by the best part of the telecommunications market will not be introduced for funding after the threshold is phased out in 2023. Rather, the gigabit strategy published by the Federal Ministry for Digital and Transport ["Bundesministerium für Digitales und Verkehr": BMDV] on 13 July 2022 works on the assumption that that there will be a "natural prioritization." In the event that a flood of funding procedures arises from 2023 that funding bodies, network planners and civil engineers struggle to cope with, the gigabit strategy reserves the right for the ministry to intervene with binding measures to structure the funding. In order to support a meaningful prioritization of funding, the potential for commercial expansion is to be scientifically determined. According to the gigabit strategy, however, market consultations remain permissible even where such potential is identified.

#### Legislative package on the digital single market: Data Governance Act
One of the EU Commission's priorities for 2019 to 2024 is a European data strategy, at the core of which is a single market for data. This European Data Strategy is a comprehensive legislative agenda aimed at ensuring that data can be reused across the EU and its sectors while upholding European values and regulations, in particular laws on data and consumer protection. As part of the legislative package, the EU Data Governance Act was published on 3 June 2022 and has thus entered into force. The regulation allows the re-use of certain public sector data and thus creates new scope for digital business models, also for the EWE Group.

### Germany

#### EEG surcharge 2021
As of 1 January 2022, the EEG surcharge fell to 3.723 cents per kilowatt hour. Since 2021, the promotion of renewable energies has been partly financed using proceeds from the $CO_2$ pricing introduced in 2021 and from the stimulus package. In order to provide relief for consumers, the EEG Surcharge Relief Act ["EEG-Umlage-Entlastungsgesetz"] came into force on 28 May 2022, reducing the EEG surcharge by law to 0.00 cents/kWh as of 1 July 2022. From this date, all end consumers are to benefit from the reduction.

### Heating Costs Billing Ordinance

Since 1 January 2022, building owners have been required to provide tenants and apartment owners with monthly billing and consumption information, including details on the fuel mix. This requires remotely readable meters or heating cost distributors to be fitted in the buildings. The requirement is part of the Heating Costs Billing Ordinance [“Heizkostenabrechnungsverordnung”: HeizkostenV], which took effect on 1 December 2021. It affects the business of EWE VERTRIEB GmbH, Oldenburg (EWE VERTRIEB).

### Charging Station Ordinance

The Charging Station Ordinance [“Ladesäulenverordnung”: LSV] came into force on 1 January 2022. It regulates ad hoc payments at publicly accessible e-charging stations with a view to simplifying the process by establishing a standard payment system comprising an integrated card terminal. This applies to charging points with a charging capacity of more than 50 kW. This means that charging stations that are put into operation for the first time on or after 1 July 2023 must offer cashless and contactless payment using common credit and debit cards in addition to the established form of contract-based charging via a charging card. EWE Go GmbH, Oldenburg (EWE Go), will offer this ad hoc method at its own charging stations’ fast-charging infrastructure from 1 July 2023 at the latest.

### Ordinance on Determining Critical Infrastructure

The second amending ordinance to the Ordinance on Determining Critical Infrastructure [“Verordnung zur Bestimmung Kritischer Infrastrukturen”: BSI-KritisV] lowered the thresholds for generation facilities and virtual power plants such that a larger number of operators fall under the rules for critical infrastructure for the first time. Furthermore, definitions of terms and facilities were expanded. The amendments came into force on 1 January 2022. As an operator of critical infrastructure, several facilities of the EWE Group are affected.

### Act on Fair Consumer Contracts

From 1 March 2022, the new regulations of the German Civil Code [“Bürgerliches Gesetzbuch”: BGB] apply for terms and periods of notice in contracts with consumers based on general terms and conditions. Contracts on the supply of energy beyond basic supply are an example of such consumer contracts. Accordingly, an initial contractual term of a maximum two years may still only be agreed. However, the subsequent terms are shorter, with unterminated contracts only rolling over by one month at a time. These rules are of special significance for the EWE Group, particularly when it comes to drafting contracts and making offers.

### Act to Strengthen Consumer Protection in Competition and Trade Law

Since 28 May 2022, amendments to the Unfair Competition Act [“Gesetz gegen unlauteren Wettbewerb”] have been in force, including provisions on the consequences of revocation for distance contracts and the prohibition of immediate payments when unsolicited visits to consumers’ homes are made. In addition, the law provides for a claim for damages in the event of improper business practices. EWE has taken the new regulations into account in its sales activities in particular.

### Ordinance Determining Additional Provisions for Refining the Greenhouse Gas Emission Reduction Rate

The ordinance, which came into effect on 1 January 2022, implements the quotas set forth in the Act to Refine the Greenhouse Gas Emission Reduction Rate [“Gesetz zur Weiterentwicklung der Treibhausgasminderungsquote”], which came into force on 1 October 2021. It sets out the crediting of biofuels and the direct use of electricity in electric cars at triple the rate within the quota. In the future, charging station operators like EWE can credit the electricity uplift toward the quota.

### Act on the Introduction of a Minimum Gas Storage Obligation

In view of the unprecedented low levels of natural gas storage for winter 2021 / 2022 and the current geopolitical tensions, the federal government presented a Draft Act on the Introduction of a Minimum Gas Storage Obligation [“Entwurf eines Gesetzes zur Einführung von Füllstandsvorgaben für Gasspeicheranlagen”] at the beginning of March this year, which is to ensure that natural gas storage facilities are full in particular before the coming winter 2022 / 2023 season. The purpose of the law is to avoid supply bottlenecks and price peaks. These amendments to the Energy Industry Act [“Energiewirtschaftsgesetz”: EnWG] came into effect on 30 April 2022.

### Energy Security Act and Backup Power Plant Standby Act

Russia's attack on Ukraine has dramatically exacerbated what was already a difficult situation on the energy markets. Against this background, the Energy Security Act ["Energiesicherungsgesetz": EnSiG] of 1974 was amended, with the amended version entering into force on 22 May 2022. The law authorizes the government to take corrective action in the area of energy production, transport and distribution to secure the supply of energy should it be threatened. For instance, the federal government is now permitted to place any critical energy infrastructure company under state trusteeship if supply is at risk. In addition, the supply of gas is to be secured going forward, even in the event of a crisis, with the aid of a digital platform for natural gas.

On 8 July 2022, the Bundesrat, the upper house of parliament, adopted the Act to provide for the standby of backup power plants to reduce gas consumption in the electricity sector in the event of an imminent gas shortage through amendments to the EnWG and other energy industry regulations – Backup Power Plant Standby Act ["Ersatzkraftwerke-bereithaltungsgesetz": EKBG] for short – which contains significant changes to the EnWG in addition to further amendments to the EnSiG. The law entered into force in July 2022, with the exception of Sec. 50d EnWG, which is subject to state aid approval by the EU Commission. The purpose of the law is to reduce the volume of gas used for electricity generation by taking measures such as reactivating coal-fired power plants and restricting the use of natural gas in power generation. The essence of the new EnSiG amendment is a new authorization for the federal government, allowing it to issue an ordinance to introduce compensation financed by a net price adjustment rather than the price adjustment right previously planned. The federal government made use of its authority to issue an ordinance by issuing the Gas Price Adjustment Ordinance ["Gaspreisanpassungsverordnung": GasPrAnpV], which came into force on 9 August 2022. EWE TRADING GmbH, Oldenburg (EWE TRADING), and EWE VERTRIEB are particularly affected by the change.

### Gas surcharge

The market area coordinator for Trading Hub Europe GmbH, Ratingen (THE), announced on 15 August 2022 that the gas surcharge, which is intended to compensate for the increased gas procurement costs, will be 2.419 cents per kWh. EWE will pass on the new surcharge applicable nationwide from 1 October 2022 to its gas customers as of 1 November 2022. The surcharge is to be adjusted at regular intervals, applies for a limit period and is currently expected to end on 31 March 2024.

### Gas storage surcharge

On 18 August 2022, THE announced the gas storage surcharge, which will be 0.059 cents per kWh starting from 1 October 2022. The amount of the surcharge will be reviewed regularly (every three months) and adjusted if necessary. The surcharge will ensure that the storage facilities continue to be filled on an ongoing basis even if market incentives are lacking due to high procurement costs. EWE will also pass this surcharge on to customers as of 1 November 2022.

### LNG Acceleration Act

With the aim of making Germany independent of gas imports from Russia, selected docking and transport infrastructure for liquefied natural gas terminals will be constructed. The legislature's enactment of the LNG Acceleration Act ["LNG-Beschleunigungsgesetz": LNGG] allows the implementation of certain infrastructure projects to be expedited. The act came into force on 1 June 2022. It currently has no direct effect on EWE. We are monitoring further developments on the topic.

### Sanction Enforcement Act I

The purpose of the Sanction Enforcement Act I ["Sanktionsdurchsetzungsgesetz I": SDG I] is to ensure effective enforcement of sanctions against Russia in Germany. EU sanctions include freezes on assets of listed individuals, travel restrictions, restrictions on economic cooperation as well as import and export restrictions. The law became effective on 28 May 2022. The sanctions in the gas sector have no significant impact on new business for the EWE Group. Volumes imported from Russia were fairly low in relation to the overall portfolio in the past and can be procured from other trading partners on the market in the future. In the coal sector, the EWE Group has bought its coal types from Russia and the US to date. Going forward, the quantity purchased from Russia will be replaced by different types of coal from the US and South Africa.

**Ordinance on Securing the Energy Supply through Rapid Impact Measures**

On 24 August 2022, the Federal Cabinet adopted the Ordinance on Securing the Energy Supply through Rapid Impact Measures [“Verordnung zur Sicherung der Energieversorgung über kurzfristig wirksame Maßnahmen”: EnSikuMaV], which contains short-term provisions for saving gas and electricity in private households, public institutions and companies. The ordinance requires gas and heat suppliers such as EWE to inform their customers by 30 September 2022 about energy consumption and energy costs in the last billing period, the amount of future energy costs and the savings potential if room temperatures are reduced. The ordinance will apply for a limited period of six months from 1 September 2022.

**Transition from low-calorific gas to high-calorific gas**

Due to the declining reserves of low-calorific gas in Germany and the Netherlands, the transition from low-calorific gas to high-calorific gas is currently underway in the EWE supply area. This will assure supply security in the market regions that up until now have been supplied with low-calorific gas. The market area transition has been running since 2018 in the EWE service area and is expected to continue until 2027. Following several earthquakes in the Groningen province, the Dutch government and the Dutch parliament decided to discontinue active natural gas production in Groningen. The target date for the closure of the Groningen natural gas field is 2023. In addition to the transition away from low-calorific gas in the purchasing countries, the Netherlands have also resolved various measures to compensate for the reduction in Groningen low-calorific gas production and simultaneously meet their supply commitments and thus also ensure supply security in Germany. The EWE Group is supporting these efforts through, among others, the construction of a blending facility for low and high-calorific gas in Bunde-West, Germany, near the border to the Netherlands.

**Universal service**

Rules on universal service have been set out in the new Telecommunications Act [“Telekommunikationsgesetz”: TKG]. The requirements for these universal service connections, such as the minimum bandwidth, to be financed by allocations charged to all network operators, were determined for the first time by the Federal Ministry for Digital and Transport with the involvement of the Bundestag and Bundesrat, the lower and upper houses of parliament. The risk that the minimum supply regime as intended under EU law could be reinterpreted as a maximum supply regime has not materialized to date.

**Service provider obligation**

In the legal dispute over the service provider obligation regarding mobile coverage, EWE TEL GmbH, Oldenburg (EWE TEL), has prevailed in the court of appeal. EWE TEL took legal action against the Federal Network Agency’s [“Bundesnetzagentur”: BNetzA] decision to no longer oblige mobile network operators to allow competitors such as EWE TEL to resell mobile services when the BNetzA allocated radio frequencies for mobile communication. The Cologne Administrative Court [“Verwaltungsgericht Köln”] rejected the legal action filed by EWE TEL and other companies as inadmissible, ruling that EWE TEL was not entitled to take legal action. EWE TEL’s complaint against denial of leave to appeal was successful. The Federal Administrative Court [“Bundesverwaltungsgericht”] ruled that EWE TEL is entitled to take action and therefore referred the case back to the Cologne Administrative Court. That court must now evaluate whether the administrative procedures infringed the independence of the national regulatory authorities guaranteed under EU law as, according to the Federal Administrative Court, there are indications that the Federal Ministry for Digital and Transport made considerable attempts to exert influence on the BNetzA’s decision. The BNetzA had no longer set out an obligation as – in a surprise decision standing in contrast to its previous legal interpretation – it no longer saw a clear legal basis for doing so. The legal basis is presented in more detail in the new Telecommunications Act. In a new ruling, the court may have to take this new legislation into consideration. The BNetzA has conducted a survey of the market to gauge just how successful negotiations on wholesale mobile services are at present.

**Charges for the subscriber line**

The monthly charges for the provision of the subscriber’s line, which EWE TEL has to pay to Telekom Deutschland AG, Bonn (TDG), were reversed in a final ruling for the period from 2016 to 2019. The legal actions filed by EWE and other companies were thus successful. As a result, there is no longer a risk that summary proceedings initiated by TDG to retroactively raise the charges will increase the charges for EWE TEL. The new decision process initiated by the BNetzA is ongoing, however. The BNetzA’s decision on the subsequent rate approval period from 2019 to 2022 was set aside by the Cologne Administrative Court due to serious deficiencies. The BNetzA and TDG have appealed. As EWE TEL did not take legal action against the decision on the subsequent period, EWE is not directly affected. For charges from 1 July 2022, the

BNetzA has set new charges and stabilized prices in order to ensure predictability and legal certainty in the upcoming phase of migration from copper to fiber-optic networks. The approval period is 10 years and will therefore cover the entire remaining useful life of copper lines. This predictability and legal certainty have been unanimously welcomed by the market. The fee was reduced slightly and will be subject to a single increase of 4 per cent after 5 years.

**Complaint proceedings against regulatory decisions**

In October 2021, the BNetzA set the returns on equity for power and gas grid operators for the fourth regulatory period. Despite considerable criticism from the industry, the returns were cut further. As a result, EWE NETZ GmbH, Oldenburg (EWE NETZ), filed a complaint against the decisions before the Düsseldorf Higher Regional Court [“Oberlandesgericht”: OLG].

Furthermore, EWE NETZ holds the view shared in the industry that an Xgen (sectoral productivity factor) of more than zero per cent for the power and gas sector cannot be determined and justified for the third regulatory period and has therefore filed a complaint against the decisions with the Düsseldorf OLG. The proceedings instituted by EWE NETZ are still pending before the Düsseldorf OLG. In a decision from March 2022, the Düsseldorf OLG overturned the BNetzA’s determination regarding the Xgen for electricity in several model case proceedings. It remains to be seen whether the BNetzA will file a complaint against the decision with the German Federal Court of Justice [“Bundesgerichtshof”: BGH].

As EWE NETZ believes that the efficiency values were not determined correctly, it filed a complaint with the Düsseldorf OLG in 2020 against the determination of final revenue caps for gas for the third regulatory period. By decision dated 12 May 2022, the Düsseldorf OLG dismissed EWE NETZ’s complaint and thus declared the gas efficiency comparison carried out by the BNetzA to be lawful for the third regulatory period. The judgment is appealable and a complaint with the BGH will be filed in due time.

Based on differing legal interpretations regarding the determination of the cost of capital deduction, EWE NETZ instituted proceedings against the BNetzA’s decision on the final revenue caps for electricity for the third regulatory period. After the BGH concurred with the legal opinion of the BNetzA in several model case proceedings in its decisions from March 2022, EWE NETZ withdrew its complaint. Owing to the differing legal opinions on how to include supplementary VAT payments in the calculation of the community discount, the amount of the community discount and the change in the basis of the consumer price index, EWE NETZ has filed several complaints against decisions on the regulatory account for gas and power with the Düsseldorf OLG. In its decision of September 2021, the Düsseldorf OLG followed the BNetzA’s interpretation of the law and rejected the complaints by EWE NETZ and other grid operators. EWE NETZ filed complaints with the BGH in response.

## Regional level

**Lower Saxony Building Code requirement to install photovoltaic systems on commercial buildings adopted**

The amendment to the Lower Saxony Building Code [“Niedersächsische Bauordnung”] contains changes to digitalization and climate protection provisions. The amendment focuses on provisions for the digitalization of the building permit process. The requirement to install photovoltaic systems on roofs of new commercial buildings will make a contribution to climate protection in the future. In addition, there is also an obligation for residential buildings, which must be planned in a manner that will enable easy retrofitting of photovoltaic systems on the roof. The revised Building Code came into force on 1 January 2022.

# Current situation in the EWE Group

## Effects of the Ukraine war

The situation on the trading, commodity and financial markets is in flux due to the war in Ukraine. A sustained significant reduction or halt to deliveries of natural gas would likely trigger rocketing prices on all relevant markets and thus also impact the EWE Group. It cannot be ruled out that this would be accompanied by an increase in insolvencies and payment defaults. Overcoming this crisis by safeguarding the security of supply continues to call for careful and coordinated action by business, government and wider civil society. The EWE Group actively makes suggestions for immediate action to policymakers and highlights options.

## Financial performance

The following table illustrates the reconciliation to the consolidated profit or loss for the period:

| in millions of euros | **1 Jan - 30 Jun 2022** | 1 Jan - 30 Jun 2021 |
|---|---:|---:|
| **Operating EBIT** | **136.7** | **286.5** |
| Derivatives | 2,238.6 | 166.1 |
| Onerous sales contracts with matching derivative purchase transactions | -1,173.2 | |
| Fair value measurement of other financial instruments | -50.2 | -25.4 |
| Impairments | -56.7 | |
| Equity investments | 5.0 | -0.1 |
| Restructuring | 0.3 | -0.2 |
| Subsequent sales proceeds | 14.2 | |
| Decommissioning of production plants | | 2.2 |
| **EBIT** | **1,114.7** | **429.1** |
| Net interest income / expense | -3.1 | -19.6 |
| Income taxes | -399.2 | -123.2 |
| **Profit / loss for the period** | **712.4** | **286.3** |

The ability of the EWE Group's normal business operations to generate earnings over the long term is of particular importance to both internal governance as well as the external communication of the current and future development of the Group's earnings. Operating EBIT is an adjusted earnings figure which is used to track and manage financial performance. To calculate operating EBIT, EBIT is adjusted for special effects such as those resulting from the measurement of financial instruments, impairments and reversals and effects resulting from changes in the basis of consolidation as well as those resulting from restructuring measures and from irregularly recurring matters affecting comparability.

## Significant changes to the consolidated income statement

In the first half of 2022, the EWE Group generated revenue (excluding electricity and energy taxes) of 3,980.5 million euros (first half-year 2021: 3,036.3 million euros). This is an increase of 944.2 million euros (up 31.1 per cent) compared with the first half of the previous year. By contrast, cost of materials of 1,889.4 million euros (first half-year 2021: 1,794.1 million euros) increased (up 5.3 per cent) and, as a result, the ratio of cost of materials to revenue improved from 59.1 per cent to 47.5 per cent.

Compared with the first half-year 2021, personnel expenses increased by 7.0 per cent to 449.2 million euros due to collective bargaining arrangements and the development of headcount.

The balance of other operating income and other operating expenses (including changes in finished goods and work in progress and own work capitalized) totaled -123.4 million euros and is thus below the level of the first half-year 2021 (-104.3 million euros).

Other profit / loss from equity investments worsened by 16.9 million euros to -37.5 million euros as of 30 June 2022 due to negative effects from the fair value measurement of companies. This loss contrasted with income from the disposal of a fully consolidated company.

## Segment performance

The following chart illustrates the changes in the segments’ operating EBIT and external revenue:

| | External revenue | | | Operating EBIT | | |
|---|---|---|---|---|---|---|
| in millions of euros | **1 Jan - 30 Jun 2022** | 1 Jan - 30 Jun 2021 | Change in % | **1 Jan - 30 Jun 2022** | 1 Jan - 30 Jun 2021 | Change in % |
| Renewable Energies segment | 229.4 | 105.6 | >100 | 101.5 | 21.1 | >100 |
| Infrastructure segment | 430.8 | 375.1 | 14.8 | 188.7 | 195.0 | -3.2 |
| Market segment | 2,579.1 | 1,839.7 | 40.2 | -176.2 | 58.3 | <-100 |
| swb segment | 592.3 | 610.2 | -2.9 | 56.4 | 33.4 | 68.9 |
| Other segment | 148.0 | 104.2 | 42.0 | -11.1 | 2.3 | <-100 |
| Group Central Division | 0.9 | 1.5 | -40.0 | -22.6 | -23.6 | 4.2 |
| **Total** | **3,980.5** | **3,036.3** | **31.1** | **136.7** | **286.5** | **-52.3** |

## Renewable Energies segment

| in millions of euros | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Operating EBIT** | **101.5** | **21.1** |
| Derivatives | -27.6 | -0.4 |
| Impairments | -55.2 | |
| Equity investments | 6.9 | -0.1 |
| **EBIT** | **25.6** | **20.6** |

In our Renewable Energies segment, external revenue in the reporting period increased by 117.2 per cent to 229.4 million euros (first half-year 2021: 105.6 million euros). The increase in revenue is mainly due to the inclusion in EWE's consolidated financial statements of Alterric GmbH, Aurich, and the equity investments it holds (ALTERRIC), acquired as of 26 March 2021. Accordingly, all onshore wind farms and their wind yields for six months are included in the half-yearly financial statements for the first time. In addition, the high market values of onshore operations had a positive effect on revenue. The electricity generated by the RIFFGAT offshore wind farm has been marketed within the Group via EWE TRADING since 1 January 2022. This reduces the segment's external revenue. The segment contributed 5.8 per cent to the Group's total revenue (first half-year 2021: 3.5 per cent).

Operating EBIT amounted to 101.5 million euros (first half-year 2021: 21.1 million euros) and was primarily affected by the inclusion of ALTERRIC. At the RIFFGAT offshore wind farm, higher maintenance costs are weighing on operating EBIT, as is the decline in revenue as a result of the end of the EEG high remuneration period.

The development of non-operating items is mainly attributable to impairments on project rights and the fair value measurement of hedging transactions. The sale of an onshore project in Finland had a positive effect.

## Infrastructure segment

| in millions of euros | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Operating EBIT** | **188.7** | **195.0** |
| Restructuring | | -0.2 |
| **EBIT** | **188.7** | **194.8** |

In our Infrastructure segment, we registered an increase in external revenue of 14.8 per cent to 430.8 million euros compared with the previous-year period (first half-year 2021: 375.1 million euros). The increase in revenue from the distribution networks is mainly due to revenue related to energy volume management. Higher charges in connection with the marketing of gas storage facilities and higher capacity utilization for the long-distance gas network also had a positive impact. This segment contributed 10.8 per cent to the Group's total revenue (first half-year 2021: 12.4 per cent).

Operating EBIT was down to 188.7 million euros (first half-year 2021: 195.0 million euros). For the distribution networks in particular, a lower gross margin in the gas sector as a result of the much milder weather led to a lower operating result compared to the same period in the previous year. By contrast, the natural gas storage facilities reported higher revenue from the marketing of storage capacity and a higher intake of orders related to the long-distance gas network.

## Market segment

| in millions of euros | **1 Jan - 30 Jun 2022** | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Operating EBIT** | **-176.2** | **58.3** |
| Derivatives | 2,198.8 | 148.2 |
| Onerous sales contracts with matching derivative purchase transactions | -1,173.2 | |
| **EBIT** | **849.4** | **206.5** |

In our Market segment, we recorded an increase in external revenue by 40.2 per cent to 2,579.1 million euros (first half-year 2021: 1,839.7 million euros). The segment therefore contributed 64.8 per cent to the Group's total revenue (first half-year 2021: 60.6 per cent). Revenue is mainly generated in the electricity and gas business. The rise is chiefly attributable to higher sales volume requirements due to unplanned customer growth and price increases. The latter are the result of significantly higher procurement costs for electricity and gas, which will be passed on to customer after a certain delay.

Operating EBIT came to -176.2 million euros (first half-year 2021: 58.3 million euros). The year-on-year decline is mainly due to price effects on sales of electricity and gas. The energy markets are seeing sharp price increases driven by effects such as greater demand for fossil fuels on the world markets and the war in Ukraine. Insolvencies and customer terminations on the part of several energy suppliers, whose short-term procurement strategy had previously plunged them into an economic crisis in view of high procurement prices, led to unplanned customer growth at the beginning of the year. Procuring the additional volumes leads higher procurement costs overall, which will be passed on to customers through price increases in the course of the year. A large number of customer inquiries arose due to system changes, which increased expenses in customer service. In addition, the recognition of provisions for potential losses from pending transactions with municipal utilities had a negative impact on earnings.

## swb segment

| in millions of euros | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Operating EBIT** | **56.4** | **33.4** |
| Derivatives | 58.8 | 16.0 |
| Fair value measurement of other financial instruments | -23.4 | -17.9 |
| Impairments | -1.4 | |
| Restructuring | 0.3 | |
| Subsequent proceeds from the sale of a financial asset previously accounted for using the equity method | 14.2 | |
| Decommissioning of production plants | | 2.2 |
| **EBIT** | **104.9** | **33.7** |

In our swb segment, external revenue in the reporting period was down 2.9 per cent on the previous year to 592.3 million euros (first half-year 2021: 610.2 million euros). The decline in revenue is mainly the result of lower sales volumes due to weather conditions and lower consumption. The segment contributed 14.9 per cent to the Group's total revenue (first half-year 2021: 20.1 per cent).

Operating EBIT came to 56.4 million euros (first half-year 2021: 33.4 million euros). The year-on-year improvement is largely attributable to the sale of cavern gas by wesernetz Bremen GmbH, Bremen, and a one-time effect from the payment of electricity taxes at swb Entsorgung GmbH & Co. KG, Bremen (swb Entsorgung), in the previous year. Lower electricity earnings at swb Erzeugung AG & Co. KG, Bremen, reduced operating EBIT year on year due to temporary effects from coal valuation.

The development of non-operating items is mainly attributable to income from the valuation of financial instruments as of the reporting date and a subsequent purchase price payment for the shareholding in Stadtwerke Bielefeld GmbH, Bielefeld, sold in 2012. Negative effects are chiefly the interest rate-driven impairments of the equity investments in Osterholzer Stadtwerke GmbH & Co. KG, Osterholz-Scharmbeck, and in Stadtwerke Soltau GmbH & Co. KG, Soltau.

## Other segment

| in millions of euros | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Operating EBIT** | **-11.1** | **2.3** |
| Derivatives | 8.7 | 2.3 |
| **EBIT** | **-2.4** | **4.6** |

In our Other segment, we recorded an increase in external revenue by 42.0 per cent to 148.0 million euros (first half-year 2021: 104.2 million euros). The higher revenue is mainly attributable to the higher prices in the gas sector in Poland. The segment therefore contributed 3.7 per cent to the Group's total revenue (first half-year 2021: 3.4 per cent).

Operating EBIT came to -11.1 million euros (first half-year 2021: 2.3 million euros). Compared to the first half of the previous year, the growth track pursued and the resulting increase in resources for business activities led to higher expenses for innovation. Revenue has been falling short of expectations, dogged by material shortages and distortions on the energy market, thus leading to reduced earnings. In the IT sector, the previous year saw an extraordinary performance in the licensing business, such that the result for the first half of 2022 is lower. In Poland, earnings deteriorated due to a lower gross profit from gas attributable to lower volumes purchased and higher procurement costs. In addition, higher inflation and foreign currency losses are weighing on earnings.

The development of non-operating items was mainly attributable to the fair value measurement of derivatives in the electricity and gas business of the Polish companies.

## Group Central Division

| in millions of euros | **1 Jan - 30 Jun 2022** | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Operating EBIT** | **-22.6** | **-23.6** |
| Derivatives | -0.1 | |
| Fair value measurement of other financial instruments | -26.8 | -7.5 |
| Impairments | -0.1 | |
| Equity investments | -1.9 | |
| **EBIT** | **-51.5** | **-31.1** |

Our Group Central Division chiefly generates revenue from intragroup services.

Operating EBIT came to -22.6 million euros (first half-year 2021: -23.6 million euros). These earnings resulted from the holding function of EWE AG and the other equity investments it holds and are on a par with the previous year.

Non-operating items mainly relate to the fair value measurement of other financial instruments.

## Assets and liabilities

| Assets<br>in millions of euros | 30 Jun 2022 | in % | 31 Dec 2021 | in % |
|---|---|---|---|---|
| Non-current assets | 14,046.9 | 53.3 | 10,919.6 | 56.3 |
| Current assets | 12,286.0 | 46.7 | 8,490.8 | 43.7 |
| **Total assets** | **26,332.9** | **100.0** | **19,410.4** | **100.0** |

| Equity and liabilities<br>in millions of euros | 30 Jun 2022 | in % | 31 Dec 2021 | in % |
|---|---|---|---|---|
| Equity | 6,041.3 | 22.9 | 4,715.1 | 24.3 |
| Non-current liabilities | 11,845.7 | 45.0 | 8,437.0 | 43.5 |
| Current liabilities | 8,445.9 | 32.1 | 6,258.3 | 32.2 |
| **Total equity and liabilities** | **26,332.9** | **100.0** | **19,410.4** | **100.0** |

At 26,332.9 million euros, total assets were up by 35.7 per cent compared with 31 December 2021 (19,410.7 million euros).

The increase in non-current assets of 3,127.3 million euros is chiefly attributable to the change in derivatives relating to the development of energy prices (up 3,371.2 million euros). By contrast, intangible assets and property, plant and equipment were down by 128.6 million euros and 104.4 million euros, respectively.

The increase in current assets is mainly due to the change in derivatives as a result of the development of energy prices (up 3,074.4 million euros), an increase in gas inventories (up 242.4 million euros), an increase in trade receivables (up 212.4 million euros) due to end-of-period effects and the increase in cash and cash equivalents (up 1,501.0 million euros). This contrasts with the sale of securities (down 873.4 million euros) and a decline in collateral provided in energy trading (down 490.8 million euros).

At 22.9 per cent, the equity ratio was slightly lower than as of 31 December 2021 (24.3 per cent). Details are provided in the statement of changes in equity.

Non-current liabilities increased by 3,408.7 million euros to 11,845.7 million euros. A mainly interest-driven reduction in pension provisions (down 508.2 million euros) and rehabilitation provisions (down 62.8 million euros) was more than offset by the increase in derivatives due to the development of energy prices (up 2,747.5 million euros) and the increase in provisions for potential losses from onerous sales contracts with matching derivative purchase transactions (up 670.3 million euros).

Current liabilities were up as a result of the increase in provisions for potential losses from onerous sales contracts with matching derivative purchase transactions (up 503.0 million euros), the increase in trade payables (up 285.0 million euros) due to end-of-period effects and the change in derivatives due to the development of energy prices (up 1,354.4 million euros).

## Financial position

| in millions of euros | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 | Change in % |
|---|---|---|---|
| Cash flow from operating activities | 2,011.2 | 832.8 | >100 |
| Cash flow from investing activities | -273.8 | -621.3 | 55.9 |
| Cash flow from financing activities | -234.8 | 277.4 | <-100 |
| Change in cash and cash equivalents | 1,502.6 | 488.9 | >100 |
| Change in cash and cash equivalents due to exchange rates, basis of consolidation and measurement | -1.2 | 6.2 | <-100 |
| Cash and cash equivalents at the beginning of the period | 1,022.7 | 765.8 | 33.5 |
| **Cash and cash equivalents at the end of the period** | **2,524.1** | **1,260.9** | **>100** |

Cash flow from operating activities represents a key element of the EWE Group's financing. In the first half of 2022, EWE posted cash flow from operating activities totaling 2,011.2 million euros. The significant change of 1,178.4 million euros against the comparative period is mainly due to the development of receivables and other assets as well as accounts payable and other liabilities.

Cash flow from investing activities of -273.8 million euros (first half-year 2021: -621.3 million euros) is shaped by cash outflows for property, plant and equipment as well as other non-current assets. The cash outflows for investments in the previous year relate to the acquisition of the shares in ALTERRIC.

Cash flow from financing activities amounted to -234.8 million euros (first half of 2021: 277.4 million euros) and comprised dividends of 84.1 million euros (first half-year 2021: 186.9 million euros) paid to the shareholders of EWE AG.

Cash and cash equivalents in the statement of cash flows comprise cash and cash equivalents recognized in the statement of financial position as well as cash pool receivables. Cash and cash equivalents recognized in the statement of financial position include cash on hand and bank balances as well as, since fiscal year 2021, credit balances related to trades. The previous-year figure for cash and cash equivalents at the end of the period in the statement of cash flows was adjusted accordingly.

The financial flexibility of the EWE Group is secured by various instruments. These include syndicated revolving credit facilities of 2,450.0 million euros (31 December 2021: 950.0 million euros). An existing credit facility in the amount of 750 million euros with a term until November 2023 was replaced by a new credit facility in the first half of 2022. In addition, a credit facility of 1,500 million euros was concluded in February 2022 as a precautionary measure to secure our ability to trade on exchanges and meet the associated margin obligations. The various credit facilities end in April 2023, August 2024 and June 2027. All credit lines serve to provide general working capital. As of 30 June 2022, a total of 12.2 million euros had been drawn on from these credit lines (31 December 2021: 33.8 million euros).

The value of bilateral credit lines available as of the reporting date totaled 772.8 million euros (31 December 2021: 774.9 million euros). Of this amount, 180.2 million euros (31 December 2021: 345.2 million euros) was drawn on in some form, including as guarantees.

Bonds, promissory note loans and registered debt securities represent another key component of EWE's financing. As of 30 June 2022, unsecured bonds quoted in euros with a total nominal value of 1,100.0 million euros (31 December 2021: 1,100.0 million euros) were outstanding. They include a green bond of 500.0 million euros that EWE issued in June 2021. In addition, promissory note loans and registered debt securities of 200.0 million euros (31 December 2021: 200.0 million euros) are outstanding. The abovementioned financial instruments have terms expiring between 2024 and 2032. They earn interest at fixed rates between 0.25 per cent and 4.0 per cent.

## Non-financial performance indicators

### Environment

Climate protection is traditionally a top priority for the EWE Group and has long been a determining factor behind our actions. Pursuant to our articles of incorporation and bylaws, climate-friendly energy supply and the promotion of sustainability are key focuses of EWE AG's business activities and a fundamental component of its strategic alignment. We are committed to the Paris Agreement on climate change and the goal of limiting global warming to well below 2° degree Celsius compared to pre-industrial levels. Likewise, we support the EU 2030 climate target.

We are aware that the energy industry is the sector with the highest carbon footprint in Germany and therefore want to drive the transition to a regenerative, low-carbon energy supply and make a stand to help ensure that the necessary conditions are put in place. We consider it necessary in this context to remove the barriers to expanding renewable energies and grids and implementing the hydrogen economy. We believe that energy efficiency and renewable energies are the key to achieving climate neutrality. In order to effectively support the energy transition and further reduce the carbon footprint of the energy sector, we are expanding the share of our power generated from renewable energy sources. Specifically, we are focusing our activities on expanding the use of wind energy onshore.

We are also committed to discontinuing coal-fired power generation by 2030. We currently expect to have completed our phase-out by the middle of the 2020s. The cross-sector use of renewable energies for the decarbonization of all sectors requires the use of both electrical energy as a final energy source and hydrogen on the basis of renewable energies. We are therefore involved in the development of green hydrogen as a clean gas for the future. We anticipate that in the future hydrogen will play an elementary role in particular for combined power and gas grids and the coupling of the individual energy sectors of power, heat, transport and industry. Combined with large-scale storage in salt caverns, hydrogen also offers great potential for the storage of renewable energies and thus climate-friendly supply security.

As the EWE Group and in our key role as energy service provider, we want to help significantly reduce $CO_2$ emissions in the energy industry and the adjacent sectors of transport and buildings. For us, this also means beginning at home and reducing our own carbon footprint. To this end, we have drawn up group-wide greenhouse gas accounts based on the international standards of the Greenhouse Gas Protocol and used them to develop a climate strategy. We will achieve net-zero emissions in those areas under our direct control by reference to the baseline year 2018 by 2035. We also assume responsibility for the upstream and downstream value creation stages that are beyond our direct control, where we aim to make 50 per cent of our procurement volume in the upstream value chain climate-neutral by 2035 (using 2018 as the baseline year). In the downstream value chain, our goal is to reduce 65 per cent of emissions attributable to the products and services we offer to our customers by 2035 (also using 2018 as the baseline year).

## Changes in the number of employees

In the first half of 2022, the EWE Group had an average of 9,992 employees (31 December 2021: 9,575 employees). This figure includes all full-time and part-time employees as well as trainees and temporary staff.

| Number of employees by segment | **30 Jun 2022** | 31 Dec 2021 |
|---|---|---|
| Renewable Energies | 308 | 209 |
| Infrastructure | 1,969 | 1,908 |
| Market | 2,482 | 2,405 |
| swb | 2,271 | 2,334 |
| Other | 2,192 | 1,963 |
| Group Central Division | 770 | 756 |
| **Total** | **9,992** | **9,575** |

# Report on anticipated development and significant opportunities and risks

## Forecast report

### Development of political and regulatory conditions

#### Europe

**"Fit for 55" package**

In order to implement the European Green Deal, whose measures impact nearly all areas of the EWE Group, various directives and regulations need to be aligned with the new EU climate target of a minimum 55 per cent reduction in emissions by 2030. The new rules include the following:

*Reducing methane emissions in the energy sector:* The EU is committed to reducing climate-damaging methane emissions. To this end, provisions will be introduced regarding all energy-related methane emissions, reporting and repair of leaks. The EWE Group will see effects at different natural gas value creation stages.

*EU emissions trading:* The EU Emissions Trading System (EU ETS) will be tightened to achieve the 55 per cent target. For this purpose, the linear reduction factor will be increased to reduce the total amount of available certificates, initially from the current 2.2 per cent to 4.4 per cent from 2024. The draft, which has now been adopted by the EU Parliament, provides for an extension to the scope of the ETS to include municipal waste incineration facilities, among others. In addition, the market stability reserve will be adjusted and market access for financial participants restricted. A new emissions trading system for buildings and road transport (ETS2) is also planned. The trilogue negotiations on the directive are currently underway.

*Renewable Energy Directive*: As part of the "REPowerEU" initiative, on 18 May 2022 the EU Commission raised the target for the share of renewable energies in gross final energy consumption by 2030 from 40 per cent (draft dated 14 July 2021) to 45 per cent (currently 32 per cent). In addition, in a new draft, it made proposals for speedier planning and approval procedures for renewable energy facilities, which would simplify ALTERRIC's business. The draft Renewable Energy Directive also sets sector targets for the use of renewables in heating and cooling, buildings, industry, district heating and transport. In the transport sector, the Commission is calling for a 13 per cent reduction in greenhouse gas emissions by 2030. It also sets sustainability criteria for non-biogenic renewable fuels and biomass. Other changes relate to the provisions on guarantees of origin for renewable electricity. The draft is being put to the vote in the Council and Parliament.

*Energy Efficiency Directive*: The amendment to this directive essentially relates to the reduction of energy consumption (currently 32.5 per cent) in order to achieve the new EU target. The proposal is based on a reduction in energy consumption of 9 per cent by 2030 compared with the 2020 baseline scenario. This is equivalent to raising the energy efficiency targets for primary and final energy consumption to 39 per cent and 36 per cent, respectively, compared with the 2007 baseline scenario. The member states will contribute to achieving this target in line with the national contributions calculated.

*Regulation setting $CO_2$ emission performance standards for new passenger cars and for new light commercial vehicles:* Under the new proposal, car manufacturers will have to reduce $CO_2$ emissions for new vehicles sold from 2030 by 55 per cent, before making them 100 per cent emission-free from 2035. This essentially means that no new vehicles with combustion engines may be sold after 2035. At the beginning of June this year, the European Parliament explicitly decided to ban the sale of cars with internal combustion engines, which was confirmed by the EU Environment Council on 27 June 2022. The German government is seeking an exemption for combustion engines that use climate-neutral e-fuels.

*Regulation on the deployment of alternative fuels infrastructure (AFIR):* The regulation on alternative fuels infrastructure sets out the requirements for a considerable expansion of the EU network of recharging and refueling stations for alternative vehicle fuels – mainly electric batteries, natural gas (CNG / LNG) and hydrogen. The aim is to establish an adequate number of easily accessible fuel stations in order to ensure the interoperability of the infrastructure and to offer comprehensive information for the users and appropriate payment options. From EWE's point of view, this commitment to the expansion of hydrogen infrastructure is important. The planned harmonization of payment systems at recharging stations and the related technical work is important for EWE Go.

*Gas Markets Package:* The extensive legislative package aims to facilitate the integration of climate-friendly gases into existing gas grids. Development of a pure hydrogen network and coordinated planning for all energy networks are to be put in motion. Under the EU Commission's proposal, long-term contracts for fossil natural gas may not be extended beyond 2049. Consumers are to be given access to new gases and the security of supply is to be increased overall. The Gas Markets Package comprises a directive and a regulation on the gas market and on hydrogen. There is also a regulation on methane emissions, with which the Commission aims to reduce the particularly harmful gas that escapes during the production and transportation of natural gas and mineral oil.

*Energy Performance of Buildings Directive:* In order to reduce energy consumption in the building sector, the EU Commission initiated its renovation wave last year. Under the revised Energy Performance of Buildings Directive (EPBD), all new buildings must be "zero-emissions buildings" and the percentage of buildings with poor energy performance ratings must be significantly reduced. In addition, the national building renovation plans are to comprise roadmaps for the phasing-out of fossil fuels in heating and cooling supply by 2040 at the latest.

### "REPowerEU" plan

Against the background of the Ukraine conflict, the European Commission presented its "REPowerEU" plan on 18 May 2022 to rapidly reduce Europe's dependence on imports of Russian fossil fuels and fast forward the green transformation. From the EU Commission's perspective, there is a double urgency to transform Europe's energy system: first, to end dependence on Russian fossil fuels and, second, to tackle the climate crisis.

The plan combines the existing climate protection measures of the "Fit for 55" package with new proposals specifically aimed at replacing fossil fuels from Russia. It is based on three pillars: savings, imports from other countries and the accelerate rollout of renewable energies. By the end of this year, the EU wants to reduce imports of Russian gas by two-thirds, and by the end of 2022, no more Russian oil is to flow. The shortage is to be covered by the import of liquefied natural gas (LNG) from other countries, pipeline gas, hydrogen and biomethane. The demand for gas is to be reduced, primarily through electrification, better energy efficiency and increased use of renewable and low-carbon gases.

In addition, the EU Commission wants to increase the energy savings target from 9 to 13 per cent by 2030. To this end, measures such as a heat pump campaign is to be launched. With a view to accelerating the rollout of renewable energies, the EU Commission is proposing that the share of renewables in the EU's final energy consumption should be increased from 40 to 45 per cent. In this context, the Commission has presented initiatives including a pan-European solar strategy. At the same time, the member states are to greatly accelerate the permitting procedures for renewable energy projects. For this purpose, they are to put in place dedicated go-to-areas for renewables in which shortened and simplified permitting processes apply in areas with lower environmental risks. The planned measures will have an impact on almost all of the EWE Group's business activities in the energy sector.

**Delegated act on electricity purchase criteria for renewable hydrogen**

Subsequent to the "REPowerEU" package, on 20 May 2022 the European Commission presented a draft delegated act on electricity purchase criteria for renewable hydrogen for the implementation of Art. 27 (3) of the Renewable Energy Directive (RED II) and invited comment until 17 June 2022. The delegated act sets out criteria specifying when renewable fuels of non-biological origin (RFNBOs) are considered renewable for the purposes of RED II and can therefore be counted towards the renewable energy targets. Although the criteria initially only apply to RFNBOs used in the transport sector, an extension to all applicable areas is planned. The provisions are of particular importance for all hydrogen activities in the EWE Group.

**Action plan on sustainable finance**

On 24 May 2018, the European Commission published an action plan on sustainable finance. With this package of measures, the EU aims to support the transition to a low-carbon, more resource-efficient and sustainable economy. It contains legislative proposals for a voluntary, unified EU classification system, the disclosure of information relating to sustainable investments and a regulation amending the Climate Benchmark Regulation. The key element of the package is the proposal for a unified EU classification system (taxonomy) for defining sustainable economic activities. Following on from the taxonomy, EU labels for green financial products, such as green bonds, could be established. The taxonomy lists economic activities that contribute to the achievement of various environmental objectives. Delegated acts on technical screening criteria are currently being prepared for application of the Taxonomy Regulation, which came into force on 1 January 2022. Such acts have already been adopted for the environmental objectives of climate change mitigation and climate change adaptation. Depending on how the technical criteria are defined, the unified EU classification system could have an effect on the future provision and aggregation of project funding. The taxonomy activities are also being included in non-financial reporting.

**Legislative package on the digital single market**

Other legislative acts relating to the abovementioned legislative package on the digital single market that have not yet entered into force are:

*EU Data Act:* In February 2022, the Commission presented its draft EU Data Act. In essence, the act will give users of devices the right to obtain access from the manufacturer to the data generated by them through their use of the devices and also to share such data with a third party. This has the potential to improve the data base for EWE's digital business models if it is suitably structured. Moreover, the act will facilitate switching between cloud and edge service providers, which could put EWE, as a user of such services, in a better position in relation to providers. On a critical note, information obligations towards public authorities are still vaguely defined ("exceptional need") given that information on critical infrastructure could potentially be included.

*Artificial Intelligence Act:* In its proposal for an Artificial Intelligence Act of 21 April 2021, the EU Commission plans to create an EU-wide legal framework on artificial intelligence (AI). The approach is risk-based: the draft proposes establishing fixed categories for classifying AI risk and linking these to certain requirements for providers as well as prohibiting AI systems with "unacceptable risk." As the definition of AI is very broad, large parts of EWE's activities could be affected.

### ePrivacy Regulation

The objective of the regulation concerning the respect for private life and the protection of personal data in electronic communications (ePrivacy Regulation) is to align the previous provisions on privacy rules for electronic communications with the EU General Data Protection Regulation (EU GDPR). In addition, it will introduce rules for data processing in companies. As an energy supplier, the EWE Group falls within the scope of the new regulation, e.g., by collecting and further processing data through end devices, such as smart meter data. The negotiations in the ordinary legislative procedure are in the final phase (trilogue negotiations between the European Parliament, Council and Commission).

### Revision of the Broadband Cost Reduction Directive

The European Commission is revising the Directive on measures to reduce the cost of deploying high-speed electronic communications networks. This directive is the basis for the provisions – disputed in Germany – on the co-use and co-laying of broadband infrastructure. EWE is proactive in offering other mobile communications and landline providers attractive wholesale services (open access) and would therefore take a critical view of stricter rules on forced access, since these have led to overbuilding of new fiber-optic networks in the past instead of more FTTH connections. The directive will still have to be transposed into German law after its adoption in 2022 or 2023.

## Germany

### Conflict in Ukraine

Due to the conflict in Ukraine, the energy policy agenda is being reassessed at a national and European level and substantial parts are being realigned. The implications of the conflict are growing significantly, especially in Germany due to its strong dependence on imports of Russian gas. On top of the increase in wholesale energy prices, gas supplies from Russia via Nord Stream 1 are declining considerably. Maintenance work on the pipeline was already announced last year for July 2022 and has resulted in at least a temporary halt of gas supplies via Nord Stream 1. The federal government has enacted various laws to keep gas supply security stable during the winter months. Preparatory work on further legislative packages, in particular to relieve the burden on consumers, are underway.

### Legislative package for implementing climate targets

On 8 July 2022, the Bundesrat approved a comprehensive legislative package ("Easter Package") which is to implement many aspects of the energy policies set forth in the coalition agreement. The main background to the package is the achievement of climate targets and the war in Ukraine, as a result of which the phase-out of fossil fuels is being driven forward and the expansion of renewable energies expedited. The legislative package comprises various parts and affects a large number of areas of the EWE Group. The following are important for EWE:

*Act on immediate-action measures for an accelerated expansion of renewable energies and other measures in the electricity sector:* This omnibus act, which in turn amends several laws, includes amendments to the Renewable Energy Act ["Erneuerbare-Energien-Gesetz": EEG], the Act on the Financing of the Energy Transition in the Electricity Sector through Federal Payments and the Collection of Surcharges ["Energiefinanzierungsgesetz": EnFG] (Energy Financing Act), amendments to the Energy Industry Act ["Energiewirtschaftsgesetz": EnWG] and a large number of other legislative amendments. Most of the changes to the laws will come into force on 1 January 2023. The following legislative amendments are pivotal for EWE's business:

*Renewable Energy Act (EEG 2023):* The amendment aligns climate, energy and economic policy with the objective of limiting global warming to 1.5°degree Celsius. The goal is for 80 per cent of the electricity consumed in Germany to come from renewable energies by 2030 and for greenhouse gas neutrality to be achieved by 2045. For this purpose, the law increases expansion trajectories and tender volumes. It also clarifies the principle that all renewable energies are in the overriding public interest and serve public security. This is relevant for planning and approval and is intended to speed up the procedures. In addition, the law has abolished the EEG surcharge for good, after it had already been reduced to zero by a recent amendment. In the field of solar energy, regulations such as those governing full and partial feed-in from installations have been revised, as have those on citizen-owned renewable energy cooperatives. In addition to the existing innovation tenders and the tenders for innovative solutions involving hydrogen-based electricity storage, tenders for power plants fueled by green hydrogen are now also being issued. To this end, the definition of green hydrogen will be transferred to the Renewable Energy Act. Going forward, the Renewable Energy Act will also simplify and standardize grid access for plants up to 30 kW(p).

*Energy Financing Act (EnFG):* The Energy Financing Act (formerly the Energy Surcharge Act ["Energie-Umlagen-Gesetz": EnUG]) consolidates the energy surcharges: the KWKG surcharge under the Combined Heat and Power Act ["Gesetz zur Förderung der Kraft-Wärme-Kopplung": KWKG] and the offshore grid surcharge will only be levied for the use of electricity from the public grid going forward. Self-consumption of electricity for heat pumps, electricity storage, charging points and electrolyzers for the production of green hydrogen is to be exempted from the KWKG surcharge and the offshore grid surcharge in the future. The EEG surcharge, already reduced to zero in the current year, will cease to apply as a legal construct from 2023. Legislation would be required in order to reinstate it.

*Amendment of the Energy Industry Act:* Against the background of the rollout of heat pumps and the ramp-up of electromobility, an amendment to the Energy Industry Act ["Energiewirtschaftsgesetz": EnWG] was combined with the EEG amendment. Sec. 14a EnWG, which has been contentious for years, now gives the BNetzA the power to stipulate national regulations for the grid integration of controllable consumption devices and grid connections. These include economic incentives for grid-compatible behavior, agreements on grid connection capacity and active management of controllable consumption devices and grid connections by the grid operator. Participation in grid-oriented management is not mandatory.

Other parts of the Easter Package include the Wind Area Requirements Act to increase and accelerate the expansion of onshore wind farms ["Windflächenbedarfsgesetz"] and the Fourth Act to Amend the Federal Nature Conservation Act ["Viertes Gesetz zur Änderung des Bundesnaturschutzgesetzes"]. The new legal framework will be decisive for ALTERRIC's business especially:

*Onshore Wind Energy Act:* The law accompanies the higher expansion targets for electricity generation from renewable energies set out in the 2023 EEG amendment. By the end of 2032 at the latest, 2 per cent of Germany's land area must be available for onshore wind energy, more than double the currently designated area. Linked to the Onshore Wind Energy Act ["Wind-an-Land-Gesetz": WaLG] is the new Wind Energy Land Requirements Act ["Windenergieflächenbedarfsgesetz": WindBG], which sets binding area targets for the federal states. In addition, the law has altered the repowering of older wind farms. Other objectives are to simplify planning methods and their judicial review, speed up the planning process and increase legal certainty. For this purpose, changes have been made to the Federal Building Code ["Baugesetzbuch": BauGB], among other others.

*Federal Nature Conservation Act:* The aim of the amendment is to accelerate the nature-friendly expansion of renewable energies and, above all, onshore wind energy by 2045 and thus to ensure energy security. To this end, the principle that constructing and operating wind turbines is in the overriding public interest and serves public security is enshrined in the Federal Nature Conservation Act ["Bundesnaturschutzgesetz"]. In the future, landscape conservation areas can also be considered when looking for land for wind energy expansion. National standards for endangered species impact reviews are intended to simplify and expedite approval procedures.

### Energy Industry Act (EnWG): Basic and emergency supply, district heating

On 8 July 2022, the Bundesrat adopted the Act on the Amendment of Energy Industry Law in Connection with the Immediate Action Program for Climate Protection and on Adjustments to the Law on End Customer Supply – also known as the Easter Package 2022 ["EnWG-Osternovelle 2022"]. Particularly relevant for EWE VERTRIEB are revisions to the concept of basic and emergency supply, which are regulated in the Energy Industry Act. In the future, suppliers at risk of insolvency will be obliged to notify the BNetzA of the commencement and discontinuation of their activities and to inform their customers in good time. Prices for emergency supply may deviate from those for basic supply in the future, but must be demonstrably based on the short-term procurement costs. In addition, there are plans to extend the enhanced antitrust abuse control under the Act Against Restraints of Competition ["Gesetz gegen Wettbewerbsbeschränkungen"] to the district heating sector.

### Second Act Amending the Fuel Emissions Trading Act

On 7 June 2022, the Federal Ministry for Economic Affairs and Climate Action presented the preliminary draft of a Second Act Amending the Fuel Emissions Trading Act ["Zweites Gesetz zur Änderung des Brennstoffemissionshandelsgesetz"]. The main act, the Fuel Emissions Trading Act of 2019, stipulates that its full scope will apply from 1 January 2023, having initially been restricted to the principal fuel types. The current draft includes implementing rules for the $CO_2$ pricing of fuel emissions from the use of coal and waste fuels, which were previously not in-scope, as planned from 2023. The waste incineration plants of swb Entsorgung would be affected by the latter.

### Ordinance on Securing the Energy Supply through Medium-Term Impact Measures

On 24 August 2022, the Federal Cabinet adopted the Ordinance on Securing the Energy Supply through Medium-Term Impact Measures ["Verordnung zur Sicherung der Energieversorgung über mittelfristig wirksame Maßnahmen": EnSimiMaV], which contains medium-term provisions for saving gas and electricity in private households, public institutions and companies. Companies affected by the ordinance are required to implement all economically feasible efficiency measures identified in the context of an energy audit or an energy or environmental management system. The measures must be implemented within 18 months. In addition, owners of residential buildings are obliged to have their heating checked, while owners of non-residential buildings with gas central heating systems and more than 1,000 m$^2$ of heated area must arrange to have hydraulic balancing carried out. EWE will support its customers in this process. The ordinance is valid for 24 months from 1 October 2022. It still requires the approval of the Bundesrat before it can enter into force.

### Gas Price Adjustment Ordinance

In light of the criticism voiced against the gas procurement surcharge ("gas surcharge"), the planned regulation is to be revised so that only companies that meet certain requirements will benefit. The aim is to prevent companies that have no economic need from receiving the additional payments made by gas customers. It is therefore planned that only companies that meet three criteria will receive aid: First, they should be relevant for supply security in Germany and, second, the size of their gas operations should be significant. The third criterion for claiming the gas surcharge is that companies receiving state aid are not permitted to pay out bonuses and dividends. The Cabinet is to adopt the amendment to the Gas Price Adjustment Ordinance ["Gaspreisanpassungsverordnung": GasPrAnpV] on 14 September 2022.

### Third relief package of the federal government

On 4 September 2022, the coalition government adopted a third relief package for private households and businesses to the tune of 65 billion euros. Its aim is to limit the negative effects of higher energy prices, inflation and an emerging economic crisis. The measures include an electricity price cap for a basic level of consumption, the avoidance of consumers being cut off from gas and electricity, the postponement of the increase in the $CO_2$ price under the Fuel Emissions Trading Act ["Brennstoffemissionshandelsgesetz": BEHG] and a levy on windfall profits made by energy companies on the electricity market. In addition, as compensation for the gas surcharge, the VAT on total gas consumption is to be reduced from 19 per cent to 7 per cent until the end of March 2024. Many areas of the EWE Group will be affected by the relief package.

### Subsidizing broadband expansion

In its gigabit strategy, the Federal Ministry for Digital and Transport has announced the creation of a new funding regulation to eliminate the threshold that has already been superseded in practice and refrains from actions to prioritize market consultations. This approach will be monitored given the risk of the civil engineering market overheating and impacting prices and thus commercial expansion across the board. If need be, the prioritization actions recommended by the telecommunications industry will be subject to renewed review at the end of 2023.

At the same time, mobile network expansion in commercially unviable areas will continue to be promoted through the mobile network infrastructure company. As a provider of fiber-optic cables for the mobile communications sites, the EWE Group is also affected by this rule.

### Universal service

The requirements under the new Telecommunications Act have been further specified in the Telecommunications Minimum Supply Ordinance [“Telekommunikations-Mindestversorgungs-Verordnung”: TKMV]. The requirements that an internet connection must meet in order to ensure people’s ability to participate in social and economic life were set at a download speed of 10 Mbit/s. If no such connection is available, the BNetzA can oblige a provider to make an affordable connection available (by having it supplied by other providers, where relevant). What the legal criterion “affordable” means exactly has yet to be defined. In addition, just how the BNetzA applies the ordinance in practice will show whether a reasonable supply that allows for participation is actually accepted, such as a supply via technically suitable wireless media. The courts will not accept any transposition in Germany that deviates from European law.

### Regulatory order for wholesale local access provided at a fixed location (telecommunications market 1)

The BNetzA has issued the regulatory order for mass market network access (not legally binding). The access regime for copper subscriber lines remains unchanged. As a purchaser of these wholesale services, the framework conditions would not fundamentally change for the EWE Group. The charges will continue to be regulated in advance by the BNetzA. They are also subject to a long-term permit from 29 June 2022 until the expected latest end of use in 2032. The order prescribes bitstream access for FTTH connections of dominant providers. In addition, a new access obligation to civil infrastructure such as cable ducts of TDG was established. These new connections will be available for use by all providers to expand very high-capacity networks at a fixed location, with the charge expected to be regulated nationwide on the basis of the Telekom costs. The new wholesale services can be used for the expansion of a provider’s own fiber-optic network to the customer but not for the expansion of mobile services. This regulation places a burden on alternative infrastructure builders such as EWE, especially for the marketing of open access. The proceedings regarding Glasfaser NordWest, which was initially involved as an investee of TDG, were carved out of the proceedings relating to TDG and are still ongoing. A final decision is expected in the course of 2022.

## Regional level

### State parliament revises decision of 2021, allowing OneDyas to extract natural gas in the Wadden Sea

In the face of the Russian war of aggression against Ukraine and the associated goal of reducing dependency on natural gas supplies from Russia, the state parliament granted consent on 19 May 2022 for OneDyas to produce gas from a gas field near Borkum that is partly located on German territory, thus repealing a decision to the contrary made in October 2021. At the end of May 2022, the State Mining Office granted formal consent to commence drilling.

**Cabinet resolves amendment to the Lower Saxony Water Act – state parliament consultations underway**

The state government resolved the amendment to the Lower Saxony Water Act [“Niedersächsisches Wassergesetz”: NWG] and handed it over to the state parliament on 13 September 2021. The draft proposes promoting the designation of water protection areas with the state assuming some of the compensation payments to be made by water suppliers as well as authorization to adjust the water withdrawal fee in line with inflation.

**Amendment to the Climate Protection Act adopted by the state parliament**

At its session on 28 June 2022, the state parliament adopted the amendment to the Lower Saxony Climate Protection Act [“Gesetz zur Förderung des Klimaschutzes und zur Anpassung an die Folgen des Klimawandels”: NKlimaG]. By 2030, total emissions are now to be reduced by 65 per cent compared to 1990 levels (previously 55 per cent). By 2040, the reduction should be at least 86 per cent. Greenhouse gas neutrality is to be achieved by 2045 and not by 2050. In addition, a 2.1 per cent land target for onshore wind energy has been added, as has the requirement that at least 0.47 per cent of the state’s land area be reserved for solar parks. New large parking lots for cars must be covered by canopies equipped with photovoltaic systems. 30 gigawatts of onshore wind energy and 65 gigawatts of photovoltaics are to be achieved, 50 gigawatts of which are to be installed on already sealed or overbuilt areas, e.g., roofs. The state administration is to be climate-neutral by 2040 (previously 2050). While a solar roof obligation will apply to all new buildings from next year, the state itself intends to have installed photovoltaic systems on 30 per cent of the suitable rooftop areas of state properties by 2025, followed by all other feasible roofs by 2040. The expansion of renewable energies is also to take precedence over the preservation of historic buildings and monuments. By the end of 2024, all administrative districts and independent cities are required to draw up climate protection plans. All municipalities must introduce a cadaster by the end of 2025 that can be used to determine where sealing or paving in the municipality can be removed by the end of 2028. In addition, the new Climate Protection Act now provides for municipal heating plans, which must be drawn up by small and large regional centers by the end of 2027 and subsequently updated every five years.

**State Regional Land Development Program Amendment – state parliament opts not to comment**

After almost two years of consultations with negotiations at government level and several hearings of associations and organizations, the state parliament opted not to debate the finalized draft of the amendment to the State Regional Land Development Program [“Landesraumordnungsprogramm”: LROP] at its session on 29 June 2022. This means that nothing stands in the way of the amendment being announced by the responsible Ministry of Agriculture. Among other matters, the new LROP sets out new requirements for onshore and offshore wind energy as well as photovoltaics. Furthermore, the stipulations on energy clusters, large-scale energy plants and grid expansion were amended.

**Digital Master Plan for Lower Saxony**

The state government of Lower Saxony is setting itself the ambitious goal of rolling out a one-gigabyte per second internet service across the federal state by 2025. To this end, the state government has adopted a financing plan for the digital innovation fund, which includes investments of up to 850 million euros until 2023 to implement the strategy presented in the Master Plan for the gigabyte expansion and digitalization of Lower Saxony. Since 2019, a total of 15 million euros has been made available in the form of a three-year digital bonus to promote the digitalization of medium-sized and craft businesses. The EWE Group will stand to benefit from this through its services and products from the telecommunications and broadband segment in particular.

**Easement agreements**

EWE NETZ is already in the negotiation stage or the decision by the local bodies is expected shortly in the tendering procedures for easements for electricity and gas in the municipalities Sottrum, Hassendorf (Rotenburg administrative district), Hanstedt (Harburg administrative district) and Langeoog (Wittmund administrative district) as well as Gross Kiesow (Vorpommern-Greifswald administrative district). Furthermore, the tendering procedures for easements have begun in the municipalities Hammah (Stade administrative district), Asendorf (Harburg administrative district), Stemmen, Lauenbrück, Helvesiek (municipal members of the Fintel joint municipal association, Rotenburg administrative district), Worpswede (Osterholz-Scharmbeck administrative district) and Süderholz (Vorpommern-Rügen administrative district) as well as in the cities of Wittmund (Wittmund administrative district) and Fürstenwalde (Oder-Spree administrative district).

The local bodies decided in favor of EWE NETZ in the electricity and/or gas tendering procedures in the municipalities Drochtersen (Stade administrative district) and Rappin (Vorpommern-Rügen administrative district). All abovementioned easement agreements have since been signed by EWE NETZ and the municipalities.

The electricity tendering procedure in the city of Cuxhaven, where the city council had already decided in favor of EWE NETZ, has to be repeated due to a decision by the local supervisory authority (Lower Saxony Ministry of the Interior). EWE NETZ has renewed its expression of interest in supplying electricity to the city.

## Expected industry development

### Ukraine crisis

In the first half of 2022, the energy sector was significantly affected by the events that have occurred since the Ukraine war began on 24 February 2022. There have been considerable increases in wholesale prices in the electricity and gas sectors as a result. Since the beginning of June this year, Russian gas imports to Germany have also been substantially scaled back. Following completion of the maintenance work on 21 July 2022, only around 20 per cent of the maximum capacity of the relevant Nord Stream 1 transport pipeline has been used. To alleviate any gas shortage in the winter of 2022 / 2023, the federal government passed the Gas Storage Act ["Gasspeichergesetz"] in April 2022 in order to achieve a minimum filling level of 90 per cent as of 1 December 2022. On 21 July 2022, the Federal Ministry for Economic Affairs announced new targets for filling gas storage facilities in Germany. These facilities should be 75 per cent full by 1 September 2022 and 95 per cent full by 1 November 2022. In addition, significant reductions in the consumption of gas in industry and power generation (greater use of coal-fired power plants) are envisaged. The federal government created the necessary legal basis for this purpose by adopting the Backup Power Plant Standby Act in July 2022. In April of this year, the federal government also decided to build new LNG import terminals in Wilhelmshaven and Brunsbüttel in order to quickly and substantially reduce dependency on Russian gas imports. The EU decided to impose an embargo on Russian coal with effect from 11 August 2022. A partial oil embargo will follow at the end of the year and will put a stop to all oil imports into the EU by ship. Exceptions are possible for pipeline imports, though Germany wants to make do without them as well.

The Ukraine crisis has thus turned the focus to energy security and in particular gas supply security and poses immense challenges for the industry. Coal, oil and gas supply chains need to be reorganized in the short term and LNG import infrastructure built as quickly as possible and connected to Germany's natural gas system. The federal government laid the groundwork for shortening the necessary approval processes by adopting the LNG Acceleration Act ["LNG Beschleunigungsgesetz"] in July 2022. EWE is making a contribution to a secure gas supply for the region in the short term by constructing a 70 km long connection pipeline from the planned LNG terminal in Wilhelmshaven to the gas storage facilities in Jemgum and Nüttermoor by the end of 2023. There are also financial and liquidity risks that have to be managed as energy prices remain high.

Quite apart from the Ukraine crisis, the objectives of an ambitious energy transition need to be addressed. Gas supply in the form of LNG can therefore only be a temporary solution to enable a secure supply of natural gas in the short term without gas imports from Russia. Natural gas will have to be replaced by alternative carbon-free energy sources such as green hydrogen or biomethane by 2045 at the latest. The gas price increases and supply shortages caused by the Ukraine crisis are likely to raise the pressure to realign business models still further. As things currently stand, the electricity and industry sectors will have to replace natural gas with hydrogen due to a lack of alternatives. In the building sector, natural gas is likely to be substituted to an increasing degree by green electricity as an energy source for highly efficient heat pumps. Natural gas suppliers such as EWE that mostly generate their gas sales in this sector therefore face a particular challenge to adapt their business models.

## Energy transition

In April 2021, the European Commission implemented a comprehensive package of measures to help direct more investments toward sustainable activities in the European Union. The measures adopted include an EU Taxonomy Climate Delegated Act aimed at supporting investment in a sustainable decarbonized economy and thus making a significant contribution toward Europe achieving climate neutrality by 2050. In order to meet the ambitious targets of the Paris Agreement, in spring 2021 the European Union stepped up its climate targets for 2030 (minus 55 per cent compared to 1990) and climate neutrality by the middle of the century and enshrined them in the new EU Climate Law.

A judgment by the Federal Constitutional Court in March 2021 led to the first amendment to the Federal Climate Protection Act ["Bundes-Klimaschutzgesetz"] (published on 18 August 2021). The more stringent target trajectory for the reduction of greenhouse gas emissions compared to 1990 is set out there as follows: reduction of greenhouse gas emissions by at least 65 per cent by 2030, at least 88 per cent by 2040 and 100 per cent (net-zero emissions) by 2045; negative greenhouse gas emissions are to be achieved beyond 2050. The sector targets for 2020 to 2030 were brought in line with the overall reduction target of 65 per cent by 2030.

At the beginning of this year, a $CO_2$ price was introduced under the Fuel Emissions Trading Act for the first time for gasoline, diesel, heating oil and natural gas for building heating and transport. Under the BEHG, the starting price is 25 euros per ton of $CO_2$. This is equivalent to 7.0 cents per liter of gasoline, 7.9 cents per liter of diesel and heating oil and 0.6 cents per kWh for natural gas, including VAT. Even if the climate protection effects related to the 25 euros per ton of $CO_2$ will be negligible, fossil fuels are expected to become more expensive given the further increase in the price of $CO_2$ to 55 euros per ton in 2025 already adopted. Despite the political debate in advance surrounding a further increase, another increase in the $CO_2$ price is not expected in the relevant sectors until at least 2026 according to the new government's coalition agreement.

In 2021, it was not only the $CO_2$ prices under the BEHG that lead to higher end customer prices for gas but in particular the hike in wholesale prices and low levels of storage at the start of winter 2021 / 2022. Electricity prices then also rose in the second half of 2021, followed by another significant rise when the Ukraine war began in February 2022. The currently high energy prices have had a much greater impact than the steering effect of a carbon tax on natural gas. With electricity prices high at the same time, however, there is hardly any incentive to switch from fossil natural gas to renewable electricity. It remains to be seen whether the situation on the exchanges will relax in 2023.

Besides these latest developments on the energy markets as a consequence of the Ukraine crisis, the current precedent-setting political and legal decisions on climate protection will mean a significantly faster reduction in the use of fossil fuels in the energy industry than before and an acceleration of the transformation of the energy system toward renewable energies and alternative energy sources. Additionally, a more fast-paced shift of jobs in conventional energy generation to companies involved in regenerative energy, hydrogen technology and completely new business models will be necessary.

To achieve the goals for 2030 of the Paris Climate Change Agreement, the share of renewable energies will need to be increased substantially each year and the grids and energy storage facilities will need to be expanded. Moreover, the mobility, heating and industrial sectors will need to be onboarded to work toward the sectoral targets in the transformation process. Such restructuring will only be possible with a high degree of standardization and automation. More recent studies (such as the study by the German Energy Agency ["Deutsche Energie-Agentur": dena] entitled "Setting out for climate neutrality" (Aufbruch Klimaneutralität) from October 2021) have highlighted that the climate neutrality target requires negative emissions technologies to be developed and ramped up in order to offset unavoidable greenhouse gas emissions from industrial processes or agriculture. Negative emissions technologies could also play a role in producing energy from waste.

## Market and competition

For 2022, the German Council of Economic Experts that advises the federal government expects growth of only 1.8 per cent. What is more, the Bundesbank expects a significantly higher inflation rate of 7.1 per cent for 2022. According to the AGEB, primary energy consumption in Germany fell by a total of 1.9 per cent in the first quarter of 2022, with consumption of natural gas as a primary energy source down 8.9 per cent in the wake of the Ukraine crisis. The economic development going forward is uncertain and is highly dependent on the further course of the Ukraine crisis. Economic recovery after the COVID-19 pandemic in 2022 is therefore uncertain.

Competition and the pressure on margins in the energy industry are ongoing and are shaped by a high level of rivalry in the area of standard products and product bundles across all customer segments. Competitors from other industries are also increasingly crowding into the energy sector. Overall, this will result in increasing consolidation in the German energy sector and will drive up competitive and price pressure in the industry.

There will be a growing need to transform conventional business models in the electricity and heating segments of the energy sector. The energy sector will increasingly turn to new, largely digital and platform-based business models to boost profitability in a competitive environment.

The ongoing energy transition is leading to a growing interconnectedness of the building, transport and industry sectors, requiring increasingly complex, overarching business models. This is leading to a rising need for digitalization and partnerships with companies outside the industry in order to offer holistic customer solutions. The existing price pressure also calls for highly scalable business models. To achieve the optimal outcome for the economy as a whole, it will become increasingly important to plan integrated electricity, gas and heating networks.

Developments in the political and regulatory environment increase the pressure to innovate, especially in the heating market, most notably the $CO_2$ prices for the energy carriers heating oil and natural gas and the Energy and Buildings Act. As a result, the sale of electricity as an alternative energy carrier in the heating market will probably rise. At the same time, the federal government intends to reduce the EEG surcharge, which will reinforce the trend toward electricity in the heating market. On the other hand, the National Hydrogen Strategy opens up new perspectives for the gas industry, particularly in the industry and transport sectors.

The federal ministries are also keenly aware of their obligation to ensure that the annual emission targets are complied with in the various sectors in the future, i.e., in the energy industry, industrial sector, in the buildings sector, in mobility, in agriculture and forestry, and in the waste management sector. This will inevitably lead to an increase in demand for corresponding services, products and solutions in the energy sector, giving rise to numerous opportunities for the industry to capitalize on.

## Power

As a result of the current gas crisis and prices that are likely to remain high, attention is turning to alternative energy carriers such as electricity and hydrogen. As the energy system becomes increasingly electrified due to more electromobility, the heating transition and policies to drive the expansion of green hydrogen production, the targets for the installation of facilities using renewable sources and the expansion of power grids at all voltage levels will also need to be brought in line with the rise in demand for power. Yet the current pace of expansion of renewable energies and power grids is out of sync with the growing demand for power. The current political debate and the federal government's new and more ambitious targets appear to be heralding a turnaround in policy. But they still need to be underpinned by appropriate action, such as speeding up approval processes and improving public buy-in of onshore wind plants in order to attain the necessary new installation rates. In addition, the existing scope for expanding offshore wind energy production must be leveraged and the expansion of photovoltaic facilities on roofs and in open spaces accelerated.

The new federal government has sent out a strong signal for an accelerated expansion of renewable energies to meet the ambitious goals by 2030 / 2045 by raising the expansion target for photovoltaics to 200 gigawatts until 2030 and increasing the planned expansion capacities for offshore wind to 70 gigawatts in 2045 as set out in the coalition agreement.

What is more, besides nuclear power being phased out, the phase-out of coal is also certain. According to the coalition agreement, coal is to be phased by 2030 instead of by 2038. In view of the Ukraine crisis, it remains to be seen whether this will be achievable by 2030. If coal is phased out eight years earlier, adequate back-up capacities in gas power plants will need to be created in the short and medium term to ensure supply security given the long lead times for such projects. It is unclear whether the current energy only market (EOM) will be able to ensure this or whether a capacity market will need to be introduced.

However, the more dynamic expansion of renewable energies will lead to a fall in market values as a result of cannibalization effects and could put the required willingness to invest and therefore the achievement of the targets at risk. The accelerated expansion of additional flexible demand in the form of battery storage systems or power-to-gas plants could help to stabilize market values. A significant increase in $CO_2$ prices in EU ETS trading would also be conceivable in order to offset a decline in renewable energy prices as gas power plants will likely remain key for setting wholesale power prices until 2030 and beyond.

The sluggish expansion of the transmission system that has led to substantial inefficiencies in the electricity market over the last 10 years and has negatively impacted EWE’s service areas in particular due to high reductions in subsidized wind feed-in (redispatching) continues to be of concern. This is offset by the expected expansion of power-to-gas plants, which could provide additional flexibility in the event of grid congestion or lack of take-up. However, power-to-gas plants cannot be operated profitably solely with the excess electricity arising when grids are congested. A further delay in the expansion of the transmission system caused by power-to-gas plants would endanger the climate goals.

The population’s increasing lack of acceptance of the construction of new onshore wind farms and the still lengthy approval procedures are continuing to impede the wind energy sector and threaten the required expansion of onshore wind. The Wind Area Requirements Act [“Windflächenbedarfsgesetz”] to increase and accelerate the expansion of onshore wind farms was adopted in July 2022. The aim of the Wind Area Requirements Act is to designate 2 per cent of the total area of the Federal Republic of Germany for the installation of wind turbines by 2032 at the latest – previously, this figure was only 0.5 per cent. According to the bill, 2.2 per cent of the area in Brandenburg, Hesse, Lower Saxony, Rhineland-Palatinate, Saxony-Anhalt and Thuringia must be made available for wind power, while Baden-Württemberg, Bavaria, North Rhine-Westphalia and Saarland have a target of only 1.8 per cent. The targets for rest of the federal states, other than the city states, are in-between. For the city states of Berlin, Hamburg and Bremen, a minimum area of just 0.5 per cent of their territory applies.

The generation of power from renewable energy sources will continue to grow and replace conventional power stations. With a view to security of supply, this inevitably entails sufficient capacity to be provided by backup power plants. Until February 2022, the focus was on expanding gas-fired power plants in the course of the planned phase-out of coal. The gas supply crisis, which has been intensifying since February, led to the amendment of the Energy Security Act [“Energiesicherungsgesetz”: EnSiG] of 1974 and a resolution to keep backup power plants on standby to reduce gas consumption in the electricity sector. The amendments are intended to limit the use of gas for electricity. For a limited period of time, generation capacities provided by coal and oil are to be reactivated or their operation extended. To this end, the Energy Industry Act and the Energy Security Act were amended. In addition, environmental legislation is to be relaxed to ease the fuel switchover.

Volatile distributed electricity produced through photovoltaics and onshore wind, the expansion of offshore wind and sector coupling also require a massive grid expansion, in particular at the level of distribution networks, as well as technical measures to ensure network stability (smart grids). The increase in the volatility of energy generation requires greater flexibility to ensure network stability. Flexibility options include electricity wholesale with 15-minute products, CHP plants, power storage units, regional flexibility markets, demand-side management or the Europeanization of electricity trading via market coupling and diversification of the renewable's portfolio in Europe. Power-to-gas and power-to-heat, i.e., transforming green electricity to hydrogen, natural gas or heat, are currently being discussed as a further feasible flexibility option. Flexibility requirements will continue to increase, while the development of the respective market shares is uncertain. Economies of scale in the area of plant engineering as well as adjustments to the regulatory framework and incentives are required in order for the power storage, power-to-gas and power-to-heat segments to gain a relevant market share.

### Gas and heat

Fossil fuels, and therefore natural gas, will have to be substituted to achieve the climate goals. Potential substitutes for natural gas are "green gases" such as biomethane, synthetic methane and hydrogen. In view of the quantities available and sector-specific price levels, the use of hydrogen and biomethane will in the medium term primarily be confined to industry, as a raw material or source of energy, and the transport sector. In the long term, it is likely that hydrogen will also be used to generate electricity. There are few alternatives in the medium term that could be implemented quickly to replace the use of natural gas in the heating market, especially in unrenovated old buildings. However, the increasing energy-efficient renovation of buildings encouraged by subsidies, the use of new technical alternatives such as hybrid heat pumps or high-temperature heat pumps will significantly reduce the demand for fossil natural gas or climate-neutral gases in the medium to long term. This leads to the question of future demand for gas grids and their alternative use for the transportation of hydrogen for the heating market.

In the long run, hydrogen technologies will become more and more important, especially in the industry and transport sectors as well as in power generation. Solutions to the upcoming generation, transport and infrastructure challenges will need to be developed and promoted.

As electrification in newbuilds and old buildings spreads, the effects of the energy transition and the Ukraine crisis on demand for natural gas demand are expected to become visible in the coming years. The additional national $CO_2$ pricing model for natural gas to be introduced from 2021 through the Climate Protection Act with effect until 2026 will also make a contribution. However, under the Climate Protection Act, oil-fired boilers must be replaced in Germany. Beyond the Federal Climate Protection Act, there are already signs of further changes pending at the European level in the form of the EU Gas Package and the EU Green Deal. Essentially, this will involve implementation of further decarbonization (including in the heating sector) at the European level including adjustments to the climate targets for 2030 and 2050.

In addition to the refurbishment of existing buildings to make them more energy efficient and increasing electrification in the newbuild segment, the use of hydrogen, biomethane or synthetic methane is an option. However, it is uncertain whether their use will be viable on the heating market for single-family homes, given the relatively high construction costs and alternative technologies (heat pumps) available. It is more probable that they will be used in community CHP solutions, linking heat and power generation to community and district heating networks. Flexible electric boilers will also play a central role in district heating systems.

This means that natural gas will remain the dominating energy carrier in single-family homes until around 2030. Nevertheless, natural gas will become more expensive for customers due to higher taxes, raising pressure in the heating market to offer lower-emission solutions, in particular in the newbuild segment. Overall, natural gas sales in the heating market will decrease significantly in the long term.

Despite the decrease in Dutch and German gas production, the liquidity of the German gas market has been ensured to date through additional imports from Russia. This increasing dependence on Russian imports currently needs to be reassessed in view of the Ukraine crisis. In order to safeguard gas supplies, imports from Russia should be replaced as rapidly as possible. In the short term, additional liquefied natural gas (LNG) imports are the only alternative. Given the limited transport capacities and lack of LNG import infrastructure, the federal government therefore decided in May 2022 to have new import terminals built in Wilhelmshaven and Brunsbüttel and to have them connected to the German natural gas system. Importing hydrogen as an alternative or further electrifying the heating market, on the other hand, are longer-term undertakings.

## Transport

The positive trend toward alternative drives (battery electric vehicle (BEV), hybrid plug-in, fuel cell, gas, hydrogen) continues. According to the German Federal Motor Authority ["Kraftfahrtbundesamt"], a total of 1,013,417 new passenger cars were registered in the first five months of 2022, 449,345 passenger cars or 44.3 per cent of which featured an alternative drive system. This marks an increase of 15.4 per cent compared to the same period in the previous year (38.4 per cent). At 24.5 per cent (up 10.4 per cent), new cars with an electric drive (BEV, plug-in, fuel cell) accounted for almost one quarter of all new registrations. BEV passenger cars commanded a 13.3 per cent share of new registrations in the reporting period, an increase of 29.1 per cent.

The expansion of public charging infrastructure is gathering pace, with the number of public charging points increasing from 37,000 in March 2021 to almost 52,000 as of 1 May 2022 according to the BNetzA. This is an increase of some 41 per cent in the space of nine months. Every seventh charging point is a DC fast charger and the expansion is spreading rapidly not only in cities.

Given the ongoing high production costs and scant charging infrastructure from a customer perspective, a further dynamic e-mobility market ramp-up will largely hinge on subsidies for the purchase and ownership of the vehicles and the subsidized establishment of charging and hydrogen filling station infrastructure in the coming years.

The focus of developments is expected to be on battery electric vehicles or plug-in hybrid vehicles. As things stand today, an electrification strategy alone will not suffice to achieve an adequate reduction in greenhouse gas emissions from the mobility sector and, going forward, there is still likely to be demand for gaseous and liquid fuels, in particular in the heavy duty, maritime and aviation sectors. Whether the national hydrogen strategy will culminate in hydrogen technology capturing a relevant market share in the mobility sector in the medium term will depend in particular on the commitment of manufacturers to develop hydrogen vehicles for series production and the expansion of the required competitive hydrogen production and infrastructure. Given the planned combustion engine ban for passenger cars in the EU from 2035, it looks like hydrogen will establish itself as an energy source for mobility in shipping or aviation alongside synthetic fuels.

## Customer focus

Relentless pressure on margins and, driven by high energy prices and the consequences of the Ukraine crisis, the trend toward self-generation and the establishment of mature technical solutions to increase self-sufficiency and efficiency put increasing pressure on conventional sales of power and gas once again in 2022. The needs of end customers and prosumers beyond the pure supply of energy is moving more and more into focus. As part of an expanded product portfolio including regional green electricity and green gas products, customers can be offered products for energy efficiency, power storage, smart home applications, electromobility, telecommunications, green heating, etc. In this way, energy distribution companies are evolving from pure-play energy suppliers into sustainable one-stop service providers for all aspects of building technology, energy and transport. The energy industry must therefore not just offer the customer marketable products, but also see them as a partner who not only buys power, but also produces it.

### Digitalization

The trend toward digitalization of the energy sector, which was accelerated by the COVID-19 pandemic, continued in the first half of 2022. In addition to the automation of production processes, digitalization is penetrating the entire world of work; the gradual shift toward mobile working is placing higher requirements on digital communication as well as the transmission capacity and stability of the necessary infrastructure. This trend is likely to continue in the long term and will require the accelerated nationwide expansion of fiber-optic networks.

## Expected performance in the EWE Group

Looking ahead to the end of 2022, we currently expect the energy markets to remain highly volatile. EWE is benefiting from the higher energy prices and the current uncertainty through increased wind yields in the Renewable Energies segment and greater demand for storage capacity. On the other hand, unplanned volume increases are weighing on earnings, as such additional volumes have to be procured at significantly higher market prices. The price adjustments effective from 1 April 2022 and the pricing measures that have been prepared for the second half of 2022 will lead to catch-up effects in earnings in the further course of the year. However, price increases also increase the risk of bad debts. Aside from the high price level, weather and wind conditions have a considerable impact on the development of earnings. Currently, steps are being taken on an ongoing basis to lock in the planned results. Operating EBIT for the EWE Group for the fiscal year is expected to develop in line with the earnings guidance in the group management report for 2021.

# Report on risks and opportunities

The risks and opportunities described in the group management report as of year-end 2021 changed during the reporting period in a way that significantly affects the risks and opportunities of the EWE Group.

The effects of the Ukraine war continue to be a focus of risk management and have been the key factor behind the increase in the EWE Group's aggregate risk since the beginning of the year.

In order to secure Germany's gas supply, gas supplies from Russia remain indispensable at present. A lasting halt of supply or significant restrictions on supply volumes – such as during maintenance work on the supply infrastructure – can lead to massive price increases and additional costs for gas importers in the short term and, in the medium term, to lower storage levels than needed for a secure gas supply in the winter months.

Overall, these distortions on the energy markets are taking a high economic toll on the energy industry, energy-intensive industries and private households, which is reflected in a deterioration in credit ratings. In connection with the increased price level, credit risk in the EWE Group has risen significantly again in the last few months and is now classified in financial terms as "catastrophic."

Given the high economic and social relevance of energy supply, the Bundestag, the lower house of parliament, has taken extensive steps to support distressed companies, especially in the energy industry, passing various legislative initiatives (Energy Security Act ["Energiesicherheitsgesetz": EnSiG]).

In parallel with the legislative initiatives to support distressed companies, a levy on windfall profits is being considered for electricity producers that have benefited from the high energy prices in recent months. The risk arising from this levy would affect electricity generation from renewable energies and fossil fuels alike. Combined with a significant increase in costs for the expansion of renewable energies, there is also the risk that existing expansion targets will cease to be economically achievable. Given that the requirements for the implementation of the levy on windfall profits have yet to be specified, the associated risks are provisionally classified as “mild” to “medium” from a financial perspective.

Assuming that these legal proposals do take effect, developments posing a risk to the EWE Group’s ability to continue as a going concern are unlikely at present. This assessment essentially depends on the design of the legal regulations and the government’s response to the failure of systemically important market participants (market collapse).

In view of the tense risk situation and the heightened aggregate risk, both market and legislative developments are being closely monitored by the crisis team and risk management so as to be able to react to any developments as they arise.

**Risk category according to ES 95 (expected shortfall 95 per cent)**

| Risk category | in millions of euros |
|---|---|
| low | < 10 |
| mild | 10 - 40 |
| medium | 40 - 100 |
| high | 100 - 250 |
| catastrophic | > 250 |

ES 95 combines the probability of occurrence and all potential loss amounts of a risk in a single metric. To this end, the risk is standardized to the level of loss which is assumed for the risk if it exceeds the value-at-risk at the 95 per cent confidence level.

# Forward-looking statements

All statements made are based on current knowledge and assumptions. They represent estimates that we have formulated on the basis of all information available to us at the present time. In the event that the underlying assumptions prove not to be accurate or additional risks emerge, the actual results could deviate from those expected. As such, we cannot assume liability for such statements.

Oldenburg, 6 September 2022

The Board of Management

Stefan Dohler

Dr. Urban Keussen

Wolfgang Mücher

Marion Rövekamp

# Consolidated income statement of the EWE Group

| in millions of euros | Note | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 [1] |
|---|---|---|---|
| **Revenue** | 5 | **4,206.6** | **3,260.1** |
| Electricity and energy taxes | | -226.1 | -223.8 |
| **Revenue (excluding electricity and energy taxes)** | | **3,980.5** | **3,036.3** |
| | | | |
| Changes in finished goods and work in progress | | 28.0 | 21.9 |
| Other own work capitalized | | 22.9 | 25.6 |
| Other operating income | | 73.3 | 60.0 |
| Cost of materials [2] | | -1,889.4 | -1,794.1 |
| Personnel expenses | | -449.2 | -419.8 |
| Amortization, depreciation and impairment | 6 | -358.5 | -261.7 |
| Other operating expenses | | -247.6 | -211.8 |
| Impairment losses / gains pursuant to IFRS 9.5.5 | | -7.5 | -4.3 |
| Profit / loss from investments accounted for using the equity method | | -0.3 | -2.4 |
| Other profit / loss from equity investments | | -37.5 | -20.6 |
| **EBIT [3]** | | **1,114.7** | **429.1** |
| | | | |
| Interest income | | 36.1 | 18.2 |
| Interest expenses | | -39.2 | -37.8 |
| **Profit / loss before income taxes** | | **1,111.6** | **409.5** |
| | | | |
| Income taxes | | -399.2 | -123.2 |
| **Profit / loss for the period** | | **712.4** | **286.3** |
| | | | |
| Thereof attributable to: | | | |
| Owners of the parent | | 710.1 | 289.7 |
| Non-controlling interests | | 2.3 | -3.4 |
| | | **712.4** | **286.3** |

[1] Restated figures: finalization of accounting for the ALTERRIC business combination

[2] Cost of materials also includes the results of mark-to-market valuation of purchase contracts

[3] Earnings before interest and taxes

# Consolidated statement of comprehensive income of the EWE Group

| in millions of euros | Note | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 |
|---|---|---|---|
| **Profit / loss for the period** | | **712.4** | **286.3** |
| Actuarial gains and losses from defined benefit pension plans and similar obligations | 8 | 494.0 | 183.6 |
| Deferred taxes on pensions | | -141.0 | -56.2 |
| Fair value measurement of equity instruments | | -60.4 | -51.3 |
| **Sum of other comprehensive income and expenses recognized directly in equity without future reclassification to profit and loss** | | **292.6** | **76.1** |
| Adjustment item for foreign currency translation of international subsidiaries | | -2.5 | 1.0 |
| Cash flow hedges [1] | | 741.6 | 387.9 |
| Deferred tax on cash flow hedge reserve [1] | | -222.5 | -116.0 |
| Share of other comprehensive income comprising investments accounted for using the equity method | | 19.8 | 5.6 |
| **Sum of other comprehensive income and expenses recognized directly in equity with future reclassification to profit and loss** | | **536.4** | **278.5** |
| **Other comprehensive income for the period, net of tax** | | **829.0** | **354.6** |
| **Total comprehensive income for the period, net of tax** | | **1,541.4** | **640.9** |
| Thereof attributable to: | | | |
| Owners of the parent | | 1,539.1 | 644.0 |
| Non-controlling interests | | 2.3 | -3.1 |
| | | **1,541.4** | **640.9** |

[1] Restated prior-year figures: change in presentation of basis adjustment

# Consolidated statement of financial position of the EWE Group

## ASSETS

| in millions of euros | Note | 30 Jun 2022 | 31 Dec 2021 |
|---|---|---|---|
| **Non-current assets** | | | |
| Intangible assets | 6 | 1,731.8 | 1,860.4 |
| Property, plant and equipment | 9 | 6,811.1 | 6,915.5 |
| Investment property | | 3.8 | 3.9 |
| Investments accounted for using the equity method | | 236.9 | 218.4 |
| Other financial assets | 11 | 4,941.9 | 1,581.1 |
| Other non-financial assets | | 71.0 | 70.0 |
| Deferred tax | | 250.4 | 270.3 |
| | | **14,046.9** | **10,919.6** |
| **Current assets** | | | |
| Inventories | | 700.0 | 400.4 |
| Trade receivables | 11 | 1,612.0 | 1,399.6 |
| Other financial assets | 11 | 7,031.4 | 5,344.9 |
| Income tax refund claims | | 128.1 | 113.6 |
| Other non-financial assets | | 251.9 | 210.2 |
| Cash and cash equivalents | 11 | 2,523.1 | 1,022.1 |
| | | **12,246.5** | **8,490.8** |
| Assets classified as held for sale | | 39.5 | |
| | | **12,286.0** | **8,490.8** |
| **Total assets** | | **26,332.9** | **19,410.4** |

## EQUITY AND LIABILITIES

| in millions of euros | Note | 30 Jun 2022 | 31 Dec 2021 |
|---|---|---|---|
| **Equity** | 7 | | |
| Subscribed capital | | 243.0 | 243.0 |
| Capital reserves | | 1,590.1 | 1,590.1 |
| Retained earnings | | 2,695.7 | 2,072.7 |
| Accumulated other comprehensive income / loss | | 744.7 | 41.9 |
| **Equity attributable to owners of the parent** | | **5,273.5** | **3,947.7** |
| Non-controlling interests | | 767.8 | 767.4 |
| | | **6,041.3** | **4,715.1** |
| **Non-current liabilities** | | | |
| Construction subsidies | | 658.1 | 663.5 |
| Provisions | 8 | 2,957.5 | 2,862.7 |
| Bonds | 11 | 1,090.6 | 1,090.1 |
| Liabilities to banks | 11 | 991.8 | 1,058.5 |
| Other financial liabilities | 9, 11 | 4,676.6 | 1,931.5 |
| Income tax liabilities | | 8.0 | 7.3 |
| Other non-financial liabilities | | 41.8 | 33.5 |
| Deferred tax | | 1,421.3 | 789.9 |
| | | **11,845.7** | **8,437.0** |
| **Current liabilities** | | | |
| Construction subsidies | | 49.9 | 49.9 |
| Provisions | 8 | 1,023.2 | 504.2 |
| Bonds | 11 | 3.1 | 2.4 |
| Liabilities to banks | 11 | 297.3 | 364.6 |
| Trade payables | 11 | 1,362.8 | 1,078.5 |
| Other financial liabilities | 9, 11 | 5,331.7 | 3,976.5 |
| Income tax liabilities | | 118.2 | 91.6 |
| Other non-financial liabilities | | 253.8 | 190.6 |
| | | **8,440.0** | **6,258.3** |
| Liabilities classified as held for sale | | 5.9 | |
| | | **8,445.9** | **6,258.3** |
| **Total equity and liabilities** | | **26,332.9** | **19,410.4** |

# Consolidated statement of changes in equity of the EWE Group

| in millions of euros | Subscribed capital | Capital reserves of the EWE Group | Retained earnings | Accumulated other comprehensive income / loss | |
|---|---|---|---|---|---|
| | | | | Reserve for equity instruments | Cash flow hedge reserve |
| **As of 31 December 2020** | **243.0** | **1,590.1** | **1,567.9** | **175.3** | **-2.7** |
| Profit / loss for the period | | | 289.7 | | |
| Other comprehensive income | | | | -51.3 | 271.9[1)] |
| **Total comprehensive income** | | | | | |
| Capital increase | | | | | |
| Dividend payments | | | -186.9 | | |
| Sale of shares in affiliates to holders of non-controlling interests | | | 89.0 | | |
| Changes in the basis of consolidation | | | | | |
| Other changes | | | -6.3 | -0.1 | -7.2[1)] |
| **As of 30 June 2021** | **243.0** | **1,590.1** | **1,753.4** | **123.9** | **262.0** |
| **As of 31 December 2021** | **243.0** | **1,590.1** | **2,072.7** | **130.6** | **566.6** |
| Profit / loss for the period | | | 710.1 | | |
| Other comprehensive income | | | | -60.4 | 519.1 |
| **Total comprehensive income** | | | | | |
| Capital decrease | | | | | |
| Dividend payments | | | -84.1 | | |
| Changes in the basis of consolidation | | | -0.9 | | |
| Other changes | | | -2.1 | | -126.2 |
| **As of 30 June 2022** | **243.0** | **1,590.1** | **2,695.7** | **70.2** | **959.5** |

[1)] Restated figures: change in presentation of basis adjustment

| Accumulated other comprehensive income / loss | | | Equity attributable to owners of the parent | Non-controlling interests | **Equity** |
|---|---|---|---|---|---|
| Currency translation difference | Measurement of pension obligations | Changes not recognized in profit or loss arising from accounting for investments using the equity method | | | |
| **-16.0** | **-737.6** | **-31.7** | **2,788.3** | **51.0** | **2,839.3** |
| | | | 289.7 | -3.4 | 286.3 |
| 0.9 | 127.2 | 5.6 | 354.3 | 0.3 | 354.6 |
| | | | **644.0** | **-3.1** | **640.9** |
| | | | | 20.0 | 20.0 |
| | | | -186.9 | | -186.9 |
| | | | 89.0 | 39.5 | 128.5 |
| | | | | 657.3 | 657.3 |
| | 1.6 | | -12.0 | 10.7 | -1.3 |
| **-15.1** | **-608.8** | **-26.1** | **3,322.4** | **775.4** | **4,097.8** |
| **-16.3** | **-617.3** | **-21.7** | **3,947.7** | **767.4** | **4,715.1** |
| | | | 710.1 | 2.3 | 712.4 |
| -2.5 | 353.0 | 19.8 | 829.0 | | 829.0 |
| | | | **1,539.1** | **2.3** | **1,541.4** |
| | | | | -5.0 | -5.0 |
| | | | -84.1 | | -84.1 |
| | | | -0.9 | | -0.9 |
| | | | -128.3 | 3.1 | -125.2 |
| **-18.8** | **-264.3** | **-1.9** | **5,273.5** | **767.8** | **6,041.3** |

# Consolidated statement of cash flows of the EWE Group

## Cash inflow (+), cash outflow (-)

| in millions of euros | Note 13 | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 [1] |
|---|---|---|---|
| **EBIT [1]** | | **1,114.7** | **429.1** |
| Amortization, depreciation and impairment | | 358.5 | 261.7 |
| Release of construction subsidies | | -25.7 | -25.9 |
| Interest paid | | -27.1 | -15.2 |
| Interest received | | 6.1 | 10.7 |
| Income tax payments / refunds | | -36.6 | -45.6 |
| Gain / loss on the disposal of non-current assets | | -5.9 | -1.8 |
| Non-cash foreign currency gains / losses | | -0.2 | |
| Non-cash changes in provisions | | 1,216.0 | 31.2 |
| Changes recognized in profit or loss arising from accounting for investments using the equity method | | 0.6 | 6.8 |
| Non-cash gain / loss from derivative financial instruments | | -2,238.6 | -166.1 |
| Other non-cash income and expenses | | 63.6 | 60.4 |
| Change in inventories | | -300.0 | 41.2 |
| Change in receivables and other assets | | -3,132.6 | -993.2 |
| Change in accounts payable and other liabilities | | 5,018.4 | 1,239.5 |
| **Cash flow from operating activities** | | **2,011.2** | **832.8** |
| | | | |
| Cash received from construction subsidies | | 20.6 | 17.7 |
| Cash received from the disposal of intangible assets | | 2.8 | 0.1 |
| Cash paid for investments in intangible assets | | -17.2 | -31.8 |
| Cash received from the disposal of property, plant and equipment | | 9.1 | 7.7 |
| Cash paid for investments in property, plant and equipment | | -195.8 | -195.0 |
| Cash received from the disposal of other non-current assets | | 6.2 | 25.4 |
| Cash paid for investments in other non-current assets | | -108.4 | -42.7 |
| Cash received from the disposal of shares of fully consolidated companies | 4 | 8.9 | |
| Cash paid for investments in shares of fully consolidated companies | | | -402.7 |
| **Cash flow from investing activities** | | **-273.8** | **-621.3** |

[1] Earnings before interest and taxes

[2] Restated figures: finalization of accounting for the ALTERRIC business combination and change in presentation of receivables from clearing activities

| in millions of euros | Note 13 | **1 Jan - 30 Jun 2022** | 1 Jan - 30 Jun 2021 [1)] |
|---|---|---|---|
| Cash paid due to equity changes | | -5.0 | |
| Dividends paid | | -84.1 | -186.9 |
| Cash received from / paid for financial liabilities (net) | | -126.6 | 477.3 |
| Cash paid for the repayment of lease liabilities | | -18.4 | -13.2 |
| Other net payments from financing activities | | -0.7 | 0.2 |
| **Cash flow from financing activities** | | **-234.8** | **277.4** |
| Change in cash and cash equivalents | | 1,502.6 | 488.9 |
| Change in cash and cash equivalents due to exchange rates, basis of consolidation and measurement | | -1.2 | 6.2 |
| Cash and cash equivalents at the beginning of the period | | 1,022.7 | 765.8 |
| **Cash and cash equivalents at the end of the period** | | **2,524.1** | **1,260.9** |
| thereof reported as cash and cash equivalents | | 2,523.1 | 1,259.2 |
| thereof reported as cash pool receivables | | 1.0 | 1.7 |

[2)] Restated figures: finalization of accounting for the ALTERRIC business combination and change in presentation of receivables from clearing activities

# Notes to the condensed consolidated interim financial statements

## 1. Information about the Company

EWE Aktiengesellschaft (EWE AG) based at Tirpitzstrasse 39, 26122 Oldenburg, Germany, is the parent company of the EWE Group.

These condensed consolidated interim financial statements for the first half of 2022 were approved by the Board of Management for review by the Supervisory Board on 6 September 2022.

The condensed consolidated interim financial statements and the interim group management report were subject to a review by an auditor.

## 2. Basis of preparation

The condensed consolidated interim financial statements for the first half of 2022 were prepared in line with the International Financial Reporting Standards (IFRS) as adopted by the EU. In accordance with IAS 34, these statements do not contain all of the information and disclosures required for consolidated financial statements at the end of a fiscal year and should therefore be read in conjunction with the consolidated financial statements for the fiscal year ending on 31 December 2021.

Slight deviations may result in the calculation of total values and percentages in the half-year financial report as a result of rounding.

## 3. Accounting policies

### Changes in accounting policies

The same accounting policies that were applied to the preparation of the consolidated financial statements as of 31 December 2021 were applied for the preparation of the condensed consolidated interim financial statements, except for the following standards which became effective for the first time but had no or no material impact on the consolidated financial statements:

- Amendments to IFRS 3 “Business Combinations,” IAS 16 “Property, Plant and Equipment,” IAS 37 “Provisions, Contingent Liabilities and Contingent Assets” and Annual Improvements 2018 to 2020
- Amendments to IFRS 4 “Insurance Contracts” – Deferral of Effective Date of IFRS 9
- Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 – Interest Rate Benchmark Reform (Phase 2)
- Amendments to IFRS 16 “Leases” – Covid-19-Related Rent Concessions beyond 30 June 2021

### Standards which have been issued but are not yet effective and have also not been voluntarily adopted early

The EWE Group reasonably expects the following standards issued but not yet effective to have no or only an immaterial impact on its disclosures and/or assets, liabilities, financial position and financial performance when applied at a future date:

- Amendments to IAS 1 "Presentation of Financial Statements" – Classification of Liabilities as Current or Non-Current
- Amendments to IAS 1 "Presentation of Financial Statements" and IFRS Practice Statement 2 "Disclosure of Accounting Policies"
- Amendments to IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors"
- Amendments to IAS 12 "Income Taxes" – Deferred Tax relating to Assets and Liabilities arising from a Single Transaction
- IFRS 17 "Insurance Contracts"
- Amendments to IFRS 17 "Insurance Contracts" – Initial Application of IFRS 17 and IFRS 9 – Comparative Information

## 4. Basis of consolidation

Besides EWE AG, the condensed consolidated interim financial statements comprise all significant German and foreign subsidiaries which EWE AG directly or indirectly controls. Investments in significant associates and joint ventures are accounted for using the equity method. The basis of consolidation is as follows:

| Type of consolidation and number | **30 Jun 2022** | 31 Dec 2021 | 30 Jun 2021 |
|---|---|---|---|
| Fully consolidated companies | 295 | 293 | 305 |
| Companies accounted for using the equity method | 27 | 28 | 27 |
| **Total** | **322** | **321** | **332** |

The change in the basis of consolidation is primarily due to intragroup reorganizations and the deconsolidation of Alkkian Energia Oy, Kauhajoki, Finland.

### Divestments in 2022

The sale of the shares in Alkkian Energia Oy, Kauhajoki, Finland, as of 7 June 2022 gave rise to a gain on deconsolidation of 6.9 million euros. The sale included the transfer of non-current and current assets of 5.8 million euros and 0.4 million euros, respectively, and non-current and current liabilities of 3.6 million euros and 0.2 million euros, respectively. The cash consideration agreed amounted to 9.3 million euros, while cash and cash equivalents of the divested subsidiary came to 0.4 million euros.

## 5. Revenue

The following table shows revenue by product and service:

| 1 Jan - 30 Jun 2022<br>in millions of euros | Renewable Energies | Infrastructure | Market | swb | Other | Group Central Division | Group |
|---|---|---|---|---|---|---|---|
| Power | | | | | | | |
| Energy | 225.7 | 0.8 | 1,288.1 | 216.2 | 12.6 | | 1,743.4 |
| Grid utilization | | 191.2 | | 61.8 | | | 253.0 |
| Miscellaneous | 0.3 | 10.5 | | 1.5 | | | 12.3 |
| Gas | | | | | | | |
| Energy | | 55.3 | 945.8 | 132.2 | 57.6 | | 1,190.9 |
| Grid utilization | | 147.5 | 8.1 | 15.8 | 0.6 | | 172.0 |
| Miscellaneous | | 8.2 | | 1.0 | | | 9.2 |
| IT | | | | | 68.9 | | 68.9 |
| Telecommunications | | | | | | | |
| Private customers | | | 135.4 | | | | 135.4 |
| Business customers | | | 90.9 | | | | 90.9 |
| Carrier & wholesale | | 1.5 | 16.5 | | | | 18.0 |
| Miscellaneous | | | 13.8 | | | | 13.8 |
| Other | | | | | | | |
| Heat | | | 50.9 | 44.2 | 0.4 | | 95.5 |
| Water | | 0.1 | 2.8 | 62.0 | | | 64.9 |
| Waste | | | | 36.8 | | | 36.8 |
| Miscellaneous | 3.4 | 15.7 | 26.8 | 20.8 | 7.9 | 0.9 | 75.5 |
| **External revenue** | **229.4** | **430.8** | **2,579.1** | **592.3** | **148.0** | **0.9** | **3,980.5** |

Miscellaneous other revenue of the Infrastructure, Market and swb segments includes revenue from leases of 11.6 million euros (first half-year 2021: 9.4 million euros).

Revenue from electricity, gas and telecommunications primarily relates to revenue recognized over time. For multiple-element arrangements which include the delivery of hardware upon conclusion of the contract, revenue is recognized as of the date of transfer (at a point in time). Revenue from service components is recognized over time. In the area of IT, revenue is recognized over time except for release changes, which are recognized at a point in time.

| 1 Jan - 30 Jun 2021<br>in millions of euros | **Renewable Energies** | **Infrastructure** | **Market** | **swb** | **Other** | **Group Central Division** | **Group** |
|---|---|---|---|---|---|---|---|
| Power | | | | | | | |
| Energy | 104.1 | 19.0 | 857.1 | 246.1 | 9.6 | | 1,235.9 |
| Grid utilization | 0.1 | 161.1 | | 51.5 | | | 212.7 |
| Miscellaneous | | 14.7 | 4.6 | 14.0 | | | 33.3 |
| Gas | | | | | | | |
| Energy | 0.3 | 13.0 | 662.2 | 117.7 | 24.5 | | 817.7 |
| Grid utilization | | 107.6 | | 17.2 | 0.4 | | 125.2 |
| Miscellaneous | | 44.7 | 5.8 | 7.5 | 0.2 | | 58.2 |
| IT | | | | | 63.5 | | 63.5 |
| Telecommunications | | | | | | | |
| Private customers | | | 135.5 | | | | 135.5 |
| Business customers | | | 69.3 | | | | 69.3 |
| Carrier & wholesale | | | 22.8 | | | | 22.8 |
| Miscellaneous | | | 23.2 | | | | 23.2 |
| Other | | | | | | | |
| Heat | | | 38.4 | 44.5 | 0.2 | | 83.1 |
| Water | | 0.1 | 2.7 | 58.3 | | | 61.1 |
| Waste | 0.2 | | | 35.8 | | | 36.0 |
| Miscellaneous | 0.9 | 14.9 | 18.1 | 17.6 | 5.8 | 1.5 | 58.8 |
| **External revenue** | **105.6** | **375.1** | **1,839.7** | **610.2** | **104.2** | **1.5** | **3,036.3** |

## 6. Amortization, depreciation and impairment

Impairment losses of 56.6 million euros (first half-year 2021: 0.0 million euros) were recognized in the reporting period, primarily relating to project rights.

The allocation to segments is indicated in the segment reporting.

## 7. Equity

**Approved and paid dividends**

On 9 June 2022, the general meeting of EWE AG resolved to distribute a dividend of 84,073,848.00 euros for fiscal year 2021 to the shareholders. This is a distribution of 346.00 euros per share entitled to a dividend. The dividend was distributed to the shareholders in the first half of the year.

## 8. Provisions

**Pension provisions**

The provisions for pensions and similar obligations of 1,386.9 million euros as of 30 June 2022 (31 December 2021: 1,895.1 million euros) were discounted at an interest rate of 3.20 per cent p.a. (31 December 2021: 1.00 per cent p.a.; 30 June 2021: 1.00 per cent p.a.).

**Rehabilitation provisions**

Interest rates of between 0.25 per cent and 7.32 per cent p.a. (31 December 2021: between -0.74 per cent and 3.88 per cent p.a.; 30 June 2021: between -0.69 per cent p.a. and 2.09 per cent p.a.) were used to calculate the rehabilitation provisions of 722.1 million euros as of the reporting date (31 December 2021: 778.1 million euros).

**Provisions for potential losses**

Due to the developments in the energy markets, the provision for onerous sales contracts with matching derivative purchase transactions increased to 1,666.3 million euros (31 December 2021: 493.1 million euros).

## 9. Leases

### Leases recognized in the income statement (EWE as lessee)

| in millions of euros | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Amortization, depreciation and impairment** | | |
| Depreciation of right-of-use assets | 17.1 | 14.5 |
| **Net interest income / expense** | | |
| Interest expenses | 2.0 | 1.3 |

### Leases in the statement of financial position (EWE as lessee)

| in millions of euros | 30 Jun 2022 | 31 Dec 2021 |
|---|---|---|
| **Assets** | | |
| **Non-current assets** | | |
| Property, plant and equipment (right-of-use assets) | 316.2 | 320.5 |
| **Liabilities** | | |
| **Non-current other financial liabilities** | | |
| Lease liabilities | 291.5 | 298.0 |
| **Current other financial liabilities** | | |
| Lease liabilities | 32.2 | 29.8 |
| **Total** | **323.7** | **327.8** |

## 10. Contingent assets and liabilities

### Contingent assets

As of 30 June 2022, EWE held contingent assets totaling 41.2 million euros (31 December 2021: 36.6 million euros).

### Sureties, guarantees and letters of comfort

As of 30 June 2022, sureties, guarantees and letters of comfort amounted to 257.0 million euros (31 December 2021: 190.1 million euros), of which 0.5 million euros (31 December 2021: 0.5 million euros) were issued to creditors of joint ventures and associates.

## 11. Additional disclosures on financial instruments

The carrying amounts and the fair values of financial assets and financial liabilities are set out below.

### Carrying amounts and fair values by measurement category (I/II)

| in millions of euros | Carrying amount 30 Jun 2022 | Measurement category pursuant to IFRS 9 | | | Fair value 30 Jun 2022 |
|---|---|---|---|---|---|
| | | Amortized cost | Fair value through profit or loss | Fair value through OCI without recycling | |
| **Assets** | | | | | |
| Other non-current assets | | | | | |
| Shares | 263.1 | | 95.2 | 167.9 | 263.1 |
| Loans | 328.9 | 328.9 | | | 336.3 |
| Derivatives | | | | | |
| Derivatives not in a hedging relationship | 3,747.2 | | 3,747.2 | | 3,747.2 |
| Derivatives in a hedging relationship (n/a) | 506.4 | | | | 506.4 |
| Finance lease receivables (n/a) | 89.5 | | | | 75.1 |
| Miscellaneous non-current financial assets | 6.9 | 6.9 | | | 6.9 |
| Trade receivables | 1,612.0 | 1,612.0 | | | 1,612.0 |
| Other current assets | | | | | |
| Loans | 15.5 | 15.5 | | | 15.5 |
| Securities | 3.5 | | 3.5 | | 3.5 |
| Derivatives | | | | | |
| Derivatives not in a hedging relationship | 4,836.7 | | 4,836.7 | | 4,836.7 |
| Derivatives in a hedging relationship (n/a) | 1,131.9 | | | | 1,131.9 |
| Finance lease receivables (n/a) | 10.7 | | | | 10.7 |
| Cash collateral furnished (energy trading) | 981.9 | 981.9 | | | 981.9 |
| Miscellaneous current financial assets | 51.1 | 51.1 | | | 51.1 |
| Cash and cash equivalents | 2,523.1 | 2,523.1 | | | 2,523.1 |
| **Total** | **16,108.4** | **5,519.4** | **8,682.6** | **167.9** | **16,101.4** |
| **Liabilities** | | | | | |
| Bonds | 1,093.7 | 1,093.7 | | | 867.4 |
| Liabilities to banks | 1,289.1 | 1,289.1 | | | 1,451.4 |
| Trade payables | 1,362.8 | 1,362.8 | | | 1,362.8 |
| Lease liabilities (n/a) | 323.7 | | | | 323.7 |
| Miscellaneous other financial liabilities | 845.4 | 845.4 | | | 818.7 |
| Derivatives | | | | | |
| Derivatives not in a hedging relationship | 8,623.2 | | 8,623.2 | | 8,623.2 |
| Derivatives in a hedging relationship (n/a) | 159.6 | | | | 159.6 |
| **Total** | **13,697.5** | **4,591.0** | **8,623.2** | | **13,606.8** |

n/a = not applicable: financial instrument is not allocated to any of the three measurement categories pursuant to IFRS 9

## Carrying amounts and fair values by measurement category (II/II)

| in millions of euros | Carrying amount 31 Dec 2021 | Measurement category pursuant to IFRS 9 | | | Fair value 31 Dec 2021 |
|---|---|---|---|---|---|
| | | Amortized cost | Fair value through profit or loss | Fair value through OCI without recycling | |
| **Assets** | | | | | |
| Other non-current assets | | | | | |
| Shares | 363.5 | | 139.9 | 223.6 | 363.5 |
| Loans | 239.9 | 239.9 | | | 267.2 |
| Derivatives | | | | | |
| Derivatives not in a hedging relationship | 620.9 | | 620.9 | | 620.9 |
| Derivatives in a hedging relationship (n/a) | 261.5 | | | | 261.5 |
| Finance lease receivables (n/a) | 87.5 | | | | 84.3 |
| Miscellaneous non-current financial assets | 7.8 | 7.8 | | | 7.8 |
| Trade receivables | 1,399.6 | 1,399.6 | | | 1,399.6 |
| Other current assets | | | | | |
| Loans | 12.6 | 12.6 | | | 12.6 |
| Securities | 876.9 | | 876.9 | | 876.9 |
| Derivatives | | | | | |
| Derivatives not in a hedging relationship | 2,114.3 | | 2,114.3 | | 2,114.3 |
| Derivatives in a hedging relationship (n/a) | 779.9 | | | | 779.9 |
| Finance lease receivables (n/a) | 10.9 | | | | 10.9 |
| Cash collateral furnished (energy trading) | 1,472.4 | 1,472.4 | | | 1,472.4 |
| Miscellaneous current financial assets | 77.9 | 77.9 | | | 77.9 |
| Cash and cash equivalents | 1,022.1 | 1,022.1 | | | 1,022.1 |
| **Total** | **9,347.7** | **4,232.3** | **3,752.0** | **223.6** | **9,371.8** |
| **Liabilities** | | | | | |
| Bonds | 1,092.5 | 1,092.5 | | | 1,090.7 |
| Liabilities to banks | 1,423.1 | 1,423.1 | | | 1,503.0 |
| Trade payables | 1,078.5 | 1,078.5 | | | 1,078.5 |
| Lease liabilities (n/a) | 327.8 | | | | 327.8 |
| Miscellaneous other financial liabilities | 899.3 | 899.3 | | | 896.6 |
| Derivatives | | | | | |
| Derivatives not in a hedging relationship | 4,537.7 | | 4,537.7 | | 4,537.7 |
| Derivatives in a hedging relationship (n/a) | 143.1 | | | | 143.1 |
| **Total** | **9,502.0** | **4,493.4** | **4,537.7** | | **9,577.4** |

n/a = not applicable: financial instrument is not allocated to any of the three measurement categories pursuant to IFRS 9

Fair value is measured solely on a recurring basis.

The following table allocates financial instruments measured at fair value to the three levels of the fair value hierarchy:

| 30 Jun 2022<br>in millions of euros | Level 1 | Level 2 | Level 3 | **Total** |
|---|---|---|---|---|
| **Financial assets at fair value** | | | | |
| Shares | | | 263.1 | 263.1 |
| Securities | 3.5 | | | 3.5 |
| Derivative financial instruments | 66.7 | 9,717.9 | 437.8 | 10,222.4 |
| **Total** | **70.2** | **9,717.9** | **700.9** | **10,489.0** |
| **Financial liabilities at fair value** | | | | |
| Derivative financial instruments | 61.1 | 8,721.7 | | 8,782.8 |
| **Total** | **61.1** | **8,721.7** | | **8,782.8** |

| 31 Dec 2021<br>in millions of euros | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| **Financial assets at fair value** | | | | |
| Shares | | | 363.5 | 363.5 |
| Securities | 876.9 | | | 876.9 |
| Derivative financial instruments | 31.6 | 3,417.3 | 327.7 | 3,776.6 |
| **Total** | **908.5** | **3,417.3** | **691.2** | **5,017.0** |
| **Financial liabilities at fair value** | | | | |
| Derivative financial instruments | 36.1 | 4,597.0 | 47.7 | 4,680.8 |
| **Total** | **36.1** | **4,597.0** | **47.7** | **4,680.8** |

In the first half of 2022, EWE did not transfer any assets or liabilities between levels 1 and 2 of the fair value hierarchy, nor did it transfer any assets or liabilities into or out of level 3 of the hierarchy.

The following table provides an overview of financial instruments allocated to level 3 of the fair value hierarchy:

| in millions of euros | Shares (assets) | Derivative financial instruments (assets) | Derivative financial instruments (liabilities) | Other financial instruments (liabilities) |
|---|---|---|---|---|
| **As of 1 January 2022** | **363.5** | **327.7** | **47.7** | |
| Cost of materials recognized in the income statement | | 122.9 | -47.7 | |
| Other profit / loss from equity investments recognized in the income statement | -49.9 | | | |
| Other comprehensive income | -60.4 | -12.8 | | |
| Purchases | 9.1 | | | |
| Reclassifications | 0.8 | | | |
| **As of 30 June 2022** | **263.1** | **437.8** | | |

| in millions of euros | Shares (assets) | Derivative financial instruments (assets) | Derivative financial instruments (liabilities) | Other financial instruments (liabilities) |
|---|---|---|---|---|
| **As of 1 January 2021** | **410.8** | **33.6** | **1.3** | **0.1** |
| Changes in the basis of consolidation, mergers | -9.2 | | | |
| Cost of materials recognized in the income statement | | 278.6 | 46.5 | |
| Other operating income recognized in the income statement | | | | -0.1 |
| Other profit / loss from equity investments recognized in the income statement | 1.9 | | | |
| Other comprehensive income | -39.8 | 15.5 | -0.1 | |
| Purchases | 16.2 | | | |
| Sales | -16.4 | | | |
| **As of 31 December 2021** | **363.5** | **327.7** | **47.7** | |

The fair values of shares classified in level 3 are calculated using the discounted cash flow method based on planning figures from several periods for the cash flows to be discounted and assuming a sustainable terminal value. This category includes equity instruments not listed on a stock exchange. A hypothetical change in the WACC (Weighted Average Cost of Capital) by +/-1 per cent would result in a theoretical decrease in fair values by 58.9 million euros (31 December 2021: decrease by 105.7 million euros) or an increase by 103.0 million euros (31 December 2021: increase by 250.9 million euros), respectively. A hypothetical change in EBIT by +/-10 per cent would result in a theoretical increase in fair values by 28.4 million euros (31 December 2021: increase by 38.5 million euros) or a decrease by 28.4 million euros (31 December 2021: decrease by 38.5 million euros), respectively.

Level 3 derivative financial instruments are predominantly flexible purchase and sale contracts. The prices for the flexible terms are not quoted on a highly liquid market, they are determined individually in bilateral negotiations. To measure the value of contracts with flexibility, EWE utilizes a valuation model which includes Monte Carlo simulations that make it possible to determine a price for the contract options.

## 12. Segment reporting

| 1 Jan - 30 Jun 2022<br>in millions of euros | Renewable Energies | Infrastructure | Market | swb | Other | Group Central Division | Group |
|---|---|---|---|---|---|---|---|
| External revenue | 229.4 | 430.8 | 2,579.1 | 592.3 | 148.0 | 0.9 | 3,980.5 |
| Internal revenue | 44.9 | 443.0 | 444.7 | 64.5 | 48.0 | -1,045.1 | |
| **Total revenue** | **274.3** | **873.8** | **3,023.8** | **656.8** | **196.0** | **-1,044.2** | **3,980.5** |
| **Segment profit / loss (operating EBIT)** | **101.5** | **188.7** | **-176.2** | **56.4** | **-11.1** | **-22.6** | **136.7** |
| Impairments | 55.2 | | | 1.4 | | 0.1 | 56.7 |
| thereof of intangible assets and property, plant and equipment | 55.2 | | | 1.4 | | | 56.6 |
| Capital expenditure | 46.0 | 89.8 | 105.7 | 53.7 | 18.9 | 7.3 | 321.4 |
| Employees (average) | 308 | 1,969 | 2,482 | 2,271 | 2,192 | 770 | 9,992 |

| 1 Jan - 30 Jun 2021<br>in millions of euros | Renewable Energies | Infrastructure | Market | swb | Other | Group Central Division | Group |
|---|---|---|---|---|---|---|---|
| External revenue | 105.6 | 375.1 | 1,839.7 | 610.2 | 104.2 | 1.5 | 3,036.3 |
| Internal revenue | 24.1 | 393.6 | 321.4 | 169.0 | 45.9 | -954.0 | |
| **Total revenue** | **129.7** | **768.7** | **2,161.1** | **779.2** | **150.1** | **-952.5** | **3,036.3** |
| **Segment profit / loss (operating EBIT)** | **21.1** | **195.0** | **58.3** | **33.4** | **2.3** | **-23.6** | **286.5** |
| Capital expenditure | 31.1 | 95.4 | 45.6 | 86.2 | 7.6 | 406.3 | 672.2 |
| Employees (average) | 162 | 1,890 | 2,389 | 2,352 | 1,873 | 754 | 9,420 |

Operating EBIT can be reconciled as follows to earnings before taxes (EBT):

| in millions of euros | 1 Jan - 30 Jun 2022 | 1 Jan - 30 Jun 2021 |
|---|---|---|
| **Operating EBIT** | **136.7** | **286.5** |
| Derivatives | 2,238.6 | 166.1 |
| Onerous sales contracts with matching derivative purchase transactions | -1,173.2 | |
| Fair value measurement of other financial instruments | -50.2 | -25.4 |
| Impairments | -56.7 | |
| Equity investments | 5.0 | -0.1 |
| Restructuring | 0.3 | -0.2 |
| Subsequent proceeds from the sale of a financial asset previously accounted for using the equity method | 14.2 | |
| Decommissioning of production plants | | 2.2 |
| **EBIT** | **1,114.7** | **429.1** |
| Interest income | 36.1 | 18.2 |
| Interest expenses | -39.2 | -37.8 |
| **EBT** | **1,111.6** | **409.5** |

## 13. Statement of cash flows

Cash and cash equivalents comprise the cash and cash equivalents recognized in the statement of financial position amounting to 2,523.1 million euros (30 June 2021: 1,259.2 million euros) as well as cash pool receivables of 1.0 million euros (30 June 2021: 1.7 million euros). Cash and cash equivalents include cash on hand and bank balances as well as, since fiscal year 2021, credit balances related to trades. The previous-year figure for cash and cash equivalents at the end of the period was adjusted accordingly.

Cash received from the disposal of shares of fully consolidated companies arose from the deconsolidation of Alkkian Energia Oy, Kauhajoki, Finland.

Cash paid for investments in shares of fully consolidated companies in the first half-year 2021 relates to the acquisition of shares in ALTERRIC less acquired cash and cash equivalents.

The dividends were paid to the shareholders of EWE AG.

Non-cash investments of 29.6 million euros (first half-year 2021: 7.5 million euros) relate to the acquisition cost of right-of-use assets under lease agreements of 14.3 million euros (first half-year 2021: 20.3 million euros) and the recognition of rehabilitation provisions of 15.3 million euros (first half-year 2021: 5.9 million euros).

Non-cash financing activities relate to the recognition of lease liabilities pursuant to IFRS 16 of 14.3 million euros (first half-year 2021: 20.3 million euros) resulting from the acquisition of assets by way of a lease.

## 14. Related party disclosures

The following table shows the transactions with related parties in the first half of 2022 and 2021 and the outstanding balances from such transactions as of 30 June 2022 and 31 December 2021:

| in millions of euros | **2022** | 2021 |
|---|---|---|
| **Income** | | |
| Shareholders in EWE AG | 0.1 | 0.1 |
| Associates and joint ventures | 112.4 | 28.8 |
| Other entities | 6.9 | 6.8 |
| **Expenses** | | |
| Shareholders in EWE AG | 0.4 | 0.3 |
| Associates and joint ventures | 45.8 | 20.3 |
| Other entities | 13.9 | 10.9 |
| **Receivables** | | |
| Shareholders in EWE AG | 0.1 | |
| Associates and joint ventures | 274.6 | 207.4 |
| Other entities | 6.9 | 20.9 |
| **Liabilities** | | |
| Shareholders in EWE AG | 400.4 | 400.0 |
| Associates and joint ventures | 15.8 | 16.7 |
| Other entities | 10.4 | 10.6 |
| **Guarantees or collateral provided** | | |
| Associates and joint ventures | 0.5 | 0.5 |

Receivables from associates accounted for using the equity method and joint ventures contain current and non-current loan receivables of 216.7 million euros (31 December 2021: 137.1 million euros). 3.4 million euros of the resulting income from financing agreements (first half-year 2021: 2.2 million euros) was from companies accounted for using the equity method.

The liabilities to shareholders of 400.4 million euros (31 December 2021: 400.0 million euros) include a loan issued by a shareholder.

The collateral was furnished to creditors of an associate.

Expenses of 0.3 million euros were incurred for uncollectible or doubtful debts from related parties (first half-year 2021: 0.0 million euros).

## 15. Information on the governing bodies of EWE AG

### Supervisory Board

**Bernhard Bramlage**
Chairman of the Supervisory Board
Former District Administrator, Leer

**Carsten Hahn**
First Deputy Chairman
Technical Clerk, EWE NETZ GmbH, Osterholz-Scharmbeck

**Heiner Schönecke**
Second Deputy Chairman
Member of the Landtag (state parliament) of Lower Saxony, Neu Wulmstorf

**Johann Wimberg**
Third Deputy Chairman
Chief Administrative Officer of the Cloppenburg District, Cloppenburg

**Dr. Andreas Radmacher**
Fourth Deputy Chairman
Managing Director of R3AMP GmbH, Essen

**Christian Blömer**
Head of Group Communications and Brand, EWE AG, Bad Zwischenahn

**Claus Christ** (until 15 March 2022)
Technical Supervisor, EWE NETZ GmbH, Uplengen-Remels

**Henning R. Deters**
Chief Executive Officer of Gelsenwasser AG, Essen

**Sigrid Flegel**
Commercial Clerk of swb Vertrieb Bremen GmbH, Bremen

**Frank Gawrischtschuk**
Chairman of the Works Council of swb Erzeugung AG & Co. KG, Bremen

**Lars Giegling** (since 16 March 2022)
Sales Trader / Graduate Geologist, Business Economist (IHK) of EWE TRADING GmbH, Wardenburg

**Aloys Kiepe**
Pensioner, Emden

**Heike Klattenhoff** (until 31 May 2022)
Pensioner, Delmenhorst

**Jürgen Krogmann**
Mayor of the City of Oldenburg, Oldenburg

**Beatrix Kuhl** (until 10 February 2022)
Mayor of the City of Leer, Leer

**Jürgen Franz Löcke**
Managing Director of the Association of Savings Banks in Lower Saxony, Barsinghausen

**Immo Schlepper**
Head of Department of ver.di for the Lower Saxony-Bremen region, Oldenburg

**Ulrike Schlieper**
Healthcare Quality Manager, Sande

**Paul Schneider**
Qualified Engineer of EWE GASSPEICHER GmbH, Oldenburg

**Dr. Daniel Graf von der Schulenburg**
Senior Managing Director / Head of Ardian Intrastructure Germany, Benelux & Northern Europe, Frankfurt / Main

**Vera Visser** (since 1 June 2022)
Trade Secretary of ver.di for the Weser-Ems District, Bremen

**Herbert Winkel** (since 17 February 2022)
Managing Director of EWE Verband / former District Administrator, Lohne

**Ingo Wührmann**
Chairman of the Works Council of EWE VERTRIEB GmbH, Central Area, Stadland

### Board of Management

**Stefan Dohler**
Chief Executive Officer of EWE AG, Oldenburg

**Michael Heidkamp** (until 30 July 2022)
Chief Sales Officer of EWE AG, Bad Zwischenahn

**Dr. Urban Keussen**
Chief Technical Officer of EWE AG, Oldenburg

**Wolfgang Mücher**
Chief Financial Officer of EWE AG, Oldenburg

**Marion Rövekamp**
Chief Human Resources Officer and Legal Affairs Officer of
EWE AG, Human Resources Director, Oldenburg

## 16. Events after the reporting period

No events with a significant impact on the EWE Group's assets, liabilities, financial position and financial performance occurred after the reporting date and prior to the preparation date of the Group's condensed consolidated interim financial statements.

Oldenburg, 6 September 2022

The Board of Management

Stefan Dohler

Dr. Urban Keussen

Wolfgang Mücher

Marion Rövekamp

# Responsibility statement

We confirm that, to the best of our knowledge and in accordance with the applicable financial reporting framework for interim reporting, the condensed consolidated interim financial statements provide a true and fair view of the assets, liabilities, financial position and financial performance of the Group and that the interim group management report gives a true and fair view of the development of business, including the operating result and the Group's position, and also describes the principal opportunities and risks relating to the expected future development of the Group.

Oldenburg, 6 September 2022

The Board of Management

Stefan Dohler

Dr. Urban Keussen

Wolfgang Mücher

Marion Rövekamp

# Review report

## To EWE Aktiengesellschaft, Oldenburg

We have reviewed the condensed consolidated interim financial statements – comprising the condensed income statement and statement of comprehensive income, condensed statement of financial position, condensed statement of changes in equity, condensed statement of cash flows and selected explanatory notes – and the interim group management report of EWE Aktiengesellschaft, Oldenburg, for the period from 1 January 2022 to 30 June 2022, which are part of the half-year financial report pursuant to § (Article) 115 German Securities Trading Act ["Wertpapierhandelsgesetz": WpHG]. The preparation of the condensed consolidated interim financial statements in accordance with the IFRS applicable to interim financial reporting as adopted by the EU and of the interim group management report in accordance with the provisions of the WpHG applicable to interim group management reports is the responsibility of the parent Company's Board of Managing Directors. Our responsibility is to issue a review report on the condensed consolidated interim financial statements and on the interim group management report based on our review.

We conducted our review of the condensed consolidated interim financial statements and the interim group management report in accordance with German Generally Accepted Standards for the review of financial statements promulgated by the Institute of Public Auditors in Germany ["Institut der Wirtschaftsprüfer": IDW]. Those standards require that we plan and perform the review so that we can preclude through critical evaluation, with moderate assurance, that the condensed consolidated interim financial statements have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU and that the interim group management report has not been pre-pared, in all material respects, in accordance with the provisions of the WpHG applicable to interim group management reports. A review is limited primarily to inquiries of company personnel and analytical procedures and therefore does not provide the assurance attainable in a financial statement audit. Since, in accordance with our engagement, we have not performed a financial statement audit, we cannot express an audit opinion.

Based on our review, no matters have come to our attention that cause us to presume that the condensed consolidated interim financial statements have not been prepared, in all material respects, in accordance with the IFRS applicable to interim financial reporting as adopted by the EU nor that the interim group management report has not been prepared, in all material respects, in accordance with the provisions of the WpHG applicable to interim group management reports.

Bremen, 12 September 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Aissata Touré
Wirtschaftsprüferin
[German Public Auditor]

Carsten Engelhardt
Wirtschaftsprüfer
[German Public Auditor]

# Disclaimer

This half-year financial report contains forward-looking statements based on assumptions and estimates by the management of EWE AG. Although company management believes that these assumptions and estimates are accurate, actual future developments and results may differ considerably from these assumptions and estimates due to a wide variety of factors, which may include changes in macroeconomic conditions, the legal and regulatory framework in Germany and the EU, and in the sector. EWE AG is neither liable for, nor guarantees that actual future developments or results will coincide with the assumptions and estimates made in this half-year financial report. EWE AG neither intends to, nor assumes any obligation to, update forward-looking statements to reflect events or developments after the date of this report.

This document contains supplementary financial ratios – not precisely defined in IFRS – which are or may be non-GAAP measures. For the purpose of assessing the assets, liabilities, financial position and financial performance of the EWE Group, these should not be used in isolation or as an alternative to the financial ratios presented in the consolidated financial statements and calculated in accordance with IFRS. Other companies that present or report similar financial ratios may calculate them differently.

Due to rounding, it is possible that some numbers in this and other documents do not add up exactly to the specified aggregate value, and that the percentages shown do not exactly reflect the absolute values to which they refer.

This half-year financial report was originally produced in German; in case of any differences, the German version of the half-year financial report shall prevail over the English translation. Both versions are available for download from www.ewe.com.

**EWE Aktiengesellschaft**

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EWE