

AMPRION ANNUAL REPORT 2018

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2018 saw Amprion once again successfully fulfil its statutory duty: our transmission grid transmitted electricity to some 29 million people safely and reliably. To ensure that this continues to be the case in the future, we are today already preparing for the energy world of tomorrow. To this end, we are upgrading and expanding our grid in line with the needs and demands that lie ahead of us, and we are developing innovative solutions to enable us to achieve these objectives. In the process of fulfilling these duties, Amprion has also grown, in both quantitative and qualitative terms. A trend we want to maintain.

KEY TO ICONS USED



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DR KLAUS KLEINEKORTE
Chief Technical Officer

DR HANS-JÜRGEN BRICK
Chief Commercial Officer and Chief Financial Officer

Dear readers,

Amprion GmbH can look back on an extremely fascinating, if you'll excuse the pun, high-tension, year 2018. Once again we fulfilled our responsibility to operate our extra-high-voltage grid – an absolutely crucial piece of infrastructure for Germany's economy – safely and securely and to further expand it to meet the growing demands. At the same time, Amprion has made positive progress commercially. The company's sales revenues and earnings rose to 13,893 million euros in the past financial year, an increase of 6.6 per cent year-on-year. This growth is mainly attributable to the EEG (Renewable Energy Sources Act) equalisation mechanism, which had no effect on net income and which, at 10,945 million euros, was 5.3 per cent higher than in the previous year. Revenues from our grid business also rose, from 2,541 million euros (2017) to 2,839 million euros. In total, Amprion

made a net profit for the year of 203 million euros. The main driver was the increase in our equity base as a result of our investments in grid expansion.

The past few months have seen some important policy decisions regarding Germany's energy sector: from the "coal phase-out" to establishment of the target to increase the share of renewables in power generation to 65 per cent by 2030. Our transmission grid must meet the needs of this changing generation landscape. All the more important, then, that expansion of the grid progresses rapidly. In the coming decade, Amprion will be investing some 9.3 billion euros in upgrading and expanding our grid, and implementing an abundance of projects.

2018 saw us push ahead with around 380 projects and reach important milestones in the process – as illustrated by various groundbreaking ceremonies, initial start-ups and the erecting of new solid-panel pylons for the Wesel-Doetinchem interconnector in September. The synchronous compensator and the transformer substation in Oberottmarshausen, which went into operation in September, are also important elements of our grid upgrade. They ensure that the grid voltage in southern Germany is maintained at a constant level and secure the power supply for Bavarian Swabia. The DC link

project ALEGrO is just one example of the projects that made up the other 144 line kilometres for which we received a construction permit in 2018. We started construction of this link at the end of October.

However, the energy transition doesn't affect the electricity sector alone. All energy sectors are called upon to increase our joint green footprint. For this purpose, Amprion is working with the gas transmission grid operator Open Grid Europe to accelerate development in sector coupling. Under the umbrella of our "hybridge" project, we aim to progress power-to-gas technology so that in future it can be used on an industrial scale. To this end, we are planning to set up an electrolyser in the Lingen area that will be able to convert up to 100 megawatts of electrical power into hydrogen from 2023.

For our company to be in a position to meet these growing challenges, we must have a sound financial basis. And this we have at Amprion, as confirmed by the credit rating agencies Moody's and Fitch. In their annual review, they continue to rank Amprion as a solid investment, awarding us "A3" and "A-" ratings, respectively. These positive ratings help ensure that we continue to enjoy ready access to the capital markets and good terms.

This restructuring of the energy system presents Amprion with multiple challenges, but also a great many opportunities. We want to exploit these opportunities – and exploit the full scope of expertise, innovative ingenuity and enthusiasm of our workforce to do so. A workforce that also continued a positive trend, growing to over 1,400 in 2018. We would like to express our sincere thanks and appreciation to each and every one of our excellent employees. They are the foundation on which our company will continue to develop positively in 2019.



DR HANS-JÜRGEN BRICK
Chief Commercial Officer and
Chief Financial Officer



DR KLAUS KLEINEKORTE
Chief Technical Officer



Report of the Supervisory Board

Ladies and gentlemen,

2018 was a successful year for Amprion GmbH. The company pushed ahead with restructuring work and the expansion of the transmission grid. Last year, Amprion was granted permits for a total of 144 project kilometres and accordingly started work on construction projects in a number of locations. One such project was a new power line being built along the existing route between Reutlingen and Herbertingen. A further focus of our work was on substations. The new stations in Lambsheim and Woringen were completed in 2018, and many more are under construction. In addition to numerous grid expansion projects, Amprion has put a great deal of effort into developing innovative solutions for transforming our energy system and integrating them into the grid. Important elements such as the synchronous compensator in Oberottmarshausen have already gone on line in recent months.

The Supervisory Board monitored the progress of the company in financial year 2018 closely. The board performs all duties and responsibilities required of it by company articles of legislation and, in particular, fulfils its monitoring and advisory functions vis-à-vis the executive management. To this end, the board requested written and verbal reports from the managing directors regarding the status of commercial operations, fundamental issues of business policy and the position and development of the company. Furthermore, the board discussed significant business transactions in depth with the management board and took all necessary decisions. Moreover, the Chairman of the Supervisory Board also discussed important individual transactions and matters of corporate strategy and business policy in meetings held with management outside the Supervisory Board meetings, in preparation for the committee meetings. Furthermore, the Audit Committee performed all duties and responsibilities required of it by company articles and, in particular, carried out all preparations for approval of the annual financial statements by the Supervisory Board.

The Supervisory Board held four meetings over the course of the reporting period. These meetings focused on the detailed reports submitted by the managing directors relating to the position of the company, including the sales trends, earnings performance and the company's strategic goals. In addition, the Supervisory Board engaged in intensive discussion regarding the financial budget submitted for 2019 and approved said budget. Furthermore, the company's long-term investment plans through to 2028 were likewise debated in great detail and approved by the Supervisory Board. The Supervisory Board has also concerned itself with the regulatory environment in which the company operates and the pending or effected changes to the legal framework.

BDO AG Wirtschaftsprüfungsgesellschaft of Düsseldorf, the auditors chosen in accordance with the resolution of the shareholders passed on 14 May 2018 and engaged by the company's Supervisory

Board to carry out the audit, has audited the annual financial statements and the management report of Amprion GmbH for financial year 2018, including the accounting, and issued an unqualified auditors' opinion.

Following a detailed examination of the annual financial statements by the Audit Committee together with the auditors, the auditors' report, the annual financial statements and the management report were delivered to the members of the Supervisory Board in good time, prior to the Supervisory Board meeting held on 9 April 2019, and also discussed in depth at this meeting. The auditors participated in the meetings of the Supervisory Board and reported on the fundamental results of their audit. Furthermore, the auditors were also available to provide supplementary information as required. The Supervisory Board has endorsed the results of the audit. For its part, the board has studied the annual financial statements and the management report prepared by the executive management. In accordance with the final results of its review, the Supervisory Board confirms that no objections are to be raised. The Supervisory Board has approved the management report and the annual financial statements for financial year 2018, and the financial statements are thus adopted.

The following changes were made to the composition of the Supervisory Board in financial year 2018:

Dr Andreas Kretschmer resigned his office as a member of the Supervisory Board of Amprion GmbH with effect from 31 May 2018. A shareholders' resolution adopted on 14 May 2018 elected Mr. Christian Mosel, Managing Director of Ärzteversorgung Westfalen-Lippe, Münster, as a member of the Supervisory Board of Amprion GmbH effective from 1 June 2018.

The Supervisory Board wishes to acknowledge and express its thanks and appreciation to the management and all employees of Amprion GmbH for their commitment and the work they have performed during financial year 2018.

Dortmund, 09 April 2019



PROF HEINZ-WERNER UFER
Chairman of the Supervisory Board



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Fundamentals of the company

Business activities of the company

Amprion GmbH, headquartered in Dortmund, is one of four transmission system operators (TSOs) in Germany and employs around 1,450 people. In a control area that stretches from Lower Saxony to the Alps, Amprion operates its network at voltage levels of 220 and 380 kilovolts (kV) and is expanding it in accordance with market requirements. Measuring around 11,000 kilometres in length, this extra-high-voltage (EHV) transmission grid links the power stations with the main centres of consumption and is a vital component of both Germany's and Europe's transmission networks. Amprion uses its grid to serve customers from industry, distribution system operators, electricity traders and power utilities at fair market prices.

In addition, Amprion controls and monitors the safe transport of electricity within the EHV grid in its control area. For this purpose, the grid operations management in Brauweiler/Pulheim ensure that electricity consumption and generation are kept in balance at all times. The system services required (primary control, secondary control and tertiary (minute) control reserve and the electricity necessary to compensate grid losses are sourced using transparent tender procedures in line with regulations. The company also coordinates the exchange programmes and the subsequent volume balancing both for the entire transmission network in Germany and for the northern section of the integrated European grid.

Thanks to its central location within Europe, Amprion's network is a vital hub for the European electricity trade between north and south and between east and west. Amprion provides transmission grid capacities at the interconnecting feeder lines to France and Austria, the Netherlands and Switzerland by means of market-based auctions.

Amprion's shareholders are M31 Beteiligungsgesellschaft mbH & Co. Energie KG, a consortium of primarily German institutional investors from the insurance industry and pension funds that holds 74.9% of the shares, and RWE AG, with the remaining 25.1% of the shares.

Financial report

Political and energy regulatory environment

Omnibus Energy Act

The Omnibus Energy Act (Energiesammelgesetz – EnSaG) came into force on 21 December 2018. The amendments it incorporates concern the Energy Industry Act (Energiewirtschaftsgesetz, (EnWG (≡ Page 68)), the Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz, (EEG (≡ Page 68))), the Combined Heat and Power Act (Kraft-Wärme-Kopplungsgesetz, KWKG), the Offshore Wind Energy Act (Windenergie-auf-See-Gesetz, WindSeeG) and numerous other regulations and ordinances.

The main changes to the KWKG relate to the extension of measures designed to promote the building of new and the upgrading of existing facilities to allow them to be commissioned by the end of 2025 and to fresh support for existing combined heat and power (CHP) plants under Section 13 of the KWKG from 1 January 2019, which is still subject to approval by the EU Commission.

The key amendments to the EEG concern the implementation of the special tenders for onshore wind energy and photovoltaics to a level of 4 gigawatts (GW) each as well as a reduction in the remuneration for large building-integrated photovoltaic systems from January 2019. With retroactive effect from 1 January 2018, changes have been made to the EEG surcharge in respect of estimating and measuring end-consumer electricity volumes and self-supply from highly efficient new CHP plants.

Adjustments have been made to the WindSeeG in order to introduce “other areas for energy generation” to be identified by the Federal Maritime and Hydrographic Agency (Bundesamt für Seeschifffahrt und Hydrographie, BSH), within which, among other things, the testing of offshore wind energy in combination with offshore power-to-gas, as well as innovative technologies and new business models, are to be facilitated.

Act to accelerate the power grid expansion

On 12 December 2018, the Federal Government adopted a draft law to accelerate the expansion of the power grid and submitted it to the legislative process.

Expansion of the extra-high-voltage grid is to be accelerated by making it possible to dispense with federal sectoral planning. Such a waiver may be granted for replacement power lines that run along or parallel to existing lines. In the case of a new power line, federal sectoral planning may be dispensed with if the line is to run within a route corridor identified in a regional development plan or federal grid plan. Moreover, future approval procedures for further grid expansion measures are to be shortened by allowing additional empty conduits, the cables to be fed through them and the subsequent operation of these cables to be included in the current planning of underground cable projects, if demand is foreseeable. Accordingly, this results in bypassing any further approval procedure for the additional power line. Other adjustments relate to the implementation of measures to optimise the use of the existing grid, in particular by means of recabling measures taken to achieve higher capacity utilisation of the lines and changes to the operating concept, depending on the weather conditions.

In addition to these adjustments to planning regulations, the TSOs are to be granted full access to the renewable energy (EEG)-powered plants and CHP plants connected to the distribution networks to enable them to implement redispatch measures. This means merging feed-in management and congestion management. These regulations are to come into force on 1 October 2020.

Ordinance on the incremental alignment of grid fees across Germany

The Act on the Modernisation of the Grid Fee Structure – also known as the Grid Charge Modernisation Act (Netzentgeltmodernisierungsgesetz, NEMOG) – of 2017 provides for the harmonisation of transmission grid fees between 1 January 2019 and 1 January 2023. The Ordinance on the incremental alignment of grid fees across Germany came into force on 29 June 2018.

It regulates measurement, calculation and compensation of the additional or reduced revenues of nationally aligned transmission grid fees in the Electricity Grid Fee Ordinance (Stromnetzentgeltverordnung, StromNEV). The alignment will be carried out over a period of five years, increasing by 20% each year. On 1 October 2018, Amprion and the other German TSOs first published an indication of the grid fees, including the first step towards alignment of these fees.

Moreover, from 1 January 2019, the costs of connecting offshore wind farms to the mainland grid will no longer be passed on via the grid fees, but will be included in the offshore grid allocation as part of load balancing. This will lower the transmission grid fees and therefore the charges for grid customers. On the other hand, the burden on grid customers will increase as a result of the increase in the offshore grid surcharge owing to the offshore connection costs. However, electricity-intensive customers will be affected only to a limited extent by this increase due to the special equalisation scheme. For these customers in Amprion's control area, the charges from the nationally aligned transmission grid fees are partially compensated for.

Capacity reserve regulation

The capacity reserve regulated in Section 13e **EnWG** (≡ Page 68) (German Energy Industry Act) was subject to the approval of the EU Commission under state aid law, which was granted on 7 February 2018 subject to certain requirements. The power to issue ordinances in respect of the capacity reserve, which has been brought into line with the provisions of the approval issued under state aid rules, is part of the Omnibus Energy Act (EnSaG) and provides for the provision of such a reserve from 1 October 2020 to 30 September 2023.

Ordinance on adjustments to the regulatory framework

On 19 December 2018, the Federal Government adopted a draft ordinance on calculation of the offshore grid surcharge and on adjustments to the regulatory framework. This provides for amendments to various energy industry ordinances and requires the approval of the Federal Council (Bundesrat).

The main adjustments in the Electricity Grid Fee Ordinance (StromNEV) relate to the actual calculation of the offshore grid surcharge and the preconditions for granting special remuneration for operating singularly used resources.

In the Incentive Regulation Ordinance (Anreizregulierungsverordnung, (**ARegV** (≡ Page 68))), the conditions for investment measures have been revised. As a general rule, the duration of the approval process for investment measures is to be restricted to a single regulatory period and the percentage-based approach to passing on operating costs for the phase up to commissioning of the capital assets is to be trimmed back. In accordance with previous practice, however, the regulation allows an application for an extension to be submitted before the measure is completed if the approval period is due to expire.

Regulatory environment

Equity interest rates for the third regulatory period

On 5 October 2016, the Federal Network Agency **FNA** (≡ Page 68) (Bundesnetzagentur, BNetzA) fixed pre-tax equity interest rates at 6.91% for new installations and 5.12% for existing installations. These rates are to apply throughout the third regulatory period from 2019 to 2023. Amprion lodged an appeal against this decision with the Düsseldorf Higher Regional Court (OLG) seeking a court review of the Federal Network Agency's actions. On 22 March 2018, the Higher Regional Court ruled that the equity interest rates had been set too low due to an unsound calculation method. The Federal Network Agency had used only historical time series to determine the market risk premium in the context of the capital asset pricing model when estimating future interest rate trends. However, according to the court-appointed expert, the current phase of exceptionally low interest rates means that purely historical time series cannot provide adequate information on future interest rate developments. Therefore, supplementary methods (a total-market-return approach or ex ante methods) need to be employed to examine the plausibility of future developments in order to take account of the specific situation on the capital markets. 25 April 2018 saw the Federal Network Agency lodge an appeal with the Federal Supreme Court against this decision of the Düsseldorf Higher Regional Court.

Cost audit for the third regulatory period

In accordance with Section 6 (1) of the Incentive Regulation Ordinance **ARegV** (≡ Page 68), the Federal Network Agency was tasked with determining the base level of the revenue caps for the third regulatory period from 2019 to 2023. It was to do this by means of a cost audit based on the data from financial year 2016 and in accordance with the provisions of the Electricity Grid Fee Ordinance (StromNEV). Amprion sent the documents necessary for the cost audit to the Federal Network Agency on 30 June 2017, and the agency made its decision on the costs on 20 December 2018. Amprion lodged an appeal against this decision on 25 January 2019.

Productivity factor for the third regulatory period

The individual and sectoral productivity factors are elements used to determine the revenue cap. The portions of the costs that can be influenced within the revenue cap of the grid operators are adjusted to a level deemed efficient from the point of view of the ARegV with the aid of these two factors. For this reason, the Federal Network Agency carries out an efficiency comparison for the TSOs prior to each regulatory period.

The individual productivity factor concerns the efficiency of the respective company and has been determined for the third regulatory period by the Federal Network Agency with the aid of a relative reference grid analysis. On 20 December 2018, the Federal Network Agency set the individual productivity factor for Amprion at 100%.

The general sectoral productivity factor (“Xgen”) affects all electricity grid operators and represents a correction factor for the consumer price index. A positive general sectoral productivity factor demands greater progress on productivity from the power grid industry than from the economy as a whole. In turn, greater productivity gains will lead to additional efficiency demands on grid operators. On 28 November 2018, the Federal Network Agency set the general sectoral productivity factor for electricity at 0.9%. Amprion lodged an appeal against this decision on 18 January 2019.

Reversal of the exemption from grid fees pursuant to Section 19 (2) sentence 2 StromNEV

On 28 May 2018, the EU Commission decided that the full exemption of electricity-intensive consumers from grid charges in 2012 and 2013 infringed European state aid law. This led the Federal Network Agency to initiate a procedure to reverse the exemption, which was completed within the course of the financial year and is income-neutral for the TSOs.

Voluntary self-obligations to system services

Voluntary self-obligations (Freiwillige Selbstverpflichtungen, FSV) with respect to control reserve grid losses and redispatch for the third regulatory period from 2019 to 2023 were brought into effect and procedurally regulated by resolutions passed by the Federal Network Agency in October 2018. The costs for providing these system services are thus regarded as non-controllable costs when determining the revenue cap.

The voluntary self-obligation “Control Reserve” carries the mechanisms of the second regulatory period forward. The average volumes and prices from the period September (t-2) to August (t-1) are used for the planned costs. In the settlement of accounts the following year, a bonus or penalty of around 25% of the difference between the planned and actual costs will be calculated from the volume of system services actually provided, with this affecting Amprion’s earnings up to an absolute cap of 2.5% of the planned costs. Any remaining difference is registered in the regulatory account.

A new incentive system was created in the voluntary self-obligation “Grid Losses”. Accordingly, company-specific planned costs for grid losses are calculated based on the average exchange price from the period July (t-2) to June (t-1) and the amount of electricity sourced in the long term to compensate grid losses. In the settlement of accounts the following year, a bonus or penalty of around 50 % of the difference between the planned and actual costs will be calculated, with this affecting Amprion’s earnings up to an absolute cap of 2.5 % of the planned costs. Any remaining difference is registered in the regulatory account.

The voluntary self-obligation “Redispatch” carries the mechanisms from the second regulatory period forward and also provides for a planned cost approach based on historical values. The costs are collected via the grid fees without a bonus/penalty system. The difference between the planned costs and actual costs is registered in the regulatory account. The procedure for determining the appropriate remuneration of redispatch measures is based on the “Industry Guideline: Remuneration of Redispatch Measures” published by the Federal Association of the Energy and Water Industries (Bundesverband der Energie- und Wasserwirtschaft e.V., BDEW) and is to be applied with retroactive effect from 1 January 2013.

Business performance

Grid business

The revenue cap is determined within the framework of the incentive-based regulation and in accordance with the provisions of the **EnWG** (≡ Page 68), **ARegV** (≡ Page 68) and **StromNEV**. **FNA** (≡ Page 68) On 3 July 2014, the Federal Network Agency fixed the revenue cap for the second regulatory period from 2014 to 2018 on the basis of the costs in financial year 2011. Pursuant to Section 4 (3) ARegV in conjunction with Section 34 (1) ARegV, Amprion can adjust the revenue cap, and consequently the grid fees, on 1 January of each and every calendar year in the event of a change in the non-controllable costs. The Federal Network Agency must be notified of these adjustments. Since the incentive-based regulation first came into force, Amprion has recorded any increase or decrease in revenue in the regulatory account in accordance with Section 5 ARegV.

On 1 January 2018, Amprion adjusted its grid charges according to the duration of use and voltage level. Particularly in the range of usage hours between 5,000 and 8,760 hours, which is relevant to the majority of customers, the grid charges for the extra-high-voltage level were increased in a range of 47.7 % to 47.8 %. These increases are attributable to the following circumstances:

- Rise in the costs passed on by the coastal TSOs for the connection of offshore wind farms
- Higher costs for approved investment measures for further grid expansion required for the energy transition
- Increased costs for redispatch measures, feed-in management and reserve power stations

Amprion's customers are industrial companies, distribution network operators and power stations connected directly to the extra-high-voltage grid. The sales and revenue structure is characterised largely by major distribution network operators, from whom Amprion receives around 85 % of its grid fees. Some 12 % of the grid fees come from enterprises in the chemicals, steel and aluminium industries. The remaining grid fees result from the own requirements of the power stations connected to the transmission grid.

In financial year 2018, the volume of electricity withdrawn by directly connected grid customers rose by around 2 % compared with 2017. The increase resulted from lower local feed-in by conventional power plants into the downstream distribution networks due to operational changes, which can shift generation capacity from the distribution network to the transmission grid (phase-shifting transformers). Against the background of the energy transition and the associated promoting of renewable and decentralised energy generation, declines in volume are expected in the coming years.

EEG surcharge

The EEG equalisation scheme operates on the basis of the Renewable Energy Sources Ordinance (EEV) and the Renewable Energy Sources Implementation Ordinance (EEAV). The electricity fed in under the EEG outside of direct marketing measures is marketed by the TSOs on the electricity exchange, with the difference between their revenues and expenditures for the EEG feed-in volumes being passed on to the power utilities via the EEG surcharge. The EEG process is income-neutral for the TSOs.

The TSOs published the EEG surcharge for 2019 on 15 October 2018, reducing it by about 6 % from 6.79 cents/kWh to 6.41 cents/kWh. The main reasons for this are the increase in proceeds from EEG electricity to be marketed on the exchange and the positive development on the EEG account. In agreement with the Federal Network Agency, a liquidity reserve of around € 1,500 million (equivalent to 6 % of the shortfall) was included in the EEG surcharge.

Offshore surcharge

On 15 October 2018, the TSOs published the offshore surcharge for 2019, which will be 0.42 cents/kWh. It replaces the previous offshore liability surcharge and no longer contains just the costs for compensation in the event of disruptions or delays in the connection of offshore wind farms, but also the costs of actually connecting offshore wind farms, which as of 2019 will no longer be passed on via the grid fees. The offshore surcharge is income-neutral for the TSOs.

System services

In Germany, the control reserve is procured jointly by the TSOs in accordance with the stipulations of the Federal Network Agency [FNA](#) (≡ [Page 68](#)). In July 2018, the per diem invitations to tender for the secondary and tertiary control reserves were implemented. Compared with the previous year, 2018 was marked by a significant decline in volumes, particularly in the negative tertiary control volume. Rising prices were seen in both the secondary and tertiary control areas. In October 2018, the surcharge mechanism based exclusively on the capacity charge was replaced by a weighted mixed-price procedure that integrates the unit rate per megawatt hour. At the end of October 2018, the German TSOs published the new prequalification conditions for participation in the markets for primary, secondary and tertiary control reserve, which will gradually come into full force by the end of 2019. In doing so, they fulfilled the requirements of the European Regulation establishing a Guideline on Transmission System Operation (SOGL). The SOGL provides a uniform European framework for requirements for technical units used to provide control reserve.

The cost of procuring the control reserve to compensate grid losses fell moderately this financial year. This was mainly due to management of the short-term component, which more than offset the cost increase due to higher volumes in long-term procurement.

Costs for redispatch activities fell sharply in financial year 2018 due to weather conditions. The unscheduled and extensive shutdowns of nuclear power plants in France and the tense supply situation in large parts of Europe had led to a significant increase in utilisation of Amprion's grid in the winter of 2016/2017. By contrast, the situation during the winter of 2017/2018 and at the end of 2018 was less tense.

The connection of further offshore wind farms in the North Sea since September 2017 increased the load on the interconnecting feeder lines in the north of the country between the control areas of TenneT and Amprion when the feed-in levels of wind power were high. Due to the limited possibilities for redispatch measures at conventional power plants, it became increasingly necessary for TenneT to lower feed-in from offshore wind farms in order to guarantee system stability. A partial passing-on of the associated costs by TenneT leads to an increase in Amprion's expenditures for EEG feed-in management, which are refunded through the regulatory account.

As a further product of the system services, the TSOs issue weekly tenders for interruptible ("shed-dable") loads of 750 MW each via the joint Internet-based tendering platform. The Federal Network Agency is authorised to adjust the level of the tender volume on the basis of recurring demand analyses of the TSOs. In financial year 2018, interruptible loads amounting to 3,453 MWh were used on a total of 15 days (with a total duration of around 45 hours) in Amprion's control area, leading to costs of € 2.0 million. The costs associated with interruptible loads amounted to € 18.5 million and were at the same level as the previous year.

Network reserve

Every year, the Federal Network Agency publicly announces the network's reserve needs for the next five years based on analyses conducted by the TSOs. The remaining additional needs that cannot be covered by reserves already contractually secured must be covered by expression-of-interest procedures. In its report dated 27 April 2018, the Federal Network Agency disclosed a need for reserve power station capacities of 6,600 MW for the winter half-year 2018/2019. The need for network reserve can be fully covered by domestic power stations that are already contractually or legally bound.

For the winter half-year 2018/2019, national power stations with a total output of 6,609 MW (of which 1,796 MW are in Amprion's balancing zone) have been committed to the network reserve. The costs of the network reserve are fully refunded through grid fees.

Special technical grid operating facilities

Pursuant to Section 11 (3) **EnWG** (≡ Page 68), the TSOs may deploy special technical grid operating facilities in order to maintain the security and stability of the transmission grid. A 1.2 GW requirement for such facilities for the period from 2021 to 2025 was ascertained by the TSOs and approved by the Federal Network Agency in 2017. These special technical grid operating facilities will be put out to tender by the TSOs and installed and operated by third parties. They are to be deployed exclusively outside the scope of the electricity market in order to ensure supply security and the reliability of the transmission system.

In mid-2018, the TSOs announced a technology-neutral tender for 1.2 GW on the European tendering platform. Amprion will presumably be able to award the contract as of April 2019, provided that the tenderers submit tenders that are eligible. The provision of this service is scheduled as of 1 October 2022.

System operation and control

During the reporting period, Amprion did not register any supply disruptions in its extra-high-voltage grid, i.e. no large-scale grid failures, despite the fact that operating the grid has become significantly more demanding. The main reason for the growing complexity of system operations is the continuing growth in the number of renewable energy power plants, a process that requires a much greater level of intervention in the running of the system. This is highlighted by the extensive redispatch measures that have had to be taken since 2017. For this reason, the TSOs are cooperating more and more, especially at the national level, and have meanwhile developed integrated models to make redispatch measures across Germany more efficient.

1 October 2018 saw the launch of congestion management for electricity trading on the German-Austrian border, which aims to ensure grid stability and thus the security of supply in Germany and Austria. Up to this time, electricity trading in these markets had been unrestricted thanks to the common bidding zone. This had led to bottlenecks in the heavily loaded power grid, which had to be stabilised by means of extensive redispatch measures. The TSOs expect this new congestion management system to bring about a significant improvement in the congestion situation between Germany and Austria and, as a result, a reduction in grid stabilisation measures and relief for neighbouring transmission grids, especially those in Poland and the Czech Republic.

Technical innovation

Amprion is actively engaged in the transformation of the energy system and is developing innovative solutions to facilitate this transition. Furthermore, Amprion is working to meet the rising demands being made on the transmission capability of the grid as a whole and to ensure its secure and reliable operation in the long term by integrating innovative technologies into its own section of the grid.

Amprion and Open Grid Europe entered into a cooperation agreement to promote smart sector coupling in the field of Power-to-Gas. The concept of the partners envisages that a power-to-gas plant, acting as the “sector transformer”, will be designed, built and operated by the transmission system operators – like the existing electricity and gas grid infrastructure. The technology converts electricity from renewable energy sources into hydrogen or synthetic methane. Both gases can be used in other sectors. In this way, today’s gas infrastructure can be used not only for transporting but also for storing renewable energies. As the “bridge capacity” between the systems is limited, the grid operators auction off the capacity of the sector transformer at any time to dealers or direct customers. This ensures non-discriminatory access for third parties. The auction proceeds are used by the grid operators to reduce grid fees.

To boost transmission capacity in the short term, Amprion plans to install high-temperature low-sag (HTLS) conductors at several high-load grid locations. This requires ample operational experience with this innovative technology. After the first pilot project in 2009, roughly four-kilometre-long HTLS lines were put into operation in 2017. These lines featured bundles of four conductor cables in order to continue testing them in the field.

In April 2018, the Adaptive Overhead Line Operation Light concept was integrated into system operation and control to increase the load capacity of overhead lines depending on the weather. In addition to the 14 weather stations installed in selected substations (switchgears), a further 28 measuring stations have been installed along the most heavily loaded lines on masts highly exposed to the elements. This additional capacity will become fully available when the new HSL2020 main control centre is commissioned.

In September 2018, the synchronous compensator with a reactive power of up to approx. 300 MVA and the 380 kV substation at the Oberottmarshausen site came on line. This transformer station near Augsburg is one of the most important energy hubs in Germany where Amprion is installing reactive-power compensation systems. As one of the systems, the synchronous compensator ensures voltage stability in the regional power grid and makes a crucial contribution to the future security and reliability of the grid across the entire region of Bavarian Swabia.

Amprion is involved as a partner in various national and European projects. The collaborative research project entitled “Innovations in Operations Management By 2030” (InnoSys 2030), funded by the Federal Ministry for Economic Affairs and Energy (BMWi), aims to identify, analyse and evaluate innovative approaches to realise higher capacity utilisation in the grid as being discussed at research institutes and in industry. The aim is to develop an overall concept that guarantees the highest level of system security, is suitable for use in the field and can be implemented by 2030. For this purpose, the flexibility potentials of grid users and power-flow-controlling resources are to be used.

The SwarmGrid project, which was brought to a successful conclusion in 2018, investigated ways in which information and communication technology can be used in future to bring power generation facilities, consumers and grid operation resources together in “swarms” so that they can interact with each other in ways that are particularly beneficial to network efficiency and system stability.

Amprion is constantly working on pylon designs. For example, the first newly developed solid panel pylons have been erected as part of the Lower Rhine–Doetinchem interconnector project. The first pylons were erected along a roughly seven-kilometre section from Millingen to the German-Dutch border, which went into operation in the autumn of 2018. The aim here is to test the general public’s acceptance of these pylons and to gain technical experience in their use.

Asset management

Amprion has been certified in accordance with the requirements of International Standard ISO 55001 since 2015. Compliance with these requirements is regularly verified by external auditors. The latest review took place in August 2018. The award of International Standard ISO 55001 attests to the company’s efficient and effective processes for the management of its assets.

Human resources

Amprion continued to expand its workforce as planned throughout the 2018 financial year. The number of permanent employees rose by 11.0% year-on-year from 1,246 FTE (full-time equivalent) at the end of 2017 to 1,383 FTE on 31 December 2018. This is 4.3% above the figure forecast in the 2017 Management Report. Based on the assumption of event- and process-related assignment analyses and new fields of action (e. g. offshore), Amprion's personnel requirements for 2019 have been adjusted to 1,757 permanent FTE.

In addition, 14 apprentices began their training in both commercial and technical occupations. All in all, a total of 36 apprentices are currently receiving their training at Amprion. In 2018, ten apprentices successfully completed their training, of which nine accepted a permanent job offer at Amprion.

The encouragement, advancement and ongoing development of the workforce are given high priority at Amprion. In 2018, the number of company personnel who attended internal and external advanced training courses and events designed to reinforce the occupational and personal skills of employees rose from around 2,300 to around 2,800. In addition, the company operates a system designed to assess employees' potential, with a view to ensuring that the majority of future management positions are filled by people from within the company. The potential candidates identified in this way then undergo further training as executives in needs-based programmes. These assessments take place every two years.

Amprion's workforce is characterised by a strong commitment to the company. This is reflected in the low turnover rate of 1.3% (previous year likewise 1.3%). The average age of the workforce fell by 0.7 years compared with the year before due to new appointments and amounted to 41.6 years on 31 December 2018. As a result, the average length of service (including at predecessor companies) fell from 13.9 years to 12.8 years. The proportion of women in the workforce rose slightly to 18.0% at the end of the reporting year (previous year: 17.6%). The proportion of women, which still remains low compared to other sectors, is attributable to the company's specialised, technical business activities and tallies with the low proportion of women who take degrees or apprenticeships in electrical engineering.

In 2018, Amprion continued its employee equity participation scheme based on the issuance of jouissance rights. At around 79.2%, the participation rate was slightly below the 2017 level of 81.9%.

Industrial safety and health protection

Industrial safety and health protection is an important corporate responsibility for Amprion. The company's industrial safety management system lays down binding rules governing all processes of relevance to industrial safety which must be observed by managers and employees in compliance with statutory provisions and company regulations. Amprion's industrial safety management system, which has been certified as compliant with the Occupational Health and Safety Assessment Series 18001 (OHSAS 18001), was recertified by BG ETEM at the end of 2018. Workshops with service providers, industrial safety training courses for employees and seminars for plant managers on the safe design of the workplace were conducted before any work was started.

Promoting the health of the employees is the objective of Amprion's corporate health management system. The system includes a wide range of activities and support measures. Among other things, employees enjoy benefits such as accident prevention courses, preventive health cures and external welfare counselling.

Environmental protection

The environmental guideline adopted in 2017 remains unchanged and is binding for all managers and employees. Our environmental management system, which was first certified in accordance with DIN EN ISO 14001 in 2017, has been further improved and its certification reconfirmed by a monitoring audit conducted in 2018. The next annual monitoring audit is scheduled for 2019 and the next full recertification for 2020.

Information security

Information security is a key factor in ensuring robust business processes within our company. This is particularly true in the areas of system operation and control, project management and the running of Amprion's power transmission network. The introduction, operation and continuous improvement of the Information Security Management System (ISMS) are vital prerequisites for achieving an appropriate level of information security. Successful certification of the ISMS in 2017 also demonstrated that Amprion has implemented and complies with the provisions of the IT Security Act and, in particular, the requirements of the Federal Network Agency's security catalogue.

Financial situation

Earnings

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017	CHANGE
Revenues and income	13,892.6	13,030.4	862.2
Operating expenses	-13,533.6	-12,743.7	-789.9
Operating result	359.0	286.7	72.3
Financial result	-51.4	-32.3	-19.1
Profit before taxes	307.6	254.4	53.2
Tax result	-104.2	-80.7	-23.5
Net profit	203.4	173.7	29.7

Revenues increased by 6.6% to € 13,784.0 million (previous year: € 12,931.6 million) and are slightly below the level projected in the previous year's management report. The increase essentially relates to the income-neutral EEG equalisation mechanism amounting to € 10,945.1 million (previous year: € 10,390.3 million). This results from higher income from the marketing on the electricity exchange from the horizontal load balancing and assessable sales as well as energy utility companies despite the lower EEG allocation (2018: 6.79 cents/kWh; 2017: 6.88 cents/kWh). Revenues from grid business amount to € 2,838.9 million (previous year: € 2,541.3 million). The increase in grid revenues of € 297.6 million is attributable to higher revenues from the grid charges, the system services and the safety reserve as well as from the KWKG surcharge and the surcharge pursuant to Section 19 Strom-NEV. A contrary effect is attributable to lower revenues from the offshore surcharge. These surcharges correspond to expenditures of the same amount.

The rise in the operating result of € 72.3 million was essentially caused by higher revenues for grid charges and lower expenses for system services from redispatch measures. Higher expenses for the pension scheme due to the use of Klaus Heubeck's 2018 G mortality tables, which were adjusted for company specifics, and for wages and salaries based on the planned increase in personnel as well as higher investment-related depreciation had a counteracting effect.

The decline in the financial result by € 19.1 million was essentially the consequence of higher fees for the long-term borrowing of outside capital and from the compounding of pension provisions.

The tax result primarily includes expenses for current taxes on income as well as deferred taxes. The change is largely attributable to the rise in profit before taxes.

The aforementioned effects led to a 17.1% increase in net profit to € 203.4 million. A moderate decline in profit was forecast in last year's management report.

Financial situation

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017	CHANGE
Cash flow from operating activities	854.9	748.0	106.9
Cash flow from investing activities	-753.7	-693.8	-59.9
Cash flow from financing activities	132.2	381.1	-248.9
Change in cash and cash equivalents	233.4	435.3	-201.9
Cash and cash equivalents at the end of the period	1,574.4	1,341.0	233.4

The cash flow from operating activities continues to primarily be influenced by the EEG equalisation mechanism, which has led to a considerable inflow of cash. Moreover, the annual net profit, non-cash depreciation as well as the increase in provisions, especially for the regulatory account, and the deferred income from the congestion management for investments in the maintenance or expansion of cross-border connection capacities had a positive impact on cash flow.

Cash flow from investing activities is characterised by the investments in the transmission network, which increased by 8.6%.

The decrease in cash flow from financing activities is essentially due to the lower borrowing of long-term outside capital via capital market transactions of € 253.5 million. This is in contrast with cash outflows from the distribution of the net profit in 2017.

The cash and cash equivalents are committed to covering future charges from the EEG equalisation mechanism.

Financing

A consortium loan agreement with a bank consortium of five commercial and regional banks exists to cover operating processes, the interim financing of investments and the cash requirements for the EEG equalisation mechanism. The consortium loan agreement includes a customary financial covenant. Its compliance is audited annually on the closing date of 31 December.

The grid credit tranche of the consortium loan agreement was extended by a further year in February 2018 and now expires in March 2023. The credit line was increased from €600.0 million to €850.0 million in February 2018 by exercising a contractually agreed increase option. The interest rate is based on the EURIBOR reference interest rate plus a maturity-based margin. As of the closing date, €127.0 million of the credit line (of which €7.5 million in sureties) had been utilised.

The EEG credit tranche not utilised in the consortium loan agreement amounts to €350.0 million. The second extension option was exercised in February 2018 and the term was extended by one year to March 2021. A further one-year renewal option is available. The interest rate is also based on the EURIBOR reference interest rate plus a maturity-based margin. The credit tranche ensures that the required liquidity related to the EEG equalisation mechanism is available over the term of the loan. The exercise of a renewal option for a further year until March 2022 is planned for Q1 2019.

As at 31 December 2018, total fixed-interest borrower's note loans and registered bonds amounted to €915.0 million. Of this, the value date for €100.0 million was in January 2019. Moreover, a long-term, fixed-interest consortium loan of €200.0 million, with a maturity of 15 years, was arranged with two banks, including a development bank, to finance investments in the financial year. This consortium loan includes a customary financial covenant. Its compliance is audited annually on the closing date of 31 December. In addition, the borrowing of long-term outside capital via the capital and bank market for the financing of investments is planned for 2019.

The rating agencies Moody's Investors Service Ltd. and Fitch Ratings Ltd. confirmed the ratings "A3" and "A-" respectively along with a stable outlook. Amprion continues to be firmly anchored in the solid investment grade range. The positive rating contributes to securing access to capital markets for future financing with favourable conditions.

Investments

Demands on the transmission network have risen significantly in the past few years. Increases in feed-ins from renewable energy sources and changes to the power stations in Germany lead to increased electrical output to be transported over increasingly greater distances. In addition, the energy transports throughout the European area, due to trading resulting from the liberalisation of the European energy market, have increased considerably.

The legally stipulated deadlines for the decommissioning of the nuclear power stations still in operation as well as other secured generation capacity and the expansion of renewable energies determine the necessary pace of the grid expansion. During the financial year, Amprion expanded investment activities to increase transport capacity and stabilise the transmission network so that system security can be assured. The north-south axes of the transmission network are being steadily expanded to integrate the growing feed-in of renewable energies into the grid and ensure the provision of the required transmission capacities after all nuclear power stations go offline. The largest investments in the 2018 financial year were made in the projects ALEGrO, Dortmund/Kruckel–Dauersberg, Ultranet and the new HSL2020 central control station in Brauweiler and additional reactive power compensation measures.

Amprion received a total of four planning approval notices as well as three additional public-law permits for over 144 kilometres of power line. The approval planning for the entire overhead line and underground cable project portfolio continued to move forward. Important milestones in the approval process were reached for a number of projects.

The cross-border Lower Rhine–Doetinchem line was commissioned by Amprion together with the Dutch TSO TenneT in September 2018. The new extra-high voltage line will increase the cross-border transport capacity between Germany and the Netherlands even further and will also equalise the electricity flow on all existing lines. This will improve system security and strengthen the European grid to continue to meet demand. For the ALEGrO interconnector between Germany and Belgium, Amprion received approval to build a converter and the roughly 40 km-long cable connection on the German side. Construction activities commenced in late October 2018. ALEGrO is the first interconnector that connects the German grid directly to the Belgian electricity grid. This promotes the integration of the European energy market, increases reliability of supply and contributes to the stabilisation of the grid operations throughout the entire region.

For the Ultranet project, in January 2019, Amprion received the first federal planning notice from the Federal Network Agency FNA (≡ Page 68) (Bundesnetzagentur, BNetzA) for section A (Riedstadt–Wallstadt). For two further sections (section D: Weißenthurm–Riedstadt and section C: Osterath–Rommerskirchen), the application documents were submitted to the FNA in accordance with Section 8 of the German Grid Expansion Acceleration Act (NABEG). For section D, more than 5,000 objections and opinions from public-interest bodies are currently being processed after its disclosure, while the FNA is currently checking the completeness of the documents for section C.

The A-North direct current (DC) connection from Emden/East to Osterath, together with the Ultranet project in the south, forms West German DC corridor A from Lower Saxony, via North Rhine-Westphalia and Rhineland-Palatinate, to Baden-Württemberg. The federal planning application in accordance with Section 6 NABEG was submitted to the FNA in March 2018. The subsequent application conferences were held by the FNA in May and June 2018 with the participation of the general public. The main steps (e. g. permanent dialogue events with the municipalities and citizens, drafting of the documents) for the submission of the application documents for federal planning in accordance with Section 8 NABEG took place in the second half of the financial year to integrate the resulting insights into the planning at an early stage.

The total volume of investments in the financial year came to € 762.5 million, about 6.3% over the level forecast in the 2017 management report. Of this amount, € 644.5 million related to investments in expansion and € 118.0 million to investments in the renovation of the transmission network and other investments. Investments increased by 8.6% in comparison with the previous year.

Since 2008, Amprion has submitted a total of 122 investment applications to the FNA. They relate to projects for the period until 2033. Thanks to the applications approved so far, most of the planned investments in expansion over the next few years have been secured.

Assets and liabilities

ASSETS

IN € MILLION	31 DEC. 2018	31 DEC. 2017	CHANGE
Non-current assets	4,053.0	3,466.3	586.7
Current assets	2,885.6	2,588.9	296.7
	6,938.6	6,055.2	883.4

LIABILITIES AND SHAREHOLDERS' EQUITY

IN € MILLION	31 DEC. 2018	31 DEC. 2017	CHANGE
Equity	1,823.0	1,717.1	105.9
Non-current liabilities	1,566.4	1,006.9	559.5
Current liabilities	3,549.2	3,331.2	218.0
	6,938.6	6,055.2	883.4

At 58.1% (previous year: 56.9%), tangible fixed assets make up the largest portion of the company's assets and are covered up to 84.1% (previous year: 78.9%) by equity and long-term debt. The assets from the EEG equalisation mechanism of €2,367.4 million (previous year: €2,235.2 million) represent the majority of current assets at 82.0% (previous year: 86.3%). This amount relates to current liabilities of €2,366.9 million (previous year: €2,234.3 million).

As of the balance sheet date, the equity ratio stood at 26.3% (previous year: 28.4%). The decline was due to the rise in non-current liabilities as a result of financing activities by means of promissory note loans, registered debentures and a consortium credit as well as from the obligation from the regulatory account and the use of income from congestion management. In the financial year, €73.7 million of the 2017 net profit were allocated to retained earnings.

General statement on the development of business and the financial situation

Amprion's management assesses the course of business and the financial situation as positive. The overall financial situation can be regarded as sound and provides the basis for further investments in the transmission network.

Outlook, opportunities and risk report

Outlook

Grid business

In 2019, the grid charges will contain a uniform grid charge component for the very first time. 20 % of the grid charges will be based on the relevant revenue caps of all German TSOs, while the remaining 80 % will be collected by the company-specific grid charge of each TSO.

The resolution of the **FNA** (≡ Page 68) from 20 December 2018 specified the revenue cap for the third regulatory period from 2019 to 2023 on the cost basis of the year 2016. Amprion submitted an appeal against this decision on 25 January 2019. This initial base level plus the development of the permanently non-controllable costs and the general consumer price index constitute the basis for the grid charges published on 15 December 2018. The revenue cap for 2019 has decreased moderately as a consequence of the following changes:

- Removal of the costs for the connection of offshore wind farms passed on by the coastal TSOs because these are henceforth included in the offshore grid allocation

This effect is partly offset by

- Higher planning costs for feed-in management
- Initial planning costs from the uniform grid charge component

The aforementioned changes are not or only partially within Amprion's sphere of influence and lead to a moderate fall in the grid charges in the extra-high voltage grid level of between 19.8% and 20.3% in the usage hours between 5,000 and 8,760 that is relevant to the majority of customers. The change in the grid charges relates to both the uniform and company-specific grid charge components.

System services

As before, Amprion will procure the control reserve together with the other German TSOs according to the FNA guidelines. In connection with this, it is assumed that increasing quantities and prices will lead to much higher expenses especially for the secondary control reserve. The tendering of the long-term

component for grid losses has been completed for 2019, whereby prices increased moderately in comparison with the 2018 financial year. The cost of redispatch activities and feed-in management is expected to increase sharply.

Investments

The **NEP** (≡ Page 69) (grid development plan) constitutes the basis for Amprion's project planning. The **EnLAG** (≡ Page 68) and the Federal Requirement Plan Act (**BBPIG** (≡ Page 68)), which is based on the NEP, ensure approximately € 4,400 million in expansion investments by Amprion over the coming ten years and secure the legal basis for the investment planning. They confirm that the projects are necessary for the energy industry and that they are urgently required. Moreover, BBPIG projects are subject to an accelerated approval process. In connection with this, it must be noted that only the starting and finishing points of a transmission line are legally specified in the EnLAG and BBPIG. The precise route of the line and all associated activities are specified in further planning steps.

The grid development plan is prepared in a two-yearly cycle in order to prevent overlaps in successive grid development plans. On 22 December 2017, the **FNA** (≡ Page 68) confirmed the NEP 2030, 2017 version, which covers target years 2030 and 2035. The projects from the BBPIG include the large transmission corridors and were once again confirmed by the FNA. The necessity of four measures to control the power flow in the Amprion grid area was also confirmed. However, in 2018, the NEP was revised for the identical target years but with a new scenario framework with significantly higher targets for the erection of wind turbines and solar power systems.

The NEP 2030, 2017 version, included the Hanekenfähr location in the Amprion control area as the grid connection point for two offshore grid connection systems. In order to not anticipate the land development plan (FEP), the FNA made this confirmation pending approval in the NEP 2030, 2019 version. The FEP is prepared by the BSH and applies for the allocation of land for offshore wind farms and the part of the offshore grid connections in the exclusive economic zone from 2026 until at least 2030. The draft FEP 2019 was published by the BSH and made available for consultation on 26 October 2018. This plan further substantiated that Amprion is required to construct the NOR-3-2 (900 MW) connection system at the Hanekenfähr grid connection point by 2028 and the NOR-6-3 (979 MW)

connection system by 2029. The company expects the Hanekenfähr grid connection point to once again receive formal confirmation in the NEP 2030, 2019 version, making the reservation mentioned above irrelevant. On 1 October 2018, Amprion set up its own “Offshore” organisational unit to construct the two offshore grid connection systems. The project team has started preparing for the public approval processes as well as developing specifications for the converters, cables and platforms.

The development and publication of the European TYNDP for the ENTSO-E is defined by EU Regulation 347/2013. The TYNDP 2018 therefore forms the basis of the multilateral interconnector planning for all TSOs, including Amprion. In the two-stage development process of the TYNDP 2018, in which Amprion was actively involved, the necessary interconnector capacity at the intra-European borders to promote free European energy trading and an increase in the reliability of supply was identified in the “identification of system needs” process. The six regional ENTSO-E groups will subsequently investigate the extent to which the necessary capacities can be achieved by projects that have already been specifically planned or whether a further need for expansion exists and additional projects need to be developed. The second phase involves the “project assessment”, which compares the economic benefits of the projects with the project costs using an approach developed by the ENTSO-E and recognised by the EU Commission. The TYNDP 2018 was published in December 2018. The interconnector projects specified in the plan form an important basis for the national analyses of the NEP 2030, 2019 version.

The German TSOs, in consultation with the Federal Ministry for Economic Affairs and Energy and the FNA, investigated the use of additional load flow-controlling measures (especially phase-shifting transformers) as a response to the stressed grid situation in the winter half-year 2016/2017 as well as the high redispatch activities, which are expected to increase in the future. These ad hoc measures are expected to contribute to a reduction in the redispatch activities in the transitional period until the necessary grid expansion is completed. The investigations identified Hanekenfähr and Oberzier as locations for additional phase-shifting transformers in the Amprion control area and were confirmed as ad hoc measures by the FNA in the NEP 2030, 2017 version, together with the Kruckel location already identified in the NEP. Amprion is already working intensively on implementing the identified measures to be able to ensure the planned commissioning by 2023.

The overall volume of investment planned by Amprion until 2028 consists of investment in expansion, renovation and other investments, and amounts to about €9,344 million, of which €794 million is allocated to 2019.

Revenues and profit or loss

A slight decrease in overall revenues is expected in the 2019 financial year. Revenues from the grid business are expected to fall slightly due to Amprion's lower income-neutral combined heat and power revenues. Revenues from Amprion's income-neutral EEG-based activities will also fall slightly due to the lower EEG allocation.

The decline in the imputed equity interest rate for investments in the third regulatory period is expected to result in a slightly lower net profit in the 2019 financial year.

Overall statement on future development

The management board expects to see a continued positive development in the course of business in the 2019 financial year thanks to the prevailing regulatory conditions as well as to the company's stable assets, financial and earnings situation.

Opportunities and risk report

Risk management

The risk management process aims to strengthen risk awareness in the company, enable the early detection of all risks and create transparency of the risk situation. Amprion's risk management includes extensive organisational measures pertaining to the company's processes and structure with the aim of ensuring that risks are identified, analysed and controlled at an early stage and that they are reported, thereby taking into account the requirements of the German Corporate Sector Supervision and Transparency Act (Gesetz zur Kontrolle und Transparenz im Unternehmensbereich – KonTraG). The primary objectives of risk management are the avoidance and control of risks which impact the financial result and liquidity or even endanger the existence of the company and the optimisation of the overall portfolio of opportunities and risks.

Risk identification includes the structural recording of possible risks in all operational processes and functional divisions. As part of the risk analysis, the risks identified are assessed in terms of their origin, early warning indicators, risk control and preventive measures, the amount of any loss and the probability of their occurrence. The objective of risk control is to reduce the potential amount of any loss and the probability of its occurrence or – insofar as this is possible – to avoid risks by not carrying out high-risk activities.

As part of regular risk reporting, the management board and the supervisory board are kept informed of the current risk situation. In addition, material adverse changes are immediately reported to the decision-makers. Risk management is an integral component of the business, planning and control processes and is reviewed regularly for its functional capability and its effectiveness.

In addition, a risk-oriented approach is used as part of internal audits to ensure a comprehensive appraisal of risks. The existing risk portfolios and the resulting areas for action are specified as early as at the preparation stage for auditing schedules and the specific auditing activities.

Essential opportunities and risks

System services

Market opportunities and risks result from managing the control area. The voluntary self-obligations for the control reserve, grid losses and redispatch for the third regulatory period were effectively introduced with the resolutions of the FNA (≡ Page 68) in October 2018. The costs for procuring these system services are therefore considered permanently non-controllable in accordance with Section 11 (2) ARegV (Incentive Regulation Ordinance) and can be included in the calculation of the revenue cap. In principle, the voluntary self-obligations result in an income-neutral, cross-period cost coverage, which is specifically regulated for the individual instruments.

Opportunities and risks result from changes in the cost of procurement of control reserve based on unforeseeable volume effects. The voluntary self-obligations for the control reserve provide for a price indexation resulting in opportunities and risks for the company's income due to volume effects,

which are limited by an incentive regulation. Only around 25.0% of the cost savings or cost increases generated from unforeseen volume effects influence Amprion's income up to an absolute cap of 2.5% of the planned costs. Any remaining difference from volume and price changes in excess of this amount is recognised in the regulatory account and is subject to interest. Both opportunities and risks arise from the recognition in the regulatory account and the associated time lag in the cost shifting.

In the case of the voluntary self-obligations for grid losses, a risk or opportunity arises from the price development because the settlement price is fixed. The full amount of any difference resulting from price changes is recognised in the regulatory account and is subject to interest. Moderate risks or opportunities exist from the procurement of grid losses. Only around 50.0% of the cost savings or cost increases influence Amprion's income up to an absolute cap of 2.5% of the planned costs. Any remaining difference in excess of this amount is also recognised in the regulatory account with interest. Opportunities and risks also arise from the time lag of the cost shifting via the regulatory account.

The voluntary self-obligation for redispatch results in periodic opportunities and risks from the differences between planned and actual costs. These are recognised with interest in the regulatory account and are taken into account in the grid charges with a time lag.

Periodic risks also arise for the feed-in management activities because, while planned costs can be recognised in the revenue cap for the relevant year, the actual amount required can fluctuate significantly due to the weather. The difference between planned costs and actual costs is reported in the regulatory account with interest and taken into account in the grid charges with a time lag.

Financing

As a TSO, Amprion is responsible for the implementation of the EEG equalisation mechanism in its control area. In principle, the implementation of the EEG is income-neutral based on the statutory provisions. In the event of developments that differ from the forecast, however, income from the EEG allocation and the actual revenues from sales on the electricity exchange may not be sufficient to cover the volatile feed-in remuneration to EEG plant operators. As a result of this, a periodic liquidity risk arises which is countered by the maintenance of a sufficient credit line.

Credit risks arise if business partners do not or only insufficiently meet their payment obligations. Credit risks are largely avoided by making appropriate checks on creditworthiness, continuous receivables management and the use of collateral security (in justified cases).

Regulation

Regulatory risks arise from changes in European and national laws. Amprion follows and assists in legislative processes in order to achieve financial stability in the regulated grid business and to limit costs to the company.

The grid charges are subject to regulatory supervision by the FNA (≡ Page 68). Approvals or decisions by the FNA may have a positive or negative impact on the company's result. The approval practice during cost audits in particular is a key point because it forms the basis for determining the grid charges of the coming regulatory period. The grid charges are calculated based on forecast sales quantities. In the event of unscheduled quantity deviations resulting from external factors (e. g. weather, economy, local generation), revenue surpluses or shortfalls occur; they are recorded in the regulatory account and taken into consideration for future grid charges.

Further risks may arise if the investment measures applied for are only partially accepted by the FNA thus leading to lower imputed costs which results in lower revenues from grid charges. The company reduces this risk by controlling costs and justifying the costs of investments to the FNA.

Overall statement on risks

During the 2018 financial year, there were no identifiable risks that threatened the existence of the company, either individually or in their entirety, or that might significantly impair the assets, financial and earnings position of the company. No such risks are foreseeable in the future based on current knowledge.

Accounting-related internal control and risk management system

The objective of the accounting-related internal control and risk management system is to ensure that the company's accounting activities comply with the legal provisions and the generally accepted accounting principles. Amprion's accounting-related internal control and risk management system defines principles, procedures and measures that ensure the integrity of the accounting process. The system is based on the international "Enterprise Risk Management – Integrated Frameworks" standard of the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and the COSO model named after it.

The regulations are summarised in a guideline that is supplemented by work instructions. In addition, the guideline presents the specific accounting-related risks in a control matrix with the areas of activity and responsibilities. This is regularly updated. Risk identification and risk assessment take place in compliance with the account processes and the risk management system in consultation with all of the operating accounting units.

Each identified risk is assigned to one or more specific manual and/or system-based controls. The quantitative (materiality per balance sheet item) and qualitative (complexity and discretionary powers) assessment of the risks determine the intensity of the controls. Some of these controls are used for subsequent audits, that is to say, to maintain the accuracy of the content and the completeness of the annual financial statements (ex post controls). By contrast, other control activities are of a preventive nature in order to secure risky processes in advance and reduce the system's susceptibility to errors (ex ante controls). The combination of ex post and ex ante controls ensures a more robust overall accounting process.

Important control measures of the accounting-related internal control and risk management system are:

- a continuously applied four-eyes principle,
- separation of functions and assignment of responsibilities,
- tiered release strategies,

- use of standard business software for accounting with a comprehensive authorisation concept to prevent fraud and
- IT access restrictions set up according to the principle of the separation of functions to prevent unauthorised access to data.

The accounting-related internal control and risk management system includes the central documentation of the control activities and the reporting to the Head of Accounting who is responsible for introducing any necessary additional measures. Moreover, regular discussions are held with the staff operating the internal control system and with the Amprion risk management department.

Corporate governance declaration pursuant to Section 289f (4) HGB (German Commercial Code)


As target figures for the proportion of women to be reached by 30 June 2022, in 2017 a quota of 8.3% was stipulated for the supervisory board, 0.0% for the Executive Management and 6.7% for the two management levels directly below the Executive Management.

Dortmund, 14 March 2019

Executive Management



DR HANS-JÜRGEN BRICK



DR KLAUS KLEINEKORTE

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Balance sheet

OF AMPRION GMBH AS AT 31 DECEMBER 2018

ASSETS

	NOTES	31 DEC. 2018 € MILLION	31 DEC. 2017 € MILLION
Non-current assets	(1)		
Intangible assets		16.0	12.2
Tangible assets		4,031.2	3,448.3
Financial assets		5.8	6.0
		4,053.0	3,466.5
Current assets			
Inventories	(2)	62.7	63.9
Accounts receivable and other assets	(3)	1,247.5	1,182.2
Cash and cash equivalents	(4)	1,574.4	1,341.0
		2,884.6	2,587.1
Prepaid expenses		1.0	1.6
		6,938.6	6,055.2

LIABILITIES AND SHAREHOLDERS' EQUITY

	NOTES	31 DEC. 2018 € MILLION	31 DEC. 2017 € MILLION
Equity	(5)		
Subscribed capital		10.0	10.0
Jouissance rights capital		13.8	11.3
Additional paid-in capital		1,003.0	1,003.0
Retained earnings		592.8	519.1
Net profit		203.4	173.7
		1,823.0	1,717.1
Special items	(7)	31.0	32.6
Provisions and accruals	(8)	440.4	350.7
Liabilities	(9)	4,262.7	3,684.4
Deferred income	(10)	233.5	126.2
Deferred tax liabilities	(11)	148.0	144.2
		6,938.6	6,055.2

Income statement

OF AMPRION GMBH FROM 1 JANUARY TO 31 DECEMBER 2018

	NOTES	01 JAN. - 31 DEC. 2018 € MILLION	01 JAN. - 31 DEC. 2017 € MILLION
Revenues	(13)	13,784.0	12,931.6
Change in inventory of work in progress		0.3	-0.8
Other own work capitalised		72.8	71.6
Other operating income	(14)	35.5	28.0
Cost of materials	(15)	-13,096.2	-12,360.9
Staff costs	(16)	-155.8	-144.7
Depreciation		-163.0	-144.2
Other operating expenses	(17)	-118.6	-93.9
Financial result	(18)	-51.4	-32.3
Profit before taxes		307.6	254.4
Taxes on income and earnings	(19)	-104.2	-80.7
Net profit		203.4	173.7

Notes to the financial statements

OF AMPRION GMBH, DORTMUND AS AT 31 DECEMBER 2018

Basis of presentation

The company, based in Dortmund, is entered in the Commercial Register of the District Court of Dortmund under registration number HRB 15940.

The annual financial statements have been prepared in accordance with the provisions of the German Commercial Code (HGB) for a large capital corporation as required by Section 267 (3) HGB and pursuant to the supplementary provisions of the Act Regarding Limited Liability Companies (GmbHG) and the Energy Industry Act (EnWG (≡ Page 68)). To reflect the specific nature of the company's business activities, certain items of the financial statements have been adjusted pursuant to Section 265 (5) HGB.

To ensure clarity of presentation, individual items have been combined in the balance sheet and in the income statement and are explained separately in the notes. The income statement has been prepared according to the nature of expense method. The amounts disclosed in the annual financial statements are stated in millions of euros (€ million) and thousands of euros (€ thousand).

Accounting policies

Non-current assets

Separately acquired intangible assets are initially recognised at acquisition costs and are amortised using the straight-line method over their normal useful lives of two to five years; if their value is likely to be permanently impaired, they are written down.

Tangible assets are measured at acquisition or manufacturing costs less accumulated scheduled straight-line depreciation and any unscheduled write-offs. Manufacturing costs include direct costs and any applicable overhead costs. If the reasons for the unscheduled write-offs cease to exist, appropriate reversals are recorded, but not in excess of the amortised cost. Depreciation pro rata temporis begins

in the year of the addition. Scheduled write-offs are based on the lower range of useful life pursuant to Annex 1 to Section 6 (5) StromNEV (Electricity Network Fee Regulation Ordinance). Pursuant to Section 6 (2) EStG (German Income Tax Act), low-value assets whose acquisition costs do not exceed € 250 are recognised as costs in the year of their acquisition. If the acquisition costs exceed € 250, but do not exceed € 800, they are capitalised at the point in time of their addition; at the end of the financial year, they are fully depreciated and recognised as disposals.

Financial assets are recognised at acquisition costs and measured at the lower fair value if there is a presumably permanent loss of value.

Current assets

Raw materials and supplies are recognised at acquisition or manufacturing costs measured by applying moving average prices according to the strict lowest value principle. Inventory risks arising from reduced exploitability are given consideration in the form of appropriate allowances.

Work in progress is measured at manufacturing costs. Direct costs as well as reasonable amounts of overhead costs for material and production are included in these measurements.

The receivables and other assets are recognised at nominal value or acquisition costs. All discernible specific risks and the general credit risk are given consideration in the form of reasonable value allowances.

Securities are measured at costs of acquisition or at the lower fair value.

Cash and cash equivalents are reported at nominal value.

Special items

Special items include advances and contributions in aid of construction and building connection that were received from 1 January 2003 to 31 December 2010, and are reversed in line with the useful lives of the related assets.

Provisions

Provisions for pensions and similar obligations are created on the basis of actuarial calculations, taking into account Klaus Heubeck 2018 G mortality tables, which were adjusted for company specifics, and using the projected unit credit method. They are discounted by 3.21 % per year, based on the 10-year-average market interest rate as at 31 December 2018 published by the German central bank with an assumed residual term of 15 years. Other calculation assumptions include a 3.50 % per year increase in wages and salaries and pension increases of 1.00 % and 2.10 % per year.

In the assessment of other provisions, all identifiable risks and contingent liabilities have been taken into account. They are recognised at the amount required for settlement based on reasonable commercial judgement. Provisions with a residual term of more than one year are discounted in accordance with their residual term using the average market interest rate for the previous seven financial years published by the German central bank. Interest accretion on these provisions is calculated using the interest rate at the end of the financial year. The effects of the change in the discounting rate or in the estimation of the residual term are shown in the financial result.

Provisions for service anniversaries are accrued on the basis of an actuarial analysis, taking into account Klaus Heubeck 2018 G mortality tables, which were adjusted for company specifics. They are discounted using the average market interest rate for the previous seven financial years as at 31 December 2018 of 2.32 % per year published by the German central bank. Furthermore, depending on the relevant service anniversary regulations, wage and salary increases of 2.75 % and 3.50 % per year are used as actuarial assumptions.

Provisions for pre-retirement part-time employment are accrued on the basis of actuarial calculations, taking into account Klaus Heubeck 2018 G mortality tables, which were adjusted for company specifics. They are discounted using the average market interest rate for the previous seven financial years as at 31 December 2018 of 0.98 % per year for potential and concluded pre-retirement part-time employment agreements. Furthermore, wage and salary increases of 3.50 % per year are used as actuarial assumptions.

Provisions for pensions and similar obligations are covered in full by assets held in trust as part of a contractual trust arrangement. Credits from the block model pre-retirement part-time employment in accordance with Section 8a of the German Partial Retirement Act (Altersteilzeitgesetz – AltTZG) and credits on long-term working time accounts under Section 7e of the German Social Code Vol. IV (Sozialgesetzbuch – SGB IV) are likewise secured by assets held in trust as part of a contractual trust arrangement. These assets held in trust are recognised at fair value and are offset against the respective underlying obligations in accordance with Section 246 (2) sentence 2 HGB. Expenses associated with the interest accretion to provisions are netted against income and expenses from the related assets in the financial result.

Liabilities

Liabilities are generally measured at their settlement amount. Exceptions concern the liabilities to the Pensions Security Association and those arising from early retirement obligations which are stated at present value.

Deferred income

The advances and contributions in aid of construction and building connection accrued up until 31 December 2002 and after 1 January 2011 reported as deferred items are reversed through profit and loss using the straight-line method over a period of 20 years. The income from congestion management is used for maintenance or expansion of cross-border transmission capacities and is, in the same way as the construction grants, recognised in the balance sheet as deferred income.

Deferred tax liabilities

Deferred taxes arise from temporary differences in accounting treatment under commercial and tax law and are calculated using the current applicable tax rate and shown net.

Currency conversion

Transactions in foreign currency are valued at the current exchange rate at the time of their initial posting. Assets and liabilities quoted in foreign currency are converted at the mean spot rate of exchange prevailing on the accounting date.

Notes to the balance sheet

(1) Non-current assets

The development of non-current assets during the financial year and their composition as of 31 December 2018 are described on pages 64/65.

The following table provides information on the company's stockholdings.

NAME AND HEADQUARTERS OF THE COMPANY	SHARE OF CAPITAL	EQUITY IN € MILLION*	NET PROFIT IN € MILLION*
TSCNET Services GmbH, Munich	7.7 %	5.9	0.3
Holding des Gestionnaires de Réseau de Transport d'électricité SAS, Paris/France	5.0 %	91.7	11.0
Joint Allocation Office S.A., Luxembourg/Luxembourg	4.5 %	4.6	0.3

* Equity and profit for financial year 2017

(2) Inventories

IN € MILLION	31 DEC. 2018	31 DEC. 2017
Raw materials and supplies	59.9	61.4
Work in progress	2.8	2.5
	62.7	63.9

(3) Accounts receivable and other assets

IN € MILLION	31 DEC. 2018	31 DEC. 2017
Trade receivables	1,198.9	1,137.8
Other assets	48.6	44.4
	1,247.5	1,182.2

(4) Cash and cash equivalents

Cash and cash equivalents consist largely of bank deposits.

(5) Equity

The company's authorised capital has been paid in full; 74.9% is held by M 31 Beteiligungsgesellschaft mbH & Co. Energie KG, Düsseldorf, and 25.1% by RWE AG, Essen.

The jouissance rights, which are not securitised, are held by the company's employees and are not transferable. They can be redeemed after a minimum holding period of five years. The jouissance rights entitle to a limited interest claim on the nominal amount which is prioritised over the shareholders' interests. The amount of the interest yield is dependent on the company's profit. They do not entitle to any participation in returns from liquidation of the company. The yield on the jouissance rights capital in the financial period amounted to €0.8 million. In total, jouissance rights in the following denominations have been issued.

NOMINAL AMOUNT	31 DEC. 2018
€ 180	71,630
€ 360	16
€ 720	289
€ 1.220	68
€ 1.720	375
	72,378

The retained earnings are entirely composed of the item “other retained earnings” within the meaning of Section 266 (3) A. III, no. 4 HGB.

By resolution of the Supervisory Board on 10 April 2018, € 100.0 million of the net profit of € 173.7 million for the 2017 financial year was distributed to the owners. The remainder of € 73.7 million was transferred to other retained earnings.

(6) Payout block

The total amount of non-distributable profits in accordance with Section 268 (8) HGB of € 6.6 million results from the measurement of covering assets at their fair value pursuant to Section 253 (1) sentence 4 HGB. The fair value exceeds the cost of acquisition by € 9.6 million. The deferred tax liability due on this amount totals € 3.0 million.

The non-distributable amount of € 48.5 million (previous year: 33.6 million) in accordance with Section 253 (6) HGB arises from discounting the provisions for pension obligations using the 10-year-average market interest rate instead of the previous 7-year average.

The freely disposable reserves of € 1,595.8 million exceed the non-distributable amounts of € 55.1 million.

(7) Special items

Advances and contributions in aid of construction and building connection received from 1 January 2003 to 31 December 2010 are recognised under special items for investment grants associated with fixed assets.

(8) Provisions and accruals

IN € MILLION	31 DEC. 2018	31. DEC. 2017
Tax provisions	39.5	37.3
Other provisions	400.9	313.4
	440.4	350.7

Due to the offsetting rule pursuant to Section 246 (2) sentence 2 HGB, the provisions for pensions and similar obligations reported under other provisions are netted against plan assets.

IN € MILLION	HISTORICAL COST	FAIR VALUE	SETTLEMENT AMOUNT
Netted assets			
Securities	144.6	154.3	
Other assets	52.0	52.0	
	196.6	206.3	
Netted liabilities			
Provisions for pensions and similar obligations			206.3
			206.3
Difference from offsetting			-

The fair value corresponds to the market value as at 31 December 2018. The corresponding offsetting of expenses and income is disclosed in the notes to the financial result.

Tax provisions relate to tax periods not yet irrevocably closed.

Other provisions are accrued essentially for obligations for the overhaul of pylons, claims arising from the previous version of the KWKG (Combined Heat and Power Act), and personnel-related as well as regulatory obligations.

In accordance to the consolidation requirement pursuant to Section 246 (2) sentence 2 HGB, the provisions for pre-retirement part-time employment and long-term working hour accounts disclosed under other provisions are offset against the plan assets.

IN € MILLION	HISTORICAL COST	FAIR VALUE	SETTLEMENT AMOUNT
Netted assets			
Other assets	12.1	12.1	
	12.1	12.1	
Netted liabilities			
Provisions for pre-retirement part-time employment and long-term working time accounts			38.1
			38.1
Difference from offsetting			26.0

The fair value corresponds to the market value as at 31 December 2018. The corresponding offsetting of expenses and income is disclosed in the notes to the financial result.

(9) Liabilities

IN € MILLION (PRIOR-YEAR FIGURES IN BRACKETS)	—31 DEC. 2018 (31 DEC. 2017)	OF WHICH, RESIDUAL TERM — ≤ 1 YEAR	OF WHICH, RESIDUAL TERM — > 1 YEAR	OF WHICH, RESIDUAL TERM — > 5 YEARS
Liabilities to credit institutions	943.2 (713.8)	128.2 (152.3)	185.0 (185.0)	630.0 (376.5)
Prepayments received	9.2 (12.2)	4.8 (7.7)	4.4 (2.7)	- (1.8)
Trade payables	3,096.6 (2,790.7)	3,096.6 (2,790.7)	- (-)	- (-)
Liabilities to companies with participation interest	0.1 (*)	0.1 (*)	- (-)	- (-)
Other liabilities	213.6 (167.7)	96.8 (116.7)	116.8 (51.0)	- (-)
- of which taxes	14.5 (3.5)	14.5 (3.5)	- (-)	- (-)
- of which for social security	0.3 (0.4)	0.1 (0.1)	0.2 (0.3)	- (-)
	4,262.7 (3,684.4)	3,326.5 (3,067.4)	306.2 (238.7)	630.0 (378.3)

*Negligible amount

Liabilities to credit institutions chiefly comprise promissory note loans and registered debentures totaling €815 million.

Other liabilities primarily comprise liabilities for regulatory obligations.

(10) Deferred income

Deferred income includes €22.7 million (previous year: €26.1 million) in advances and contributions in aid of construction and building connection received up to 31 December 2002 and from 1 January 2011; appropriated advances from congestion management according to Article 16 (6) Regulation (EC) No 714/2009 amounting to €184.4 million (previous year: €68.8 million) as well as various other advances for income in subsequent years amounting to €26.4 million (previous year: €31.3 million).

(11) Deferred tax liabilities

IN € MILLION	31. DEC. 2018	CHANGE	31 DEC. 2017
Deferred tax assets	107.8	31.1	76.7
Deferred tax liabilities	225.8	34.9	220.9
Deferred taxes liability gap	148.0	3.8	144.2

The deferred tax liabilities arise essentially from valuation differences with regard to land and buildings as well as technical plant and machinery. These liabilities exceed the deferred tax assets, which stem mainly from differences in the valuation of provisions for pensions and similar obligations, other provisions and deferred income. The calculation was based on a tax rate of 31.61% (previous year: 31.55%).

(12) Guarantees and other financial obligations

The guarantees consist exclusively of liabilities from guarantee contracts totalling €180.4 million (previous year: €160.5 million), with €172.6 million of this amount (previous year: €156.5 million) relating to the joint liability for pension obligations stated in the partner RWE AG's accounts. Amprion is responsible for the economic burdens and relief.

Guarantees are provided only after a thorough review of the related risks and are restricted to the company's scope of business activities. Based on all indications available up until the preparation of the annual financial statements, it is assumed that the main debtors will be able to fulfil the obligations underlying the guarantees and that the guarantees will therefore not be called upon.

The aggregate total of other financial liabilities amounts to € 368.0 million and relates to the following issues:

Purchase obligations for electricity procurement for the market-oriented balancing-out of grid losses in the amount of € 187.1 million have been entered for 2019 and 2020.

Order commitments in the amount of € 169.9 million related to submitted investment and maintenance orders and to framework agreements regarding purchase obligations.

Non-discounted financial obligations of € 3.4 million (thereof < 1 year: € 3.1 million) are related primarily to long-term property leases.

A payment obligation in the amount of € 7.6 million results from contracts for the purchase of land that will be legally and commercially conveyed after 31 December 2018.

Due to the transfer of certain pension scheme liabilities to RWE Pensionsfonds AG which took place in previous years, the company – in its capacity as employer – has a legally mandated funding obligation in the event of a possible shortfall in the pension fund in the future. This financial liability is currently not quantifiable.

Notes to the income statement

(13) Revenues

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017
Electricity	13,741.1	12,888.7
Other	42.9	42.9
	13,784.0	12,931.6

Electricity revenues essentially include revenues from the passing on of EEG expenses, network charges and income-neutral allocations. They are generated mainly within Germany.

(14) Other operating income

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017
Reversal of provisions	26.4	19.1
Profits from disposal of non-current assets	3.0	1.2
Other	6.1	7.7
	35.5	28.0

Other operating income includes income related to other periods in the amount of €33.8 million (previous year: €22.6 million). Income of €2.1 thousand (previous year: €1.0 thousand) resulted from currency conversion.

(15) Cost of materials

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017
Cost of raw materials, supplies and purchased goods	-12,448.3	-11,703.8
Cost of purchased services	-647.9	-657.1
	-13,096.2	-12,360.9

The cost of materials essentially consist of charges from EEG feed-ins and expenses for system services as well as income-neutral allocations.

(16) Staff costs

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017
Wages and salaries	-119.1	-111.1
Costs of social security, pensions and other benefits	-36.7	-33.6
<i>- of which relating to pensions</i>	-18.5	-17.4
	-155.8	-144.7
	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017
Executive employees	30	30
Non-tariff employees	274	252
Employees covered by collective wage agreements	1,071	996
	1,375	1,278

The figures stated above are related to the average employee equivalents employed during the financial year. Part-time employees are taken into account proportionally to their regular weekly working hours.

(17) Other operating expenses

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017
Services	-49.4	-40.0
Losses from disposal of non-current assets	-7.3	-3.4
Impairments or losses from disposal of current assets	-0.1	-6.4
Miscellaneous	-61.8	-44.1
	-118.6	-93.9

Other operating expenses include expenses related to other periods in the amount of €26.3 million (previous year: €9.8 million) and largely result from additions to pension provisions due to adjustments to valuation parameters.

Expenses for services relate largely to data processing and real estate management.

Miscellaneous other operating expenses essentially include expenses for fees, consulting services, rent and additions to pension provisions due to adjustments to valuation parameters amounting to €18.7 million; as well as other taxes amounting to €2.3 million (previous year: €2.2 million).

(18) Financial result

IN € MILLION	1 JAN.- 31 DEC. 2018	1 JAN.- 31 DEC. 2017
Income from participations	0.6	0.3
Other interest and similar income	3.7	1.6
Interest and similar expenses	-55.7	-34.2
- of which interest accretion	-26.5	-19.3
- of which remuneration from jouissance rights	-0.8	-0.7
	-51.4	-32.3

*Negligible amount

Expenses and earnings from plan assets were netted against expenditures from interest accretion in accordance with Section 246 (2) sentence 2 HGB. The resulting net amount is included in the item “Interest and similar expenses”.

	— IN € MILLION
Netted income	
Other operating income	-5.1
Other interest and similar income	*
	-5.1
Netted expenses	
Interest and similar expenses	-25.3
	-25.3
Difference from offsetting	-30.4

*Negligible amount

(19) Taxes on income and earnings

Expenses arising from taxes on income and earnings relating to the current financial year amount to € 95.1 million; expenses for deferred taxes amount to € 3.8 million.

Additional information

Directors and officers

The option pursuant to Section 286 (4) HGB was exercised. Therefore, no disclosure of the total remuneration paid to Executive Management in the financial period pursuant to Section 285 no. 9a HGB was made.

Members of the Supervisory Board received remuneration in the amount of € 273.7 thousand during the financial year.

The members of the Supervisory Board are listed below:

- **Professor Heinz-Werner Ufer**
Honorary Professor at the Technical University of Dortmund
Chairman
- **Christian Mosel**
Chief Executive Officer of Ärzteversorgung Westfalen-Lippe – Corporation under public law
1st Deputy Chairman
 - since 1 June 2018
- **Josef Frankemölle***
Former Chairman of the General Works Council of Amprion GmbH
2nd Deputy Chairman
- **Frank Amberg**
Head of Private Equity of MEAG MUNICH ERGO AssetManagement GmbH
- **Dr Peter-Henrik Blum-Barth**
Senior Head of Department for Investments in Liquid Assets at SV SparkassenVersicherung Holding AG
- **Detlef Börger-Reichert***
Chairman of the Works Council of Amprion GmbH at the Dortmund site

* Employees' Representative

- **Malte Glasneck***
Member of the Works Council of Amprion GmbH at the Hoheneck site

- **Natalie Kornowski***
Chairwoman of the General Works Council of Amprion GmbH and Chairwoman of the Works Council at Amprion GmbH at the Brauweiler site

- **Dr Andreas Kretschmer**
Consultant to Ärzteversorgung Westfalen-Lippe –
Corporation under public law
1st Deputy Chairman
 - until 30 May 2018

- **Dr Thomas Mann**
Spokesman of the management of Ampega Investment GmbH and Chief Executive Officer of Ampega Asset Management GmbH

- **Christoph Manser**
Head of Infrastructure Investments at Swiss Life Asset Management AG

- **Fred Riedel**
Corporate Tax Consultant, Director of Finances and Administration at the International School of Düsseldorf e.V.

- **Dr Rolf Martin Schmitz**
Chairman of the Management Board and Chief Executive Officer of RWE AG

*Employees' Representative

The members of the Executive Management are listed below:

- **Dr Hans-Jürgen Brick**
Chief Commercial Officer and Chief Financial Officer

- **Dr Klaus Kleinekorte**
Chief Technical Officer

Auditor's fee

The auditor's fee breaks down as follows.

	IN € THOUSAND	OF WHICH FOR PREVIOUS YEARS
Auditing services	147.4	-
Other assurance services	313.8	1.8
Miscellaneous services	10.8	-
	472.0	1.8

Appropriation of net profit

The net profit for the financial year amounts to € 203.4 million. Pursuant to Section 16 (1) of the company's Articles of Association, Executive Management proposes to the Supervisory Board a distribution of € 100.0 million. Furthermore, Executive Management proposes to allocate the surplus amount of € 103.4 million to other retained earnings according to Section 266 (3) A. III. no. 4 HGB for the purpose of creating appropriate reserves for future investments.

Events after the end of the reporting period

No significant events occurred during the period between the end of the reporting period and the preparation of the company's annual financial statements.

Information pursuant to EnWG

The company's business activities are related exclusively to the area "transport of electricity". Consequently, the activity report required pursuant to Section 6b (3) **EnWG** (≡ Page 68) is equivalent to the financial statements.

Dortmund, 14 March 2019

Executive Management



DR HANS-JÜRGEN BRICK



DR KLAUS KLEINEKORTE

Development of fixed assets (Appendix to the Notes)

OF AMPRION GMBH FROM 1 JANUARY TO 31 DECEMBER 2018

————— COSTS OF ACQUISITION OR PRODUCTION IN € MILLION —————

	AS OF 01 JAN. 2018	ADDITIONS	TRANSFERS	DISPOSALS	AS OF 31 DEC. 2018
Intangible assets					
Purchased concessions, patent rights and similar rights and assets, as well as licences in such rights and assets	39.3	7.5	8.9	14.6	41.1
Prepayments	1.6	0.1	-1.6	-	0.1
	40.9	7.5	7.3	14.6	41.2
Tangible assets					
Land, land rights and buildings including buildings on third-party land	516.9	44.1	8.8	3.6	566.2
Technical plant and machinery	6,921.4	395.9	56.1	52.1	7,321.4
Other equipment, factory and office equipment	54.5	11.9	3.4	4.8	64.8
Advance payments and construction in progress	410.4	303.0	-75.6	2.0	635.9
	7,903.2	755.0	-7.3	62.5	8,588.3
Financial assets					
Participations	5.2	-	-	-	5.2
Other loans	0.8	-	-	0.2	0.6
	6.0	-	-	0.2	5.8
	7,950.1	762.5	-	77.3	8,635.3

ACCUMULATED DEPRECIATION IN € MILLION				CARRYING AMOUNTS IN € MILLION		
AS OF 01 JAN. 2018	DEPRECIATION DURING THE RE- PORTING PERIOD	TRANSFERS	DISPOSALS	AS OF 31 DEC. 2018	AS OF 31 DEC. 2018	AS OF 31 DEC. 2017
28.7	5.7	5.0	14.1	25.2	15.9	10.6
-	-	-	-	-	0.1	1.6
28.7	5.7	5.0	14.1	25.2	16.0	12.2
179.6	8.2	-	1.6	186.2	380.0	337.3
4,240.8	141.6	-7.5	43.8	4,331.0	2,990.3	2,680.6
34.5	7.6	2.5	4.7	39.9	25.0	20.0
-	-	-	-	-	635.9	410.4
4,454.9	157.4	-5.0	50.1	4,557.1	4,031.2	3,448.3
-	-	-	-	-	5.2	5.2
-	-	-	-	-	0.6	0.8
-	-	-	-	-	5.8	6.0
4,483.6	163.0	-	64.2	4,582.3	4,053.0	3,466.5

Independent auditor's report

REPORT ON THE AUDIT OF THE FINANCIAL STATEMENTS AND THE MANAGEMENT REPORT

AUDIT OPINIONS

We have audited the annual financial statements of Amprion GmbH, Dortmund, which comprise the balance sheet as of 31 December 2018 and the income statement for the financial year from 1 January 2018 to 31 December 2018 as well as the notes to the financial statements, including the presentation of the recognition and measurement policies. In addition, we have audited the Amprion GmbH management report for the financial year from 1 January 2018 to 31 December 2018. In accordance with the German legal requirements, we have not audited the content of the corporate governance declaration pursuant to Section 289f (4) HGB (German Commercial Code).

In our opinion, on the basis of the knowledge obtained in the audit

- the accompanying annual financial statements comply, in all material respects, with the requirements of German commercial law applicable to business corporations and give a true and fair view of the assets, liabilities and financial position of the company as of 31 December 2018 and of its financial performance for the financial year from 1 January 2018 to 31 December 2018 in compliance with German Legally Required Accounting Principles, and
- the accompanying management report as a whole provides an appropriate view of the company's position. In all material respects, this management report is consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our audit opinion on the management report does not cover the contents of the aforementioned corporate governance declaration.

Pursuant to Section 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the annual financial statements and of the management report.

BASIS FOR THE AUDIT OPINIONS

We conducted our audit of the annual financial statements and of the management report in accordance with Section 317 HGB and in compliance with the German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW). Our responsibilities under those requirements and principles are further described in the “AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND THE MANAGEMENT REPORT” section of our auditor's report. We are independent of the company in accordance with the requirements of German commercial and professional law and have fulfilled our other German professional responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions on the annual financial statements and on the management report.

OTHER INFORMATION

The executive directors are responsible for the other information. The other information comprises the corporate governance declaration pursuant to Section 289f (4) HGB.

Our audit opinions on the annual financial statements and on the management report do not cover the other information, and consequently we do not express an audit opinion nor any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the annual financial statements, with the management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

RESPONSIBILITIES OF EXECUTIVE DIRECTORS AND THE SUPERVISORY BOARD FOR THE ANNUAL FINANCIAL STATEMENTS AND THE MANAGEMENT REPORT

The executive directors are responsible for the preparation of the annual financial statements that comply, in all material respects, with the requirements of German commercial law applicable to business corporations, and that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the company in compliance with German Legally Required Accounting Principles.

In addition, the executive directors are responsible for such internal control as they, in accordance with German Legally Required Accounting Principles, have determined necessary to enable the preparation of annual financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the annual financial statements, executive directors are responsible for assessing the company's ability to continue as a going concern. They also have the responsible for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, provided no actual or legal circumstances conflict therewith.

Furthermore, the executive directors are responsible for the preparation of the management report that, as a whole, provides an appropriate view of the company's position and is, in all material respects, consistent with the annual financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as it has considered necessary to enable the preparation of a management report that is in accordance with the applicable German legal requirements and to be able to provide sufficient appropriate evidence for the assertions in the management report.

The supervisory board is responsible for overseeing the company's financial reporting process for the preparation of the annual financial statements and of the management report.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND OF THE MANAGEMENT REPORT

Our objectives are to obtain reasonable assurance about whether the annual financial statements as a whole are free from material misstatement, whether due to fraud or error and whether the management report as a whole provides an appropriate view of the company's position and, in all material respects, is consistent with the annual financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our audit opinions on the annual financial statements and on the management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and in compliance with the German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual financial statements and this management report.

We exercise professional judgement and maintain professional scepticism throughout the audit. We also

- Identify and assess the risks of material misstatement of the annual financial statements and of the management report, whether due to fraud or error, design and perform audit procedures responsive to those risks and obtain audit evidence that is sufficient and appropriate to provide a basis for our audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal controls.

- Obtain an understanding of internal control relevant to the audit of the annual financial statements and of arrangements and measures relevant to the audit of the management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these systems of the Company.
- Evaluate the appropriateness of accounting policies used by executive directors and the reasonableness of estimates made by executive directors and related disclosures.
- Conclude on the appropriateness of executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the annual financial statements and in the management report or, if such disclosures are inadequate, to modify our respective audit opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to be able to continue as a going concern in compliance with German Legally Required Accounting Principles.
- Evaluate the overall presentation, structure and content of the annual financial statements, including the disclosures and whether the annual financial statements present the underlying transactions and events in a manner that the annual financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the company.
- Evaluate the consistency of the management report with the annual financial statements, its conformity with German law and the view of the company's position it provides.

- Perform audit procedures on the prospective information presented by the executive directors in the management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate audit opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

OTHER LEGAL AND REGULATORY REQUIREMENTS

REPORT ON THE AUDIT OF THE FULFILMENT OF THE ACCOUNTING DUTIES PURSUANT TO SECTION 6B (3) ENWG

AUDIT OPINIONS

We audited the fulfilment of the accounting duties pursuant to Section 6b (3) EnWG, which stipulates that separate accounts must be maintained for the activities defined in Section 6b (3) EnWG, for the financial year from 1 January 2018 to 31 December 2018. In addition, we prepared the activity report for the “transmission of electricity” area, consisting of the balance sheet as of 31 December 2018 and the income statement for the financial year from 1 January 2018 to 31 December 2018, including information on the rules according to which the assets and liabilities as well as the expenses and income were allocated to the accounts maintained in accordance with Section 6b (3) sentence 1 to 4 EnWG.

In our opinion

- the accounting obligations pursuant to Section 6b (3) EnWG, which stipulate that separate accounts must be maintained for the activities defined in Section 6b (3) EnWG, were fulfilled in all material respects for the financial year from 1 January 2018 to 31 December 2018 and
- the accompanying annual financial statements coincide with the activity report
- the accompanying activity report coincides with the provisions of Section 6b (3) EnWG in all material respects.

BASIS FOR THE AUDIT OPINIONS

We conducted our audit in accordance with Section 6b (5) EnWG and in compliance with the German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW). Our responsibilities under those requirements and principles are further described in the “AUDITOR’S RESPONSIBILITIES FOR THE AUDIT OF THE FULFILMENT OF THE ACCOUNTING DUTIES PURSUANT TO SECTION 6B (3) ENWG” section as well as in the “AUDITOR’S RESPONSIBILITIES FOR THE AUDIT OF THE ANNUAL FINANCIAL STATEMENTS AND OF THE MANAGEMENT REPORT” section.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions in this respect.

RESPONSIBILITIES OF EXECUTIVE DIRECTORS FOR THE ACCOUNTING PURSUANT TO SECTION 6B (3) ENWG

Executive directors are responsible for fulfilling the duties pursuant to Section 6b (3) EnWG as well as for such arrangements and measures (systems) as it has considered necessary to fulfil these duties.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE FULFILMENT OF THE ACCOUNTING DUTIES PURSUANT TO SECTION 6B (3) ENWG

Our objectives are to obtain reasonable assurance about whether the accounting duties pursuant to Section 6b (3) EnWG have been fulfilled in all material respects as well as to issue a report that includes our audit opinions on the fulfilment of the accounting duties pursuant to Section 6b (3) EnWG.

The audit includes an assessment of whether the valuations and the allocations of the accounts pursuant to Section 6b (3) EnWG are appropriate and clear and whether the principle of continuity has been adhered to.

Düsseldorf, 14 March 2019

BDO AG
Wirtschaftsprüfungsgesellschaft

signed Eckmann
German Public Auditor

signed Wiening
German Public Auditor

Glossary

ARegV

The Ordinance on Incentive Regulation (Anreizregulierung – ARegV) is an official instrument for the regulation of monopolistic markets. As networks are seen as natural monopolies, in theory network operators do not have any incentive to maintain their efficiency and thus keep the costs of their services low. The Federal Network Agency therefore sets a revenue cap for network operators via the Incentive Regulation which is stipulated on the basis of the efficiency ratings of the most favourable network operator. Within this framework, network operators are allowed some leeway, for example for investments in the network. The difference between the revenue cap and actual revenues is placed in a regulatory account by the Federal Network Agency. The revenue cap is implemented through the transmission charges. If revenues exceed the cap by more than 5%, the transmission charges must be adjusted.

BBPIG

The Federal Requirement Plan Act (Bundesbedarfsplangesetz, BBPIG) contains 43 of the grid expansion projects certified as necessary by the Federal Network Agency which must be implemented by the transmission system operators. They are considered to be necessary for the energy industry and are urgently required. The Federal Network Agency normally carries out federal planning for these projects.

www.netzausbau.net

EEG

The Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz, EEG) regulates the preferential feed-in of electricity from renewable sources, such as wind, sun, water or biomass, into

the German electricity grid. This is intended to allow the operation of regenerative generation facilities on a financially sustainable basis. According to EEG, network operators are obliged to accept electricity from these facilities and market it in the spot market on the electricity exchange. The law also lays down fixed rates of remuneration for electricity from renewable sources. The difference between the remuneration and the price achieved in the spot market is balanced out via the EEG allocation.

EEV

The Renewable Energies Regulation (Erneuerbare-Energien-Verordnung) regulates the marketing of electricity generated from renewable sources. This electricity must be sold at the level of the transmission network operator and must no longer be sold by energy utilities which supply end customers. In addition, the EEV contains provisions on calculating the EEG allocation.

EnLAG

The Power Grid Expansion Act (Energieleitungsausbaugesetz, EnLAG) regulates the accelerated expansion of power lines in the extra-high-voltage transmission network and the introduction of technologies such as “high-voltage direct current transmission”. Attached to the law as an appendix is a Consumption Plan which contains the planned construction projects for the expansion of the transmission networks.

EnWG

The Energy Industry Act (Energiewirtschaftsgesetz, EnWG) contains fundamental regulations on the law on power-line-based energies. EnWG has the goal, among others, of ensuring a “best possible secure, affordable, consumer-friendly, efficient and environmentally sustainable” energy supply to the general public. This includes safeguarding effective and transparent competition on the energy market. The law also contains regulations on the supervision of the network operations by the regulatory authorities.

Federal Network Agency (FNA)

The Federal Network Agency (Bundesnetzagentur, BNetzA) is a regulatory body that supervises, maintains and promotes competition in the network markets (electricity, gas, railway tracks). Every two years, the Federal Network Agency reviews and approves the Power Grid Development Plan and its basis as produced by transmission system operators and the scenario parameters for the development of electricity generation for the next ten to twenty years.

NEP

The Power Grid Development Plan (Netzentwicklungsplan, NEP) sets out the expansion projects in the German transmission network in the following ten years. The Power Grid Development Plans are developed by the four transmission system operators on the basis of assumptions about the development of electricity generation and consumption, the scenario parameters. The plan was created in 2012 for the first time and as of 2017 is to be developed further every second year.

Overhead power line

Overhead power lines – also known as overhead transmission lines – are electrical transmission lines where the conductor ropes – unlike underground cables – are insulated by the surrounding air. For the foreseeable future, overhead power lines will continue to be the most economical form of power transmission, particularly over long distances.

Transformer station

This is a junction in the electricity grid. Several high-voltage and extra-high-voltage transmission lines converge at a transformer station. In these facilities, individual electricity circuits can be selectively switched on and off. It is also possible to direct the electricity via the transformers – voltage converters – to be distributed further on grids with lower voltage.

Underground cables

The use of underground cables is widespread among lines for supplying towns and in regional electricity networks. On the other hand, in sections with 380 kilovolts, underground cables are unusual. Pilot sections with underground cables are provided for in EnLAG, for example, when a line is located less than 400 metres from a residential area. Cabled sections are essentially more cost-intensive than overhead power lines. The additional costs are passed on to the consumer through network use charges.

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PUBLISHER

Amprion GmbH
Phone +49 (0) 231 584 914 109
Fax +49 (0) 231 584 914 188
Email info@amprion.net

CONCEPTION AND DESIGN

3st kommunikation GmbH

PHOTOS

Rüdiger Nehmzow [page 2]

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NOTE

This is a translation of the German version. In cases of uncertainty or conflict, the German version shall prevail.

CONNECTED TO EUROPE

The Amprion grid is located in the heart of Europe and is connected to the grids in the Netherlands, Luxembourg, France, Austria, Switzerland, and in future also Belgium, through cross-border interconnectors. Amprion is working towards making the European electricity network even more secure and efficient through numerous cooperations and projects.

COOPERATION WITH EUROPEAN PARTNERS

Amprion works intensively in many areas with other European transmission system operators. Our focus here is on the issues of system security, market integration and network planning, as well as the development of transmission technologies.

SECURITY SERVICE CENTRE (SSC)

In the SSC in Rommerskirchen near Cologne, there is a joint team of experts from Amprion, TenneT Netherlands and Germany supporting the security management and the extra-high-voltage network in Germany and the Netherlands.

A map of Europe with a purple-to-blue gradient background. Three callout boxes are connected to specific regions on the map. The first callout, labeled 'JAO', points to a region in Central Europe. The second callout, labeled 'Amprion', points to a circular area in Western Europe. The third callout, labeled 'TSC', points to a region in Southern Europe. The map shows major geographical features and country borders.

JAO

Together with 22 European transmission system operators, Amprion has a holding in the Luxembourg company JAO (Joint Allocation Office). The company acts as a central auction platform and contact point for the provision of transmission capacities for electricity trading in the European Union.

ENTSO-E

As part of the “European Network of Transmission System Operators for Electricity” (ENTSO-E), Amprion is continuing to develop the European electricity network together with 40 transmission system operators. The key challenges are promotion of the EU internal market for electricity, network expansion and developing rules for network operation.

Amprion

TSC SECURITY COOPERATION (TSC)

Together with 12 European transmission system operators, Amprion is involved in the security cooperation TSCNET Services. TSC supports the transmission system operators in the coordination and planning of network operations, the forecasting of network bottlenecks and the calculation of available transmission capacity.

Amprion GmbH
Robert-Schuman-Straße 7
44263 Dortmund

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