EPH

Sustainability Report 2018

EPH

Sustainability Report 2018

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Foreword

1

We are taking an active role in transforming the energy system.

Dear shareholders, business partners, colleagues and friends,

EPH's mission is to provide energy infrastructure services and energy commodities, both vitally needed to our customers and businesses in Europe and countries where we operate. But not only this. We provide the energies in a very responsible way and efficiently, so they remain affordable. In everything we do we apply the stringiest criteria of responsibility along the following four dimensions: quality and security of supply, social aspects, regional aspects, and environmental protection.

With decarbonization efforts, new technologies, and the transformation of energy systems, the security of supply, social and regional aspects, and environmental protection are becoming ever more important. Our role is to participate actively and contribute to energy transformation while carefully balancing the above-mentioned dimensions of responsibility. The energy assets we operate are often vitally important not only in their energy supply role but also socially and regionally. Hence, in decarbonization, we strive to seek real solutions – not merely offloading (as sometimes conveniently done), but truly decommissioning the most carbon-intensive sources while investing and actively converting to low-carbon or to fully renewable sources.

Contrary to oversimplified labeling or even stigmatization of often critically needed, socially, and/or regionally essential operations, the real transformation is delivered not only via investments and implementing new technologies but also by careful management of sensitive processes important to regions, socially of for energy systems. Over the last 30 months, we have spent more than €850 million on zero or low carbon footprint generation capacities, balancing our approach carefully. In 2018, we commenced operation of Lynemouth power plant, one of Europe's largest coal-to-pure-biomass conversion projects. Similarly, we decommissioned coal-fired power station Eggborough while negotiating permit for a new, state-of-the-art power station that shall address both the energy system as well as social aspects. We are preparing new solutions for other sites too.

As a result of our undertakings, the carbon emission intensity of our generation has decreased significantly in past years, and we are committed to proceeding further. We have voluntarily put into strategic reserve or even fully decommissioned several gigawatts of coal-fired capacity. Coal resources now account for only around 10% of EPH's consolidated financial results, both in terms of EBITDA and free cash flow. Compared to 2013, the measures we implemented resulted in the reduction of 26 million tons of CO_2 emissions per annum. I am proud that EPH is one of the leading players in the real decarbonization of conventional power plants.

As of today, EPH is already operating 1.4 GW of renewable resources, 0.9 GW of storage capacities to support the grid in accommodating more renewables, and operates a significant fleet of zero-carbon and low-carbon power plants. We further invest in the development and growth of a sustainable and secure supply of electrical energy, heat, and natural gas to our customers.

Our efforts build upon the following three pillars:

1st Provide real decarbonization solutions for existing assets that we own or we may yet acquire to transform them in the most appropriate and socially responsible way. For instance, we are building one of the biggest battery storage facilities in Germany; we have significantly invested in modernization of our cogeneration fleet or already mentioned coal to biomass or gas conversions. Into this area falls i.a. the acquisition of a conventional fleet of Uniper France, assets relevant both from the energy systems' and regional perspective but also under the decision of the French Government to phase out coal generation.

2nd We invest in renewable power generation, especially into more complex, dispatchable technologies as the area of mainstream, intermittent renewables such as onshore wind and photovoltaics are already well addressed by many infrastructure and pension funds. For example, we invested in biomass power generation in Italy, Lynemouth conversion in the UK or the recent acquisition of the biomass power station in France as another part of the former Uniper France portfolio. We also intensively work on the development of renewable power generation in the former coal mining areas. And beyond that, we are determined to continue increasing the share of renewable and carbon-free generation in our portfolio.

3rd We also massively invest in infrastructure to further strengthen reliability and security of supply, increase efficiency and implement state-of-the-art technologies. Investments in better interconnections and strengthening of the European natural gas market demonstrate our support to natural gas, which is crucial for gradual decarbonization of power generation in Europe. A new compressor station we construct will increase the capacity of natural gas transmission through Slovakia and gas storage capacity in Bavaria and a completed feasibility study on the Eastring pipeline will contribute to maintaining the security of supply and support the decarbonization.

EPH is taking – and will be taking – an active role in transforming the energy system. Through above-mentioned pillars of our efforts, we contribute in a very responsible and balanced way. We remain committed to reliably delivering energies and energy-related services to our customers while being a leading player in true, socially acceptable decarbonization.

Sincerely,

JUDr. Daniel Křetínský
CHAIRMAN OF THE BOARD OF DIRECTORS

Underground gas storage facilities are strategically important in the gas market Case Study

Suitable geology is an essential precondition for establishing a gas storage facility

Slovak natural subsurface rock structures present suitable geological conditions for underground gas storage. These include capacity and permeability, which have an impact on the storage facility performance.

The crucial parameter is the integrity of the structure, ensuring that gas injected into the storage facility does not escape and remains stable until it is withdrawn. Optimal subsurface geological formations are essential for siting underground gas storage facilities. The first storage facilities in Slovakia were established in 1973 when the first natural gas was injected into the source of originally mined deposits. A major advantage in the construction of underground storage facilities is the geological and technological knowledge gained during the extraction of previous hydrocarbon deposits.

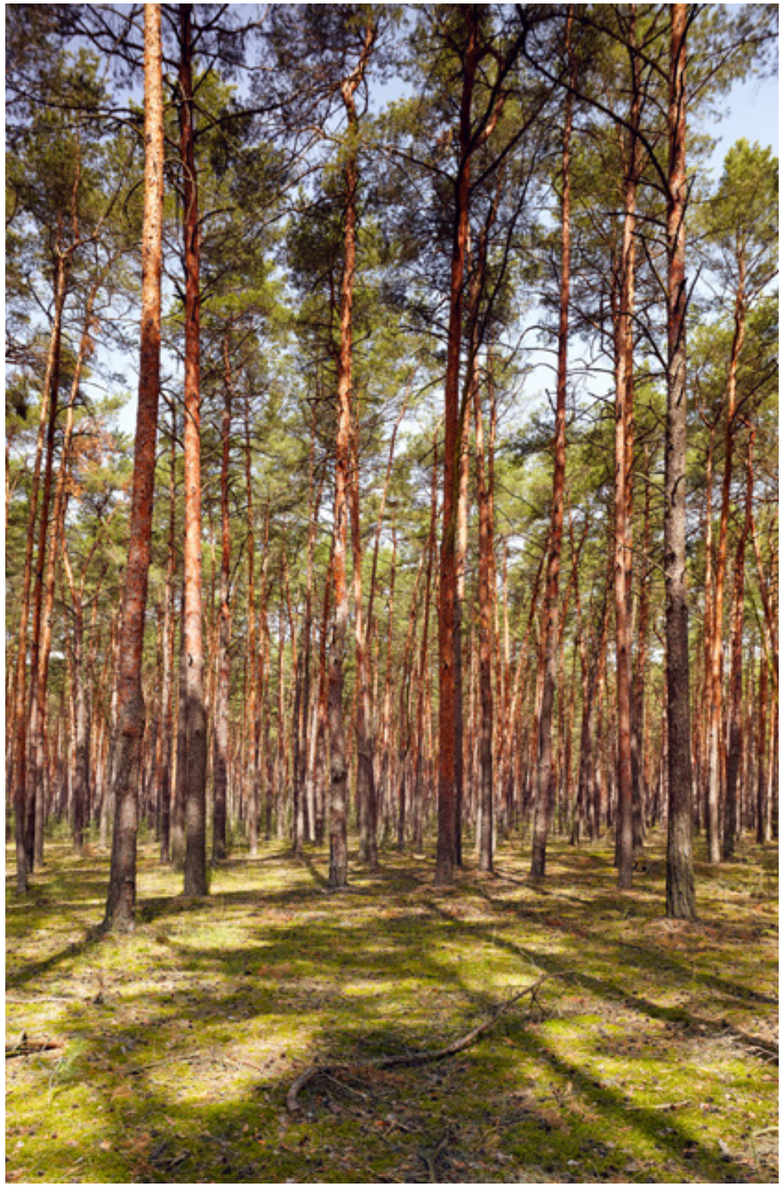
Underground gas storage facilities enable uneven demand for natural gas to be met

The storage facilities serve as a consolidating element in the gas system. They compensate for fluctuations in the transmission network and at the same time serve as an effective tool to support trading on the gas market. Re-filling storage facilities is a process conducted before every winter season. This confirms the need to have physical gas supplies at the consumption location, because it is difficult to predict the winter's severity.

During the low consumption season the storage facilities are used to store natural gas supplied from abroad. The gas injected into the storage passes through commercial measurement where its volume and composition are taken into account. The energy contained in the gas is then calculated from these measurements. The gas then flows into compressors, where its pressure is increased, subsequently always flowing from higher-pressure to lower-pressure locations. Compressed gas is then proceeds through the system of gas pipelines and collectors to individual wells and into the storage facility itself (so-called deposit), which in the case of NAFTA means storage of the natural gas at a depth of up to 1,700 meters.

Conversely, it is possible to withdraw the natural gas from the storage if there is a shortage in the network or if there is increased market demand. The natural gas flows from the wells into collection centres where a free liquid is removed from the inlet separators. Since the gas contains vapours of water and higher hydrocarbons even after the primary separation of the free liquid, drying treatment of the gas is required. This process takes place in the gas drying stations, where water and higher hydrocarbon molecules are trapped on the surface, thus drying out the gas delivered to the gas network.

The underground storage facilities are the major tool compensating for seasonal differences in the consumption of natural gas. However, their importance increases during emergency situations, when they play a key role in ensuring continuous deliveries to Slovakia, for which they are a strategic tool for improving energy security.



1 The landscape around the Gajary village, under which underground gas storage facilities are located.

The joint stock company NAFTA, with 45 years of unique experience in the sector, **is the largest operator of underground gas storage facilities in Slovakia.**

2 NAFTA's storage station in Gajary village.

Increasing storage facility capacity improves energy security

As the operator of Slovakia's largest underground storage facility, NAFTA has been developing natural gas storage for more than 45 years, gradually increasing storage capacity from an initial 200 million m³ in 1977 to today's 2.9 billion m³ (about 30 TWh). The current storage capacity represents more than half of Slovakia's annual natural gas consumption in Slovakia, which places the company among the largest national gas storage providers. The two factors contributing to successful development of natural gas storage are excellent geological conditions and the location of NAFTA storage facilities near the transit system supplying Slovakia's western and southern neighboring states. NAFTA's development of underground gas storage has improved the energy security of both Slovakia and the whole of Europe.

Commercial uses of natural gas storage

In addition to ensuring energy security and compensating for seasonal variations in natural gas consumption, underground gas storage facilities are also used for commercial purposes such as trading with energy companies. A major change in gas trading occurred after market liberalization in 2010. The entry of new gas suppliers and traders operating at so-called hubs (trading venues at cross-border pipeline locations) were among new elements of the gas market. The nearest hub, situated on the Slovak-Austrian border in Baumgarten, began spot trading on the stock market in December 2009.

The storage capacities market in Europe is currently quite dynamic and highly competitive. After market liberalization, gas storage lost its regional character and has become transnational. The most important factors are rapid and effective reaction to the client's needs. Speed is crucial and competition is increasing, thanks to transfer route interconnections which mean it is now much easier to transfer gas from one end of Europe to another.

Slovakia is still the most important transit country for gas deliveries from Russia to Europe and just behind the Netherlands is the second most important gas service region, with a long tradition. NAFTA is one of Europe's gas storage leaders and the largest gas trading companies in Europe or the world are among its clients. This is the result of the creative and client oriented approach in terms of product design and service solutions. In collaboration with a client, NAFTA has developed an option for storage capacity, giving buyers the right to reserve storage capacity at a fixed price, for possible use in the following year. The "inverse storage" product allows the sale of filled gas storage capacity to a client, who can trade with it immediately after signing the contract. The third product innovation is "value sharing", where customers pay a fixed part of the price, determined by the difference in winter and summer gas prices and a variable part depending on the profitability of the deals executed by the trader.

Slovakia is a major European player in underground natural gas storage, thanks to the suitability of its subsurface rock structures.

3 Storage facility Wolfersberg, Bavaria.

4 Storage facility Inzenham-West with its employee Dominik Langensiepen, Bavaria.

Years of experience and a highly-qualified team of professionals ideally position NAFTA as **a reliable partner for customers all over the world**.

NAFTA uses its extensive experience in foreign markets

NAFTA has begun an intensive search of development projects and international cooperation opportunities in foreign markets. This is aimed at effectively using its extensive experience and know-how, gathered during longstanding activities in the areas of underground gas storage and hydrocarbon exploration and production. Years of experience and a highly-qualified team of professionals ideally position NAFTA as a reliable partner for customers all over the world.

5 The landscape around Breitbrunn, under which underground gas storage facilities are located.

A team of experts has been working over a long period to identify interesting projects abroad. When evaluating opportunities, they take into account NAFTA's strategy and the various selection criteria of individual projects, focusing on geological, technical, legislative and economic aspects.

Thanks to its systematic activity and exploration of foreign opportunities, in 2018 NAFTA achieved a significant milestone in international underground gas storage cooperation. At the beginning of 2018, NAFTA indicated its interest in buying three underground storage facilities in Bavaria, Germany. Through its subsidiary, NAFTA signed a contract for sale of the underground storage facilities Inzenham – West, Wolfersberg and Breitbrunn / Eggstätt with the DEA Deutsche Erdoel AG company. The successful completion of the transaction was preceded by fulfillment of necessary conditions and receipt of regulatory approvals. Within this transaction NAFTA also acquired 19.7% ownership interest in the Breitbrunn / Eggstätt underground storage facility from the Storengy Deutschland GmbH company and became the 100% operator of Inzenham – West, Wolfersberg and Breitbrunn / Eggstätt underground storage facilities with overall storage capacity of 1.8 billion m³.

Currently, NAFTA Speicher is the technical operator for the Breitbrunn / Eggstätt and Wolfersberg storage facilities and also the technical and system service operator of the Inzenham – West storage facility, which has been active since 1982. It is a subsurface storage near Rosenheim and is used to compensate for seasonal variations in natural gas consumption. Uniper Gas Storage and Bayerngas operate the Breitbrunn / Eggstätt and Wolfersberg storage facilities. The team of experts in Germany has years of experience in operating underground storage, with Breitbrunn / Eggstätt active since 1996 and Wolfersberg open since 1973.

The acquisition of the underground gas storage in Bavaria represents a significant strategic investment and a successful move towards expansion of NAFTA's underground gas storage activities into the German market. NAFTA has plans to further develop the successful and well-established standards both in operations and professional growth of employees in Germany. The integration of the project of acquired Inzenham – West, Wolfersberg and Breitbrunn / Eggstätt underground gas storage facilities was completed in the first quarter of 2019. NAFTA believes in successfully developing cooperation and exchange of knowledge, based on years of experience, between its qualified and specialist employees and the team of experts in Germany.

The main objective of all foreign activities of the company is to make use of the years of professional experience in underground gas storage, exploration and production of hydrocarbons and to further expand its activities in these key businesses. In addition, NAFTA has excellent credentials for continued international growth.

6 Surroundings of the Inzenham-West storage facility in Bavaria.

About this report

This is the fourth Sustainability Report of Energetický a průmyslový holding, a. s.
and the next one will be published in 2020.

This is the fourth Sustainability Report of Energetický a průmyslový holding, a.s. (“EPH” or the “Company”). We focused on the most relevant updates compared to our 2017 Sustainability Report with the aim to provide a balanced overview of our performance and activities with regards to the economic, operational, social and environmental aspects of our operations. Moreover, we are still developing this Report to include more relevant information to our stakeholders. While EPH is not a publicly listed entity and we face no formal requirements on sustainability reporting, due to the size we have reached over the past few years and our commitment to responsibility, we feel that providing relevant information to our stakeholders is a natural next step in the development of our relatively young Company.

Reporting intro

As you read through the Report, please bear in mind that EPH effectively acts as a holding company (described further in the section 4 Governance and ethics) that has grown on the back of acquisitions and it means that our subsidiaries inherited reporting standards from their previous owners and a substantial amount of work is required to unify these. As such, we are aware that this Report includes multiple areas where data quality and quantity can be improved. Although we believe we have made progress in the quality of collected data, we will still do our best to increase the quality of our next reports while trying to remain consistent to allow data comparability.

In terms of reporting period, the information presented in this Report relate to our operations during the 2018 calendar year with 2017 comparative data reported. In the Sustainability Report 2016, for the sake of comparability, we reported full year data for subsidiaries that we acquired during the calendar year. In this regard there were deviations from the principles used in our financial reporting. From 2017’s Report onwards we decided to show the data for newly acquired subsidiaries from the date of acquisition and reviewed and adjusted, were appropriate, 2016 data in order to be prepared on the same basis as in 2017. For more information about scope, please see the section Organizational Boundaries in this chapter.

Please note, that some of EPH subsidiaries also prepare their standalone sustainability reports that are publicly available and can be referred to as well.

We plan to issue our next Sustainability Report for 2019 in 2020.

The principles of our Report

Few years before, we decided to pursue an ambitious route and report following the GRI Standards prepared by Global Reporting Initiative (“GRI Standards”). In the previous Reports (2015 and 2016) we used formerly issued GRI G4 Guidelines. The updated global standards for sustainability reporting were issued in October 2016 and were firstly used for 2017’s Report. These new GRI Standards include all the main concepts and disclosures from the G4 Guidelines, but are simpler and more flexible in terms of requirements and structure.

We are using also GRI’s sector guidelines for Electric Utilities and for Logistics and Transportation Sector Supplement (pilot version 1.0) which are based on the standard disclosures and performance indicators of GRI including the requirements of GRI “core” option.

This Report references the GRI Standards and related disclosure used could be found in the GRI Content Index section (page162). More information about GRI Standards could be found on the following website: http://www.globalreporting.org

The Report has been developed with GRI’s materiality, stakeholder inclusiveness, sustainability context, and completeness principles in mind. When prioritizing stakeholders, AA1000 Accountability Stakeholder Engagement Standards were taken into consideration. Further detail on our approach to materiality and stakeholder engagement undertaken during normal business activity and also as part of the preparation for this Report is included in the sections 5 Stakeholders and 6 Priorities respectively.

Report boundaries

The Report content covers our operations in the Czech Republic, Slovakia, and internationally. For more detailed information on our countries of operation and legal entities please refer to the next sections of this Report. The Report boundaries we have used are based on the operational control approach and are the same for all GRI Indicators with the exception of the GRI 200 Economic data and GRI 400 Social data, which has been reported using financial control in order to align the data with the financial information reported in the EPH Annual Report. As a result, EPH has consolidated data from all its entities locally and internationally where it holds a controlling shareholding and that were deemed material for the purposes of this Report. This list of entities covered by the Report is shown in the following section Organisational boundaries.

The aspects that EPH has reported on in this Report were determined through detailed assessment of the priorities for EPH, subsidiary companies and our main stakeholder groups. The assessment included analysis of issues and feedback from our stakeholder groups during the reporting period as well as further analysis undertaken as part of the preparation of this Report. Further detail on our stakeholder analysis and engagement is provided in the section 5 Stakeholders, and further detail on our approach to Materiality is given in the section 6 Priorities, both included in this Report. As a result of our materiality and stakeholder analysis, this Report is focused on those areas that were deemed the most material to our business and our stakeholder groups. These areas, or aspects, are explained in different sections of this Report with further detailed data shown in the section 11.1 GRI Index included on page 162 of this Report.

It is important to note that our two largest acquisitions in the power generation segment which took place in 2016, notably the acquisition of a 50% stake in Vattenfall’s German lignite & mining assets and the acquisition of a 33% stake in Slovenské elektrárne, are not included in consolidated 2017/2018 figures as we do not exercise control in these entities. However, EPH recognises their importance to our stakeholders and readers and we decided to include a section on their operations and their sustainability initiatives in this Report (please see the sections 3.1 Slovenské elektrárne and 3.2 Lausitz Energie Verwaltungs GmbH).

Organisational boundaries

The list presented below includes all of the entities within the EPH portfolio deemed material for the purpose of this report.

EPH Core	Subholding	Ownership Share	Financial Control	Operational Control
Alternative Energy, s.r.o.	EPIF	72.0%	Yes	Yes
ARISUN, s.r.o.	EPIF	100.0%	Yes	Yes
Budapesti Erőmű Zrt (BERT)	EPIF	95.6%	Yes	Yes
Elektrárny Opatovice, a.s.	EPIF	100.0%	Yes	Yes
eustream, a.s.	EPIF	49.0%	Yes	Yes
NAFTA a.s.	EPIF	69.0%	Yes	Yes
Plzeňská teplárenská a.s.	EPIF	35.0%	Yes	Yes
POZAGAS a. s.*	EPIF	62.0%	Yes	Yes
POWERSUN a.s.	EPIF	100.0%	Yes	Yes
Pražská teplárenská a.s.	EPIF	100.0%	Yes	Yes
SPP - distribúcia, a.s.	EPIF	49.0%	Yes	Yes
SPP Storage, s.r.o.	EPIF	49.0%	Yes	Yes
Stredoslovenská energetika a.s.	EPIF	49.0%	Yes	Yes
Triskata, s.r.o.	EPIF	100.0%	Yes	Yes
United Energy, a.s.	EPIF	100.0%	Yes	Yes
VTE Pchery, s.r.o.	EPIF	64.0%	Yes	Yes
Biomasse Crotone SpA	EPPE	100.0%	Yes	Yes
Biomasse Italia SpA	EPPE	100.0%	Yes	Yes
Eggborough Power Ltd	EPPE	100.0%	Yes	Yes
EP Langage Limited	EPPE	100.0%	Yes	Yes
EP Produzione S.p.A.	EPPE	100.0%	Yes	Yes
EP SHB Limited	EPPE	100.0%	Yes	Yes
Helmstedter Revier GmbH	EPPE	100.0%	Yes	Yes
Kraftwerk Mehrum GmbH	EPPE	100.0%	Yes	Yes
Lynemouth Power Limited	EPPE	100.0%	Yes	Yes
Mitteldeutsche Braunkohlengesellschaft mbH	EPPE	100.0%	Yes	Yes

* Note: Share in POZAGAS was increased at the end of 2017 and control obtained. This will be reflected in the consolidated non-financial information from 2018.

Logistics Core	Subholding	Ownership Share	Financial Control	Operational Control	Joint Control
LokoTrain s.r.o.	EPLI	65.0%	Yes	Yes	
EP Cargo Deutschland GmbH	EPLI	100%	Yes	Yes	
EP Cargo Polska S.A.	EPLI	100%	Yes	Yes	
SPEDICA GROUP COMPANIES, s.r.o.	EPLI	67.3%	Yes	Yes	
EOP & HOKA s.r.o.	EPH	100%	Yes	Yes	
EP Cargo a.s.	EPIF	100%	Yes	Yes	

Please note that EPH Core and Logistics Core include material companies consolidated according to IFRS and for which consolidated sustainability indicators are reported.

Share participations	Subholding	Ownership Share	Financial Control	Operational Control	Joint Control
Ergosud S.p.A.	EPPE	50.0%	No	No	Yes
Lausitz Energie Kraftwerke AG	EPPE	50.0%	No	No	Yes
Lausitz Energie Bergbau AG	EPPE	50.0%	No	No	Yes
Slovenské elektrárne, a.s.*	EPPE	33.0%	No	No	Yes

* Note: The company Slovenské elektrárne is legally out of the EPPE scope, but is shown under EPPE subholding based on management perspective.

Sustainability information on share participations is reported in a separate chapter.

Notes to compliance between EPH's sustainability and financial reporting

The information presented in this Report includes some differences in the Report boundary from the data reported in the EPH 2018 Consolidated Annual Report. The main changes identified are:

- The 50% stake in companies Lausitz Energie Kraftwerke AG, Lausitz Energie Bergbau AG, Ergosud S.p.A. and its operating power plant Scandale and 33% stake in Slovenské elektrárne, a.s. are equity consolidated in financial reporting. Since EPH does exercise joint control over these companies, sustainability information is not consolidated and is reported in the separate section 3 Other share participations.

- The 41.9% stake in the Schkopau power plant, owned via the company Saale Energie GmbH, as well as the 38.9% stake in Przedsiębiorstwo Górnicze Silesia, which are equity consolidated in financial reporting and over which EPH does not exercise the control, are excluded from this Report.

- The majority of indicators is reported at the level of the operating company in the company listed above. In order to properly capture the extent of operations, the HR data, namely the indicators on Headcount, Training hours, Fatalities, Injuries and Hours worked are reported in line with the respective subsidiaries of the above mentioned entities. These mostly operate as service companies.

Operational boundaries

We set the boundary as the core business operations of the respective companies for the environmental indicators, meaning that we excluded some data for administrative and other non-core facilities (e.g. electricity for administrative buildings) as we deemed these immaterial. In some instances, however, even this data is included as the separation from the underlying data was not possible. In addition, the boundaries for the environmental indicators are restricted to the physical location of the core operations meaning that we exclude the data from facilities not located in the physical location of main operation whose environmental impact is not deemed material compared to the impact of main operation. We recognise all of this as an area for further improvement for our future reporting.

Restatements in 2018 Report

Certain performance indicators were restated versus data reported in the last Report. Any such material restatement is duly commented on in the Performance indicators section.

Assurance

As well as publishing our Sustainability Report, we also obtained an external assurance of certain material data included in this Report in order to enhance its credibility. The energy consumption, water withdrawal and discharge, and injury data for our facilities located in the Czech Republic were assured in accordance with the ISAE 3000 (Revised) Assurance Engagements Other Than Audits or Reviews of Historical Financial Information by the independent assurance firm EY. Their assurance statement is in the section 10 Assurance on page 156 of this Report.

EPH and its **business**

EPH Group achieved EUR 7 billion **in sales which is by EUR 1 billion more than in the previous year**.

History and development of EPH Case Study

Formation of EPH

The core of the current EPH management team began to take shape in 2001 headed by Daniel Křetínský. Shortly after the formation of the team, it began to focus on corporate investments in the energy business and changed its approach from being a financial investor to being a strategic investor. The formal foundation of EPH took place in 2009, when its original shareholder (J&T) contributed certain assets and cash to the Company in order for EPH to become a platform for strategic investments in the energy and ancillary industries, headed by Daniel Křetínský who at that time had a 20% stake in EPH.

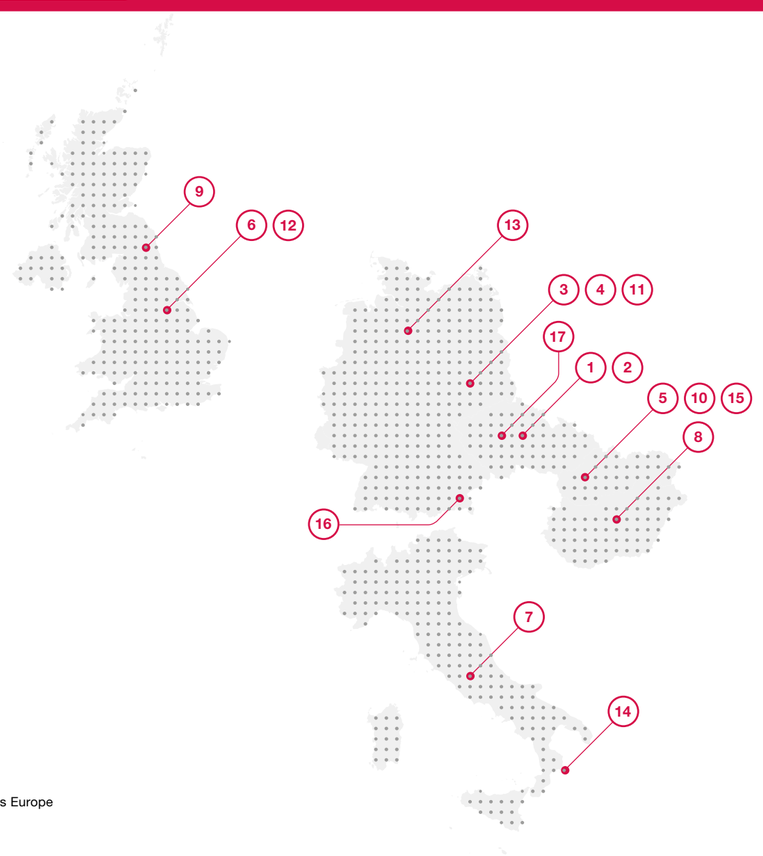


Fig. 7 EPH growth.

(#) Growth through acquisitions

Accelerated growth via selective acquisitions

Smaller add-on infra + growth in generation segment across Europe

2001
Creation of investment team within J&T led by Daniel Křetínský

1 Pražská teplárenská — Minority stake

2009
EPH established as partnership of J&T, PPF and Daniel Křetínský in the energy sector. Selected assets formerly acquired by J&T contributed to EPH

2 EOP Elektrárny Opatovice — 100%

3 MIBRAG — 50%

2010
1 Pražská teplárenská — Investment increased to 73%

2011
EP Energy created within EPH and established as a fully vertically integrated undertaking

2012
4 Saale Energie — 400 MW stake in Schkopau power plant

3 MIBRAG — 100%

2013
5 eustream — Slovak Gas TSO

5 Distribúcia SPP — 49% + management control, as part of SPP-I

5 SPP Storage

5 SSE Stredoslovenská energetika — 49% + management control

5 NAFTA — Additional 40% purchased by EPH, overall shareholding increased to 67.9%

2015
6 Eggborough Power Ltd — 100%

7 EP Produzione — 100%

8 Budapesti Erőmű ZRt. — 95.6%

2016
Consolidation of the Company expansion to Western European markets

Internal reorganisation of EPH resulting in the formation of two pillars: EP Infrastructure & EP Power Europe

9 Lynemouth Power — 100%

10 Slovenské elektrárne — 33%

11 LEAG — 50%

2017
12 EP SHB — 100%

12 EP Langage — 100%

13 EP Mehrum — 100%

14 Biomasseltalia — L'Energia di oggi, l'azzurro di domani — 100%

14 BiomasseCrotone — 100%

15 Pozagas — 62%

1 Pražská teplárenská — 98%

2018
31% stake in EPIF was sold to consortium of global institutional investors led by MIRA

1 Pražská teplárenská — 100%

16 NAFTA Speicher — 67.9%[1]

17 Plzeňská teplárenská — Více než energie — 35%[2]

1 On 2 March 2018, NAFTA a.s. entered with Deutsche Erdoel AG (DEA) into a share purchase agreement with the owner of German gas storage assets.

2 On 31 October 2018, the Group has completed merger of Plzeňská energetika, a.s. and Plzeňská teplárenská, a.s., the sole owner of which was the City of Pilsen, resulting in PLTEP as a successor company in which the EPIF obtained a 35% interest and management control through shareholders' agreement.

Geographic presence of EPH

Slovakia
Total Revenues
€ 1.9 bn

EPH Companies:
eustream
SPP - distribúcia
Stredoslovenská Energetika
Nafta

Italy
Total Revenues
€ 1.3 bn

EPH Companies:
EP Produzione

United Kingdom
Total Revenues
€ 1.1 bn

EPH Companies:
Lynemouth Power
Eggborough Power
EP SHB
EP Langage

Czech Republic
Total Revenues
€ 0.9 bn

EPH Companies:
Pražská teplárenská
Elektrárny Opatovice
United Energy
Plzeňská energetika
SPP Storage

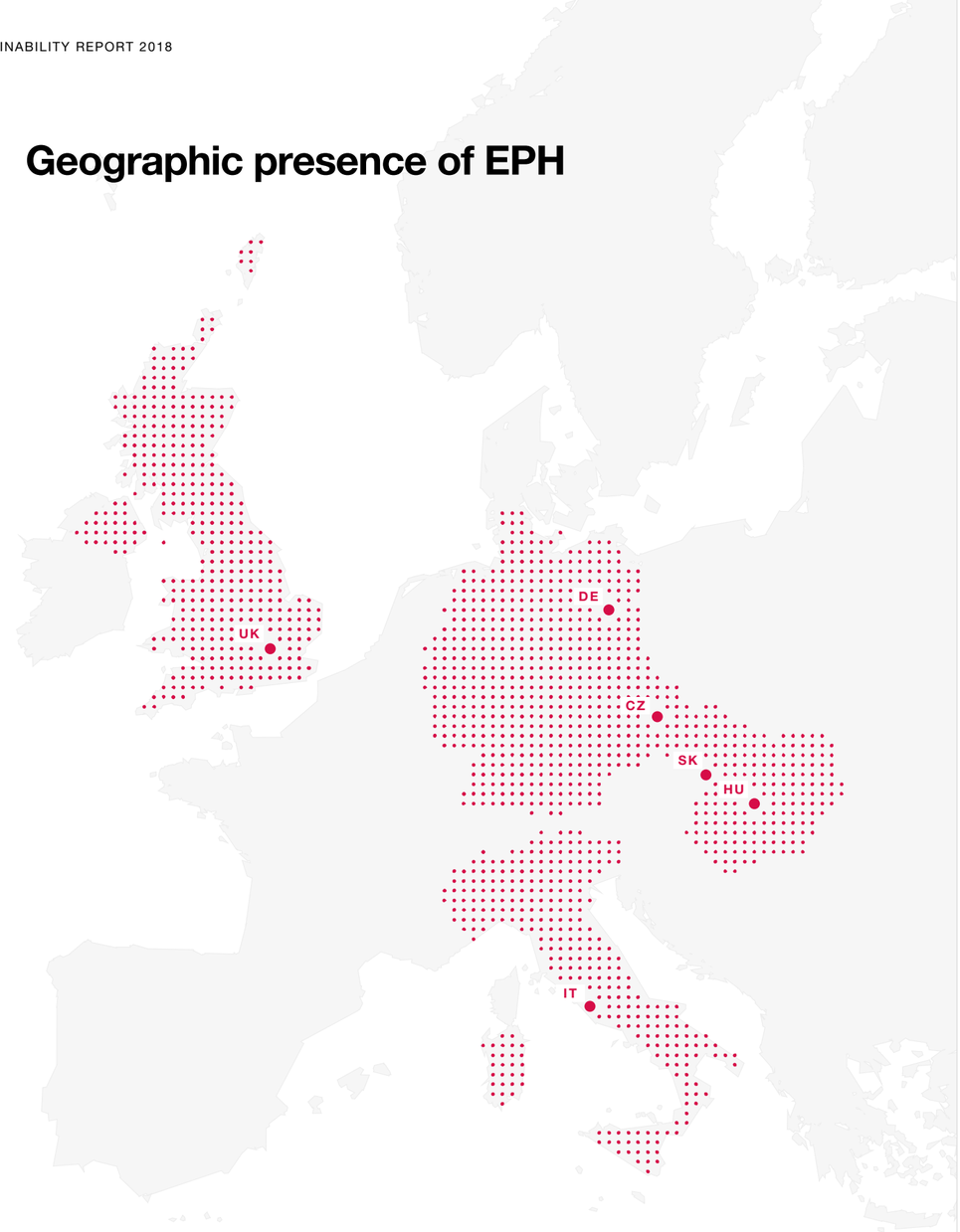
Germany
Total Revenues
€ 0.9 bn

EPH Companies:
MIBRAG
Saale Energie
Kraftwerk Mehrum

Hungary
Total Revenues
€ 0.2 bn

EPH Companies:
BERT

Other revenues
Total Revenues
€ 0.7 bn



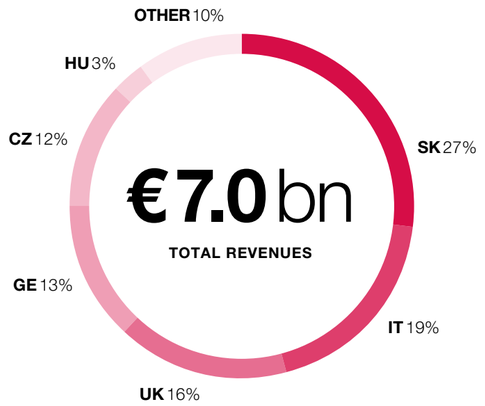


Fig. 8 Key operating entities of EPH.

Note: Fully consolidated core companies are listed here as at 2018.
SE and LEAG are not included as they are equity consolidated only.

EPH is a leading Central Europe based energy company operating mainly in the Czech Republic, Slovakia, Germany, Italy, United Kingdom, Poland and Hungary with its headquarters in Prague, Czech Republic.

EPH is a vertically integrated energy company covering the complete value chain in the energy sector, including more than 50 companies operating in coal extraction, electricity and heat production from conventional and renewable sources, electricity and heat distribution, electricity and gas trade and their supply to final customers, logistics, last but not least, EPH is an important regional player in various segments of the gas industry, including gas transmission, gas distribution and gas storage.

Following an internal reorganisation initiated at the end of 2015, EPH is centered around two main sub-holdings, EP Infrastructure (“EPIF”) and EP Power Europe (“EPPE”).

Our achievements

EPH has a number of outstanding achievements including being the market leader in the following areas:

1

Gas distributor in Slovakia

1

Largest gas transmission route in Europe

1

Czech district heating infrastructure

1

Gas storage player

in region of Slovakia, the Czech Republic and Austria

EPH Company Structure

Key Infrastructure and Generation Companies

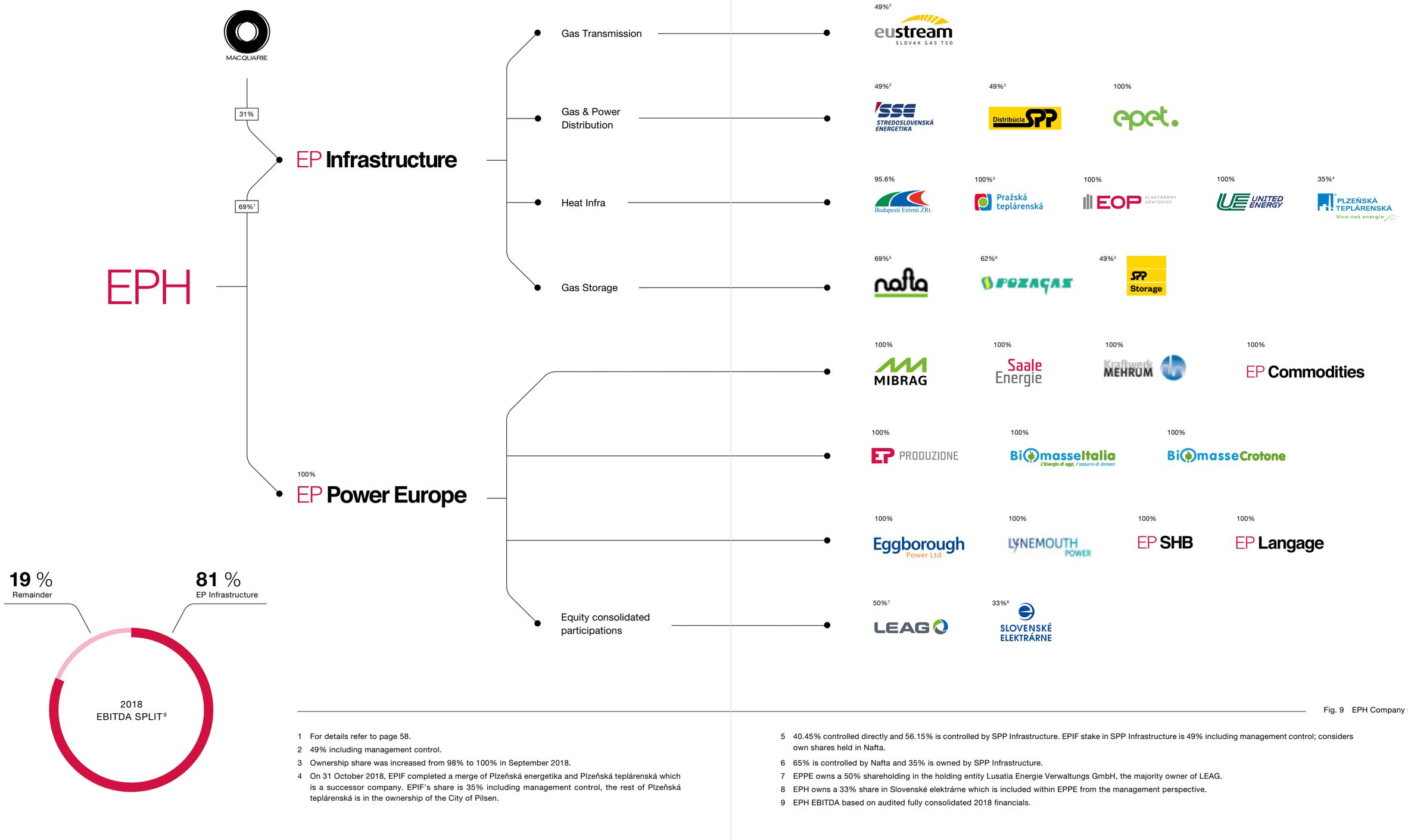


Fig. 9 EPH Company structure.

1 For details refer to page 58.

2 49% including management control.

3 Ownership share was increased from 98% to 100% in September 2018.

4 On 31 October 2018, EPIF completed a merge of Plzeňská energetika and Plzeňská teplárenská which is a successor company. EPIF's share is 35% including management control, the rest of Plzeňská teplárenská is in the ownership of the City of Pilsen.

5 40.45% controlled directly and 56.15% is controlled by SPP Infrastructure. EPIF stake in SPP Infrastructure is 49% including management control; considers own shares held in Nafta.

6 65% is controlled by Nafta and 35% is owned by SPP Infrastructure.

7 EPPE owns a 50% shareholding in the holding entity Lusatia Energie Verwaltungs GmbH, the majority owner of LEAG.

8 EPH owns a 33% share in Slovenské elektrárne which is included within EPPE from the management perspective.

9 EPH EBITDA based on audited fully consolidated 2018 financials.

EP Infrastructure (EPIF)

EPIF includes predominantly regulated and/or contracted businesses with leading market positions.

Segment	EBITDA [1]	Group companies	Business profile	Asset highlight
Gas Transmission	€ 663 million	eustream SLOVAK GAS TSO	Regulated / Contracted	1 № 1 Largest gas transmission route in Europe[2]
Gas & Power Distribution	€ 461 million	Distribúcia SPP; epet.; SSE STREDOSLOVENSKÁ ENERGETIKA	Predominantly regulated	1 № 1 Gas distributor in Slovakia[3] 2 № 2 Electricity distributor in Slovakia[4]
Heat Infrastructure	€ 148 million	PLZEŇSKÁ TEPLÁRENSKÁ Více než energie; UNITED ENERGY; Pražská teplárenská; Budapesti Erőmű ZRt.; EOP ELEKTRÁRNY OPATOVICE	Predominantly regulated	1 № 1 Czech district heating infrastructure[5]
Gas Storage	€ 140 million	SPP Storage; nafta; POZAGAS	Predominantly contracted	1 № 1 Gas storage capacity in the region of Slovakia, Czech Republic & Austria[6]

Fig. 10 EP Infrastructure (EPIF).

Source: Company information, internal research and analysis, Gas Storage Europe.

1 EBITDA is based on 2018 consolidated financials of EPIF; EBITDA calculated as operating profit plus depreciation and amortisation less negative goodwill (if relevant) on a 100% basis. Excludes segment “Holding and other” as well as inter-segment eliminations.
2 In terms of East – West transmission capacity.
3 Based on volume distributed.
4 Based on volume distributed.
5 Based on PJ distributed to final consumers.
6 Based on storage capacity.

EP Power Europe (EPPE)

EP Power Europe consists of various power generation assets across several European markets.

Country	Net installed capacity[1] / fuel	Companies	Business profille	Asset highlight
Germany	17–19 million tonnes annual lignite production 0.9 GW in lignite[2] 0.7 GW in hard coal	MIBRAG, HELMSTEDTER REVIER, Saale Energie, Kraftwerk MEHRUM	Contracted Security reserve	Two lignite mines and two CHP plants A lignite mine and the Buschhaus power plant, both not operating from the 2016 year end A share in the Schkopau power plant A highly efficient hard coal power plant
United Kingdom	0.4 GW biomass conversion project 2.0 GW in hard coal (100% decommissioned) 2.3 GW in gas	LYNEMOUTH POWER, EP Langage, Eggborough Power Ltd, EP SHB	Contract for difference Security reserve	Almost finished biomass conversion project with the UK government backed contract for difference until 2027 A hard coal power plant stopped production in March 2018, was decommissioned and the site was sold in February 2019 Highly efficient CCGTs with leading positions within the UK merit order
Italy	3.3 GW[3] in gas 0.6 GW in hard coal 0.3 GW in oil 0.1 GW in biomass	EP PRODUZIONE, BiomasseItalia, BiomasseCrotone	Merchant Must-run Ancillary services	Fleet of 5 modern gas-fired power plants in mainland Italy and Sicily and 1 coal-fired power plant in Sardinia Modern biomass plants, biomass made from wood chips and agro-food residuals An oil unit is installed, but production was stopped in 2013
Equity consolidated participations				
Slovakia	1.8 GW in nuclear 1.6 GW in hydro 0.2 GW in hard coal 0.2 GW in lignite	SLOVENSKÉ ELEKTRÁRNE	Merchant Ancillary services	The largest power generation company in Slovakia with 3.4 GW of carbon free capacity
Germany	7.6 GW in lignite 0.2 GW in natural gas 60 million tonnes annual lignite mining	LEAG	Merchant Ancillary services Heat co-generation	A former Vattenfall fleet of 4 critical and dependable baseload power plants and associated lignite mines The first of two 500 MW blocks of Jänschwalde power was placed into the security stand-by mechanism on 1 October 2018, the second one will follow in October 2019

1 The assets are represented by net installed capacity from 2017 (including) in comparison with gross installed capacity reported previous years.
2 Including the power plant Buschhaus, that has been in the security stand-by mechanism since 1 October 2016.
3 4.1 GW in gas was reported in 2017, this was a mistake in this table. Correct value is 3.3 GW.

Fig. 11 EP Power Europe (EPPE).

Source: EPH data for 2018.

EP **Infrastructure** Highlights

1 EPIF operates critical energy infrastructure

Active in gas transmission, gas and power distribution, heating infrastructure and gas storage. Our assets are regulated and/or long-term contracted.

2 Reliable partner

EPIF ensures safe, reliable and profitable operation of the energy infrastructure for prices favourable for our customers. EPIF is enhancing energy security and improving the conditions for a free market with natural gas in the EU.

3 Large diversified asset base

Diversified across multiple types of infrastructure, which contributes to EPIF's stability. No exposure to a single asset type.

4 Partnership with a public entity further contributes to a high degree of stability

Aligned goals and targets with local public partners, while keeping management control. EPH, EPIF and MIRA are private enterprises with shareholder interests as main priority.

5 Track record of growth

EPIF has historically achieved a solid track record of growth through value-accretive acquisitions & organic growth projects. Further development and optimization opportunities as well as selective bolt-on M&A opportunities provide potential revenues for continued sustainable growth.

6 Value-driven management team with proven track record

Experienced and well-structured stable management team. Proven track record in spotting and extracting value, implementation and integration.

7 Strong financing standing supported by three investment grade ratings

Sustainable sizeable EBITDA (EUR 1.4 billion in 2018) with strong cash conversion (67% in 2018). Regulatory framework motivates us to optimise (not maximise) investments. In 2018, EPIF was awarded investment ratings by renowned rating agencies Moody's, Fitch and S&P which were confirmed in the first half of 2019 again. Moreover, EPIF was also rated by a renowned ESG rating agency.

EP **Power Europe** Highlights

1 EPPE owns and operates a portfolio of safe & controllable power generation assets & related operations

EPPE[1] owns operations across well developed markets including Italy, the UK, Germany and Slovakia. Through a portfolio of controllable power plants, EPPE provides security of supply given that renewables with their limited load factor are and will only be able to partially cover power demand.

2 Individual strategy for each market

EPPE has been able to acquire critical generation assets below their replacement values and has adopted an individual strategy for each market. EPPE will seek attractive opportunities to invest in carefully selected assets primarily within its markets of operations.

3 Balanced fuel mix

EPPE's power generation portfolio provides a balanced mix of thermal, nuclear, hydro and biomass power plants (e.g. 80+% of carbon-free capacity in Slovakia, modern low-carbon gas fired portfolio in Italy, biomass conversion project in the UK). Coal and integrated mining operations only in markets that are unable to physically secure a stable power supply from alternative sources (e.g. Sardinia, Germany, the UK).

4 Active participant in power generation market transition

Current economic circumstances with no new construction of necessary reliable sources with a managed diagram is not sustainable and could lead to capacity shortages in the future. As a result, electricity markets across the UK, Italy and Germany will undergo necessary fundamental changes (e.g. market consolidation, closure of loss-making excess capacities, introduction of capacity market schemes) to re-establish stable and secure electricity supplies and EPPE will play an active role in this transition.

5 The future of coal

EPPE welcomes the Paris climate change agreement and fully supports its goal. It is obvious that coal became transitional fuel which must be gradually replaced, but on the other hand, stability of the power market must be ensured as well. EPPE is thus focused on acquisitions primarily into low and zero carbon projects.

6 Responsible & sustainable operations

EPPE is committed to operate its portfolio responsibly with the aim of gradually reducing its environmental footprint, meeting the interests of all stakeholders and standing ready to meet its liabilities, particularly associated with the future recultivation of the mining sites.

1 Including share participations.

EP Logistics International

In this Report, we would like to introduce a logistics division of our group that is gradually being formed. The division comprises companies from both EPH and EPIF and its simplified structure is presented on the next page.

The Logistics segment is focused on providing combined transportation services, mainly for the needs of EPH, as well as rolling stock and railway personnel pooling.

That being said, it is clear that our logistics companies are tightly interconnected with our trading activities, represented by EP Coal Trading under EPH as well as EP Sourcing which operates as a part of EPIF. Such symbiosis is natural considering the fact that the fuel, including its transportation costs, accounts for about 75% of a coal power plant's variable costs, thus being one of the significant areas of potential cost optimization.

The main activities of the logistics division include:

- Delivery of hard coal to our Fuime Santo and Mehrum power plants;
- Coal supply and by-products disposal for our Czech and Slovak power plants;
- Delivery of kerosene to Václav Havel Prague airport;
- Rolling stock and railway personnel pooling.

Looking back to 2018, nothing less can be said of it other than it was a milestone year for our logistics division. Most importantly, a new strategy was formulated and adopted, underlining the importance and potential we see in logistics. As a centerpiece of our strategy, focus will be put on rail transport. We have defined Germany as our main development market, aiming to create a strong regional CEE player operating on the East-West and Baltic-Adriatic corridors. Accordingly, we are aiming to increase the share of transportation provided with our own traction, personnel, and hardware as opposed to mere forwarding. First steps have already been taken in that direction, with EP Cargo having obtained a railway carrier license in Poland and EP Cargo Invest, our proprietary rolling stock leasing entity, having started to roll out its rolling stock investment plan totaling over EUR 50 million. The first pieces of rolling stock have already been delivered and commissioned for commercial operations. Towards the end of 2018, we reached an agreement with our minority partners in Spedica Group, reshuffling our shareholding as such that we have acquired entire shareholding in RM Lines while abandoning our participation in Spedica Agro.

Moving into 2019, a JV entity with Deutsche Bahn and VTG, EP Merseburg, has been established with the aim of providing complete logistics solutions for our operations in Schkopau. We have also launched EP Intermodal which will take over regular intermodal train service on the Baltic-Adriatic corridor from EP Cargo, effectively spinning off our intermodal activities into a separate entity. Also, in line with our newly adopted strategy, in May 2019 we have signed and are currently in the process of finalizing the acquisition of LOCON group, a German railway carrier focusing on container transport and railway construction logistics. We believe this transaction will mark our entry onto the German transportation market as a strong and independent railway carrier.

Based on GRI's Logistics and Transportation Sector Supplement (pilot version 1.0) the following key indicators are reported. Total energy consumption of our logistics core companies was 0.1 PJ in 2018 (0.09 PJ in 2017), this value being already included in the total EPH consumption as reported in the Performace Indicators section. Total ton-kilometres performed were: 1,057 in 2018 and 973 in 2017. In each of those years, a distance of over 4 million tonne-kilometres was driven.

> Fuel, including its transportation costs, accounts for about 75% of a coal power plant's variable costs, **thus being one of the significant areas of potential cost optimization**.

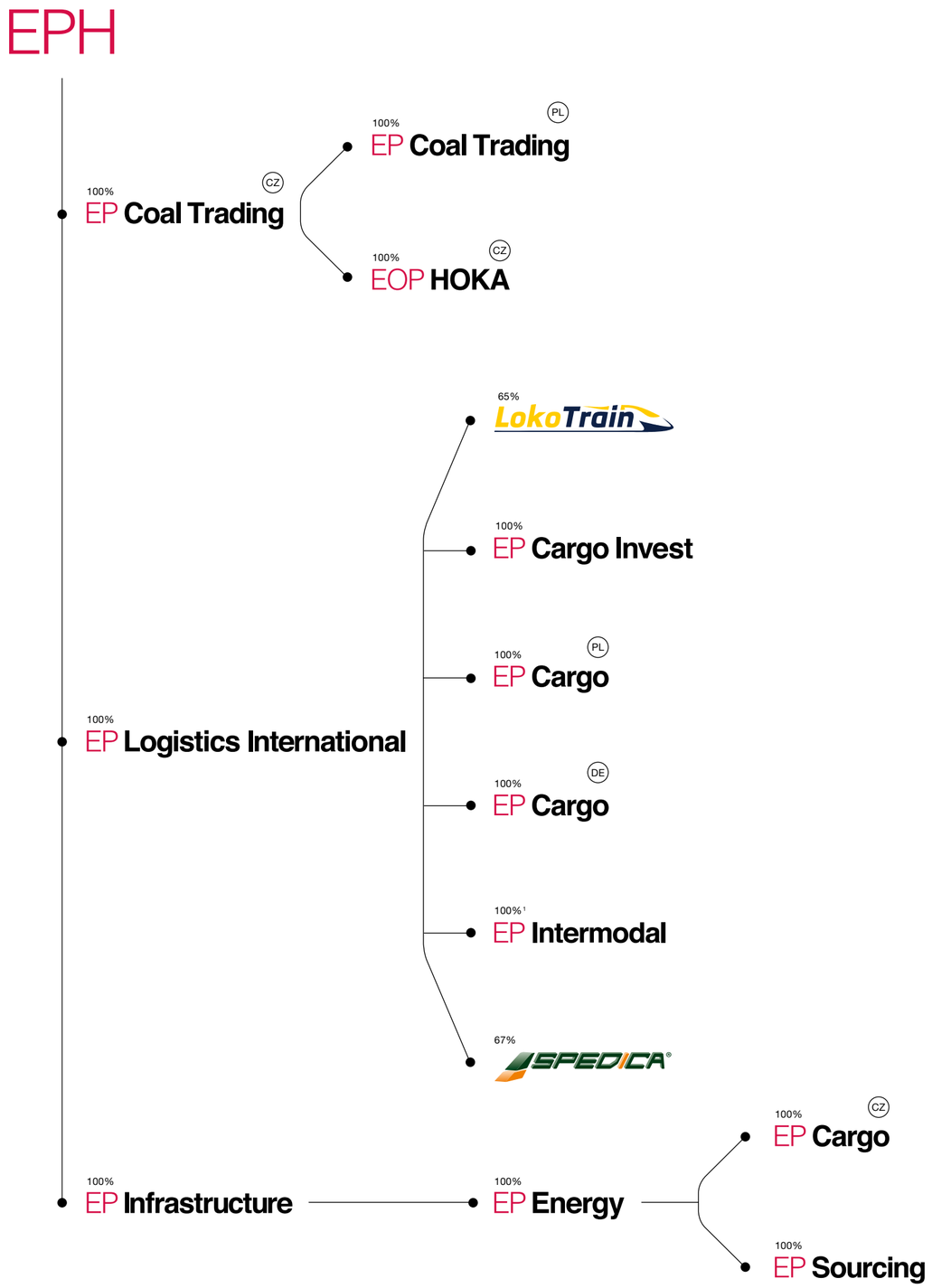


Fig. 12 Current structure of the logistics division including trading (EP Coal Trading, EP Sourcing and partially EOP HOKA).

1 EP Intermodal acquired in April 2019.

Share participations

3.1 Slovenské elektrárne

Portfolio of Slovenské elektrárne

EPH completed the first phase of the acquisition of Slovenské elektrárne (“SE”), the largest power generator in the Slovak Republic, on 28 July 2016. The current ownership structure of SE is as follows: the majority shareholder is Slovak Power Holding BV (“SPH”), owning 66% of the company. A 50% of the share capital of SPH is owned by a subsidiary of EPH, EP Slovakia B.V. and the remaining 50% belongs to the Enel Group. EPPE has an option for the acquisition of the remaining 33% stake from Enel under certain conditions. The minority shareholder, owning 34% of the shares, is the Slovak Republic, represented by the Ministry of Economy of the Slovak Republic.

In 2018, SE owned and operated a power plant portfolio with 3.8 GW of net installed capacity, of which 1.8 GW were nuclear power plants, 1.6 GW were hydroelectric plants and 0.4 GW were coal power plants. These power plants together accounted for approximately 69% of the electricity generation in Slovakia in 2018.

Role of the assets in the Slovak energy market

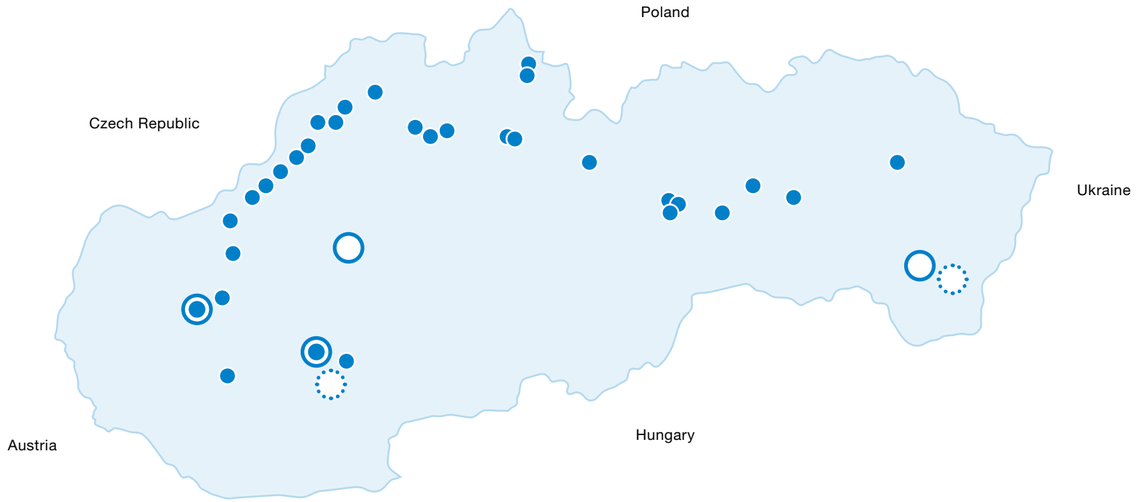
The portfolio of SE represents the critical energy infrastructure in Slovakia and in the CENTREL region, which also includes the Czech Republic, Hungary and Poland. It accounts for the majority of the installed capacity and generated power in Slovakia and represents 8% of installed capacity and 7% of generated electricity in this region. EPPE’s role in the region is key given its stakes in the power generation and supply in the Czech Republic and power generation, power and gas distribution and supply in Slovakia.

Upon successful completion of an additional two nuclear units in Mochovce, the position of SE in the Slovak and regional energy sector will be further enhanced. Mochovce Units 3 and 4, the largest private investment in Slovakia’s history, will add a further 2 × 471 MW of carbon-free installed capacity producing 7–8 TWh of electricity annually. Slovakia will thus become a net power exporter. At the end of 2018, the overall physical completion progress reached 98.23% at Unit 3 and 86.6% at Unit 4.

The nuclear power plants of SE operate in a baseload mode, guaranteeing the stability of the electricity supply. They are complemented by a group of flexible run-of-river and pump storage hydroelectric power plants providing ancillary services for the grid. In 2018, SE supplied almost 90% of electricity without GHG emissions, thus proving the importance of its nuclear and hydroelectric assets for the environmentally-friendly and sustainable future. By contrast, lignite technologies are perceived as key for the transitional period in the upcoming years (the end of domestic lignite combustion in Slovakia is expected in 2023).

The SE portfolio represents critical and indispensable energy infrastructure in Slovakia.

SLOVENSKÉ ELEKTRÁRNE



31 ×	**Hydroelectric** power plants	1,590	MW
2 ×	**Nuclear** power plants	1,814	MW
2 ×	**Thermal** power plants	414	MW
2 ×	**Solar** power plants	1.8	MW

Fig. 13 Slovenské elektrárne – net installed capacity.

Sustainability initiatives

Environmental considerations for power plants

New projects and initiatives were launched in 2018 at conventional power plants, aimed at improving their efficiency and environmental sustainability. Specifically, CO_2 emissions from Slovenské elektrárne operations in 2018 decreased to 128 g/kWh from 132 g/kWh the previous year.

The Nováky lignite power plant ("ENO") saw the successful implementation of the Chalmová definitive settling pond, at an elevation of 304m above sea level. The aim of the project, to be completed in 2019, was to provide storage capacity for ash from the ENO production of electricity and heat.

The priority investment project in the Vojany coal power plant (EVO) in 2018 was optimizing the start of the B6 boiler with co-combustion of biomass in the form of wooden pellets. After the commissioning, planned for 2019, gas consumption will be reduced during unit start-up, thus reducing the daily reserved gas capacity and environmental footprint. By replacing fossil fuels with wood chips – more than 20,000 tonnes of biomass in fluidized-bed boilers at EVO – a greenhouse gas saving of over 19,000 tonnes of CO_2-eq emissions was achieved in 2018.

A further saving of approximately 2,000 tonne of CO_2-eq emissions, compared to the same quantity of electricity produced in coal-fired power plants, was achieved through the full use of installed capacity of the photovoltaic power plants at Mochovce and Vojany.

Reliability and safety of nuclear power plants

Nuclear safety represents one of the basic pillars of SE's operations. The objective is to ensure a high level of nuclear safety and reliability of equipment and personnel at nuclear power plants (NPPs). In 2018, NPPs of SE continued to operate in a reliable and safe manner with no operational events with potential safety impact recorded.

Production of NPPs decreased year-on-year from 15,081 in 2017 to 14,843 GWh in 2018, with supplies to the grid falling by 248 GWh to reach 13,745 GWh. In 2018, the Bohunice NPP ("EBO") supplied 6,939 GWh of electricity to the grid and Mochovce ("EMO") supplied 6,806 GWh. Throughout the year, both NPPs also provided reliable ancillary services, secondary and negative tertiary regulation of output and secondary regulation of voltage.

In 2018, SE invested a total of almost €0.71 million in improving safety, including reconstructing lifting equipment, replacing socket cabinets in cooling tower modifying technological buildings at the Bohunice V2 NPP.

Each year, NPPs located at Bohunice and Mochovce conduct projects aimed at enabling the further safe, environmentally friendly and efficient production of electricity and heat. All projects are executed in the frame-work of planned general overhauls, including those carried out based on stress test results following the accident at Fukushima, Japan in 2011.

Fig. 14 Carbon emissions of energy supply in 2018.

By replacing fossil fuels with wood chips – 20,000 tonnes of biomass in fluidized bed boilers at the Vojany power plant – **a greenhouse gas saving of over 19,000 tonnes of CO_2-eq emissions was achieved in 2018**.

Current issues and future actions

SE remains determined to continuously improve the safety, reliability and environmental impact of its conventional, as well as nuclear installations.

Several projects aimed at eliminating the environmental impact and ameliorating environmental burdens have already been identified at the conventional power plants and are scheduled for implementation in upcoming years. Extension of the Chalmová project and remedial activities in the area of the Zemiansky potok stream, both located in ENO, and the settling pond in EVO, represent priority investments for the next few years.

Projects aimed at post-Fukushima measures will continue at the NPPs, together with other investment projects focused on ensuring more reliable and environmentally sustainable operation of SE's nuclear installations.

SE is also determined to maintain its excellent record of occupational health and safety and plans to retain its investment to this end in the upcoming period.

3.4 GW of completely carbon-free generation, whereby both hydro and nuclear energy have an irreplaceable role in terms of the EU Member States' commitment to reduce GHG emissions by 20% from 1999 to 2020.

Unique hydro power plant group with 0.6 GW of run-of river and 1 GW of pumped-storage units with an effectively perpetual lifetime at relatively low maintenance requirements and their pivotal role (pumped storage plants) in supporting the power system balance on the back of their variable power output and operational flexibility.

All 4 active nuclear units show excellent operational results and are ranked in the top 8 among all WWER[1] units worldwide based on INPO index (Q3 2015) and have an operational license with strict and comprehensive safety reviews every 10 years performed by the regulator based on European standards. The construction project of two new nuclear units Mochovce 3 & 4 is the largest private investment in the history of Slovakia. These units will be equipped with upgraded Generation III technology and based on the company's calculations should contribute to over 7 million tonnes CO_2-eq emissions reduction once in operation.

1 The Water-Water Energetic Reactor.

Main figures 2018 and 2017

Operations and sales

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	Net installed capacity – Electricity	MW	3,820	3,820	–	–
	Hard coal	MW	198	198	–	–
	Lignite	MW	216	216	–	–
	Nuclear	MW	1,814	1,814	–	–
	Hydro	MW	1,590	1,590	–	–
	Photovoltaic	MW	2	2	–	10%
EU1	Net installed capacity – Heat	MW	579	579	–	–
EU2	Net power production	TWh	16.8	17.5	(0.8)	(4%)
EU2	Net heat production	TWh	0.6	0.7	(0.1)	(10%)
102-7	Amount of electric energy sold	TWh	23.0	26.4	(3.4)	(13%)
	Heat supplied to district heating network	PJ	2.5	2.5	–	1%
102-7	UCF coefficient (Unit capability factor)	%	90.3%	91.4%	(1.1pp)	–

For more information, please visit www.seas.sk.

Environment

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
302-1	Direct GHG emissions (Scope 1)	million tonnes CO_2-eq	2.2	2.4	(0.2)	(7%)
305-4	Emissions intensity – including heat component	tonne CO_2-eq/GWh	128.3	132.0	(3.7)	(3%)
302-1	Energy consumption	PJ	188.7	191.8	(3.1)	(2%)
	Hard coal	PJ	7.9	7.1	0.8	11%
	Lignite	PJ	15.3	17.7	(2.4)	(13%)
	Nuclear	PJ	165.1	166.5	(1.4)	(1%)
	Other	PJ	0.4	0.4	(0.1)	(15%)
305-7	Total SO_2 emissions	thousand tonnes	3.1	7.2	(4.1)	(57%)
305-7	Total NO_x emissions	thousand tonnes	1.3	1.8	(0.5)	(28%)
305-7	Total dust emissions	thousand tonnes	0.1	0.1	(0.1)	(51%)
303-1	Quantity of water withdrawn	million m^3	55.1	54.0	1.2	2%
306-1	Quantity of water discharged	million m^3	16.4	15.9	0.5	3%
306-2	Byproducts – Total production	million tonnes	0.9	0.9	(0.0)	(1%)
	Ash	million tonnes	0.3	0.3	0.0	4%
	Slag	million tonnes	0.1	0.0	0.0	8%
	Gypsum	million tonnes	0.1	0.1	0.0	5%
	Additional material	million tonnes	0.2	0.2	(0.0)	(14%)
	Other	million tonnes	0.2	0.2	(0.0)	(1%)
306-2	Waste other than byproducts – Total production	thousand tonnes	11.6	14.6	(3.0)	(20%)
	Non-hazardous waste	thousand tonnes	11.1	14.0	(2.9)	(21%)
	Hazardous waste	thousand tonnes	0.5	0.6	(0.1)	(15%)

Social

G4-LA6	Injury Frequency Rate – Employees	index	0.1	0.5	(0.4)	(75%)
G4-LA6	Registered injuries – Employees	#	1	4	(3)	(75%)
G4-9	Headcount	#	4,356	4,339	17	0%
	Male	#	3,624	3,643	(19)	(1%)
	Female	#	732	696	36	5%
	Executives	#	22	22	(1)	(4%)
G4-LA1	New hires rate	%	7%	8%	(1pp)	–
	Employee turnover rate	%	9%	8%	1pp	–
G4-LA9	Total training hours – per employee	hours per capita	76.6	45.3	31.2	69%

Fig. 15 Main SE figures 2018 and 2017.

3.2 **Lausitz Energie Verwaltungsgesellschaft** (LEAG)

LEAG's assets represent a substantial share of the **flexible and dependable power capacity** in Germany.

Portfolio of LEAG

On 30 September 2016 a Consortium of EPPE and PPF Investments (the "Consortium") completed the acquisition of German mining and generation assets in Saxony and Brandenburg from Vattenfall. Following the acquisition, EPPE now owns a 50% stake in the holding entity Lausitz Energie Verwaltungs GmbH, which is the majority owner of the two key operating subsidiaries – Lausitz Energie Bergbau AG (former Vattenfall Europe Mining AG) and Lausitz Energie Kraftwerke AG (former Vattenfall Europe Generation AG), all together rebranded to LEAG.

LEAG's operations include opencast mines in Jänschwalde, Welzow-Süd, Nochten and Reichwalde as well as the three large lignite power plant sites Jänschwalde, Schwarze Pumpe and Boxberg and one block in Lippendorf, together representing an installed capacity of 8 GW and a total of 8 thousand employees.

LEAG power plants provide a stable and reliable supply of electricity and heat in Eastern Germany, with the crucial task of reacting flexibly to the fluctuating feed-in of wind and solar power and ensuring grid stability. As such, these assets represent a significant part of the flexible and dependable capacity in Germany.

The Consortium is fully aware that lignite assets are facing a long-term phase-out given the current direction of German energy policy, the so called Energiewende. However, together with the management of LEAG, we are convinced that such a phase-out will happen gradually and these assets will play an important role as an interim bridging technology providing a secure and non-intermittent energy supply.

Taking into account the development of the political and economic boundary conditions LEAG decided to revise its long-term mining and plant operation concept dating back to 2007. The new concept, published in March 2017, foresees significant changes especially concerning the Jänschwalde site and the Nochten mine. The residual amount of lignite allows the operation of the existing plants according to their technical and economic life time, a time span of about 3 decades.

Role of the assets in the German energy market

The electricity supply in Germany is based on a mix of conventional and renewable energy sources. Conventional energy sources are lignite, hard coal, natural gas, oil and nuclear power. Today, these cover approximately two thirds of Germany's electricity consumption. The renewable energies are primarily wind power, photovoltaic, biomass and hydro power. While renewables and lignite, are domestic energy resources, the remaining fossil energy resources (hard coal, oil and gas) and uranium for nuclear power plants, are mainly imported.

In the absence of sufficient electricity storage capacities, which are yet to be developed on a large and commercially feasible scale, the rule for a stable electricity system is that the amount of electricity produced and consumed must be in continuous balance. Therefore the system, including the network infrastructure, requires power plants that can balance out the fluctuations during the course of a day. From today's perspective, renewable sources are unsuited for fulfilling this role. However, this role can be fulfilled in Germany by coal- and gas-fired power plants and pump storage plants.

Given the dynamic growth of renewable energies, and their legally granted priority dispatch, the balancing tasks of conventional power plants are expanding. While in the past, lignite-fired power plants primarily provided stable baseload generation, today their flexibility is increasingly required. Electricity generation from PV and wind cannot satisfy consumer demand due to the variation in wind intensity and solar radiation. Since capacities for electricity storage are still limited, the contribution from wind and PV plants for the security of supply is considerably lower compared to conventional power plants. It amounts to less than 10% of the installed capacity that can be regarded as assured capacity, whereas around 90% is achieved in coal-fired power plants. Additionally, due to the substantial geographic distances between the production areas of renewables (e.g. wind from the north/eastern regions of Germany) and the industrial consumption regions in the south/western parts of Germany, grid extensions and congestions play a decisive role for the integration of the renewables. Until these challenges can be solved, controllable conventional power production in both directions (up-regulating as well as down-regulating) is essential for stability of the grid in Germany and neibouring countries and stability of the enomical and social environment.

Due to Germany's latest government decision, the percentage share of renewable energy sources in electricity consumption will be increased from today's 36% to 65% by 2030 and to 80% by 2050. If economic and social standards in Germany are not to be harmed, these ambitious targets are in our view only achievable in combination with a flexible bridging technology. Lignite is the backstop guaranteeing the stability of supply. This is the suitable partner for renewable energies as it is the only domestic energy resource in Germany that can be delivered in sufficient quantities and cost-effectively. In this setup, and considering the planned phase-out of nuclear energy, lignite will remain an important pillar of Germany's electricity supply. Almost one quarter of electricity consumed in Germany is generated from this domestic energy source.

Both, socially and economically, lignite assets are of vital importance for the Lusatia region. Almost 8 thousand people work in the Lusatian opencast mines, power plants, administrative offices and service sectors. Additionally a large number of jobs are created indirectly. It is estimated that approximately 33.5 thousand jobs in eastern Germany depend on the lignite industry (Prognos 2011). The lignite industry is a reliable business partner and stable customer for many suppliers and subcontractors.

In Germany, **lignite is currently the most suitable partner for renewable energies along the route to more sustainable, yet secure electricity supply**. Both, socially and economically, lignite assets are still of vital importance for the Lusatia region.

Sustainability initiatives

Large scale opencast mining has a significant impact on the landscape. Therefore, LEAG puts special emphasis on initiatives to minimise the impact and to recultivate the sites in a high-quality way to fulfil the requirements of future users and the ecology of the land. The recultivation processes focuses on the restoration of forest, agricultural land and nature reserves in order to maintain biodiversity. This presents a unique opportunity for large-scale forest reconstruction. Such tasks can normally be achieved only by successive generations of forestry activity. To date, some 30 million trees have been planted on Lusatian mine sites since 1990. About 10% of the post-mining landscape areas are prepared for agricultural use. LEAG transfers the land to the subsequent users only when the soil can be guaranteed to sustain crops and can be used for earning a living. Until then, the company and its contractors, mostly regional farmers, develop the land, supported by scientific knowledge. About 2,516 hectares of agricultural land have been created on former mining dumps so far. The post-mining landscape of the opencast mines Welzow-Süd and Jänschwalde offers particularly favourable conditions for agricultural areas.

Groundwater withdrawal is inevitable in the case of opencast mining. About 6 to 7 m^3 of water have to be pumped out to obtain one tonne of lignite. By constructing sealing walls wherever technologically and geologically possible the water withdrawal and its effect on the surrounding landscape is minimized. By reusing a significant amount of this water for operating a power plant the total ecological impact is minimised and the electricity production is secured even in dry periods. About 70% of the groundwater is fed back into the regional rivers Spree, Schwarze Elster and Neiße, mostly after being treated in one of LEAG's seven water treatment plants.

In the post-mining landscape lakes will have a share of about 25%. In the past years LEAG laid the foundation to develop the former opencast mine Cottbus-Nord into the lake Cottbuser Ostsee. Flooding started in April 2019 and the process should be finalized in the mid-2020s.

Responsibility and future actions

Through other activities in Germany and elsewhere the Consortium, and particularly EPH, has proven that it is well positioned to fulfill all technical, legal and financial responsibilities related to the acquired assets. The Consortium takes over all regulatory obligations related to the operations, including provisions for recultivation. Further models to guarantee the fulfilment of post-mining obligations, so-called "Precautionary agreements", have been concluded by Lausitz Energie Bergbau AG with the responsible mining authority in Saxony. Corresponding agreements for the Brandenburg opencast mines are in preparation.

The Consortium and EPH respect the long-term targets of the "Energiewende" set by the government and are committed operating their portfolio to support these targets, gradually reducing the climate footprint. We honour the decision of the German government and placed the first of two 500-MW-blocks of Jänschwalde power plant into the security stand-by mechanism on 1 October 2018. The second one will follow in October 2019. Both will finally be shut-down after 4 years. This alone will contribute another approx. 8 million tonnes per annum in CO_2-eq emissions reduction.

The Lusatia lignite mining region

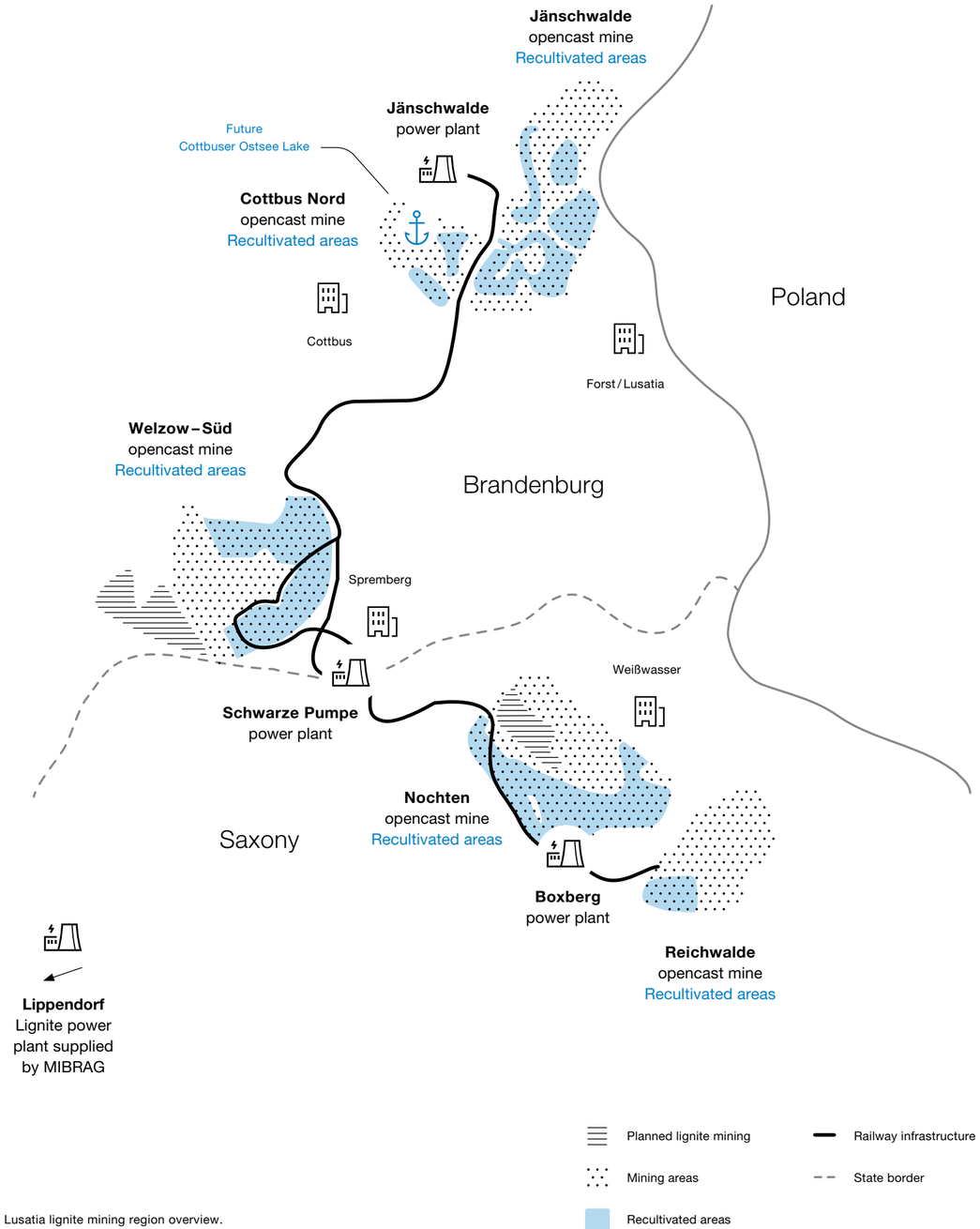


Fig. 16 Lusatia lignite mining region overview.

Main LEAG figures 2018 and 2017

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
Operations and sales						
	Coal extraction	million tonnes	60.7	61.2	(0.5)	(1%)
EU1	Net installed capacity – Electricity	MW	7,782	7,782	–	–
	Lignite	MW	7,595	7,595	–	–
	OCGT and other NG	MW	184	184	–	–
	Biomass	MW	3	3	–	–
EU1	Net installed capacity – Heat	MW	1,802	1,802	–	–
EU2	Net power production	TWh	55.6	55.0	0.6	1%
EU2	Net heat production	TWh	3.7	3.8	(0.2)	(4%)
102-7	Amount of electric energy sold	TWh	54.0	53.5	0.6	1%
102-7	Heat supplied to district heating network	PJ	12.1	12.6	(0.5)	(4%)

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
Environment						
302-1	Direct GHG emissions (Scope 1)	million tonnes CO_2-eq	60.3	60.0	0.4	1%
305-4	Emissions intensity – including heat component	tonne Co_2-eq / GWh	1,018	1,020	(2)	(0%)
302-1	Energy consumption	PJ	547.8	541.7	6.1	1%
	Lignite	PJ	537.5	531.6	5.8	1%
	Other	PJ	10.3	10.1	0.3	3%
305-7	Total SO_2 emissions	thousand tonnes	38.9	39.7	(0.8)	(2%)
305-7	Total NO_x emissions	thousand tonnes	42.8	42.4	0.5	1%
305-7	Total dust emissions	thousand tonnes	1.4	1.3	0.1	7%
303-1	Quantity of water withdrawn	million m^3	601.5	558.5	43.0	8%
306-1	Quantity of water discharged	million m^3	7.1	7.4	(0.3)	(4%)
306-2	Byproducts – Total production	million tonnes	9.2	8.9	0.3	3%
	Ash	million tonnes	4.3	4.3	(0.0)	(1%)
	Slag	million tonnes	1.4	1.3	0.1	11%
	Gypsum	million tonnes	3.4	3.2	0.2	5%
306-2	Waste other than byproducts – Total production	thousand tonnes	5,847.4	5,805.0	42.4	1%
	Non-hazardous waste	thousand tonnes	5,841.1	5,792.6	48.5	1%
	Hazardous waste	thousand tonnes	6.3	12.4	(6.1)	(49%)
	Land creation and regeneration	hectares	394	520	(126)	(24%)
	Agricultural	hectares	277	136	141	104%
	Forest	hectares	49	195	(146)	(75%)
	Other uses for nature protection	hectares	68	189	(121)	(64%)
Social						
G4-LA6	Injury Frequency Rate – Employees	index	1.4	1.5	(0.1)	(5%)
G4-LA6	Registered injuries – Employees	#	18	19	(1)	(5%)
G4-9	Headcount	#	8,053	8,227	(174)	(2%)
	Male total	#	6,501	6,657	(156)	(2%)
	Female total	#	1,552	1,570	(18)	(1%)
	Executives	#	101	102	(1)	(1%)
G4-LA1	New hires rate	%	7%	7%	–	–
	Employee turnover rate	%	10%	8%	2pp	–
G4-LA9	Total training hours – per employee	hours per capita	40.0	27.0	13.0	48%

Fig. 17 Main LEAG figures 2018 and 2017.

3.3 Other share participations

data presented on 100% ownership basis

EPH owns a 50% stake in the Italian company Ergosud S.p.A. and its operating power plant Scandale with a power capacity of 830 MW. The plant's direct GHG emissions were 868,000 tonnes of CO_2-eq in 2018 and 753,000 in 2017.

3.4 New acquisitions

Merger in Pilsen

On 31 October 2018, the Group completed the merger of Plzeňská energetika, a.s. ("PE") and Plzeňská teplárenská, a.s. ("PLTEP"), the sole owner of which was the City of Pilsen, resulting in PLTEP as the successor company in which the EPIF Group would have a 35% interest (a 24.15% effective interest of EPH Group) and management control through a shareholders' agreement.

New storage capacity in Germany

On 2 March 2018, NAFTA a.s. entered with Deutsche Erdoel AG (DEA) into a share purchase agreement with the owner of German gas storage assets Inzenham, Wolfersberg and Breibrunn located in Bavaria. The total working gas volume of these storages is approximately 1.8 bcm and around three quarters of the total capacity is contracted under long-term contracts. The EPH Group believes that these assets fit the business strategy of the EPIF Group, supporting NAFTA's clients with innovative products in the EU markets and representing long-term contracted assets, and they are in line with the risk and financial profile of the current activities of the EPIF Group. The transaction was completed on 31 December 2018 after receiving all necessary regulatory approvals.

3.5 Subsequent events

Acquisition of a biomass power plant Fusine

On 7 February 2019, EPPE is getting stronger in the biomass sector. Through the subsidiary EP New Energy Italia the Group completed the acquisition of the biomass power plant in Fusine, province of Sondrio, with an installed capacity of 7 MW by the Holcim Italia Group (100%).

Acquisition of Kilroot and Ballylumford power stations

On 13 June 2019, EP UK Investments Limited ("EPUKI") acquired generation assets at Ballylumford and Kilroot, with a combined installed capacity of 1.4 GW, in Northern Ireland, from AES Corporation ("AES"). The acquisition includes a combined cycle gas turbine (CCGT), a battery storage facility, open cycle turbines and a coal fired power station. EPUKI will acquire AES' entire Northern Irish business including all assets, systems and key management and staff. This represents the first acquisition by EPH into Northern Ireland's energy market, which forms part of the all-island Irish market.

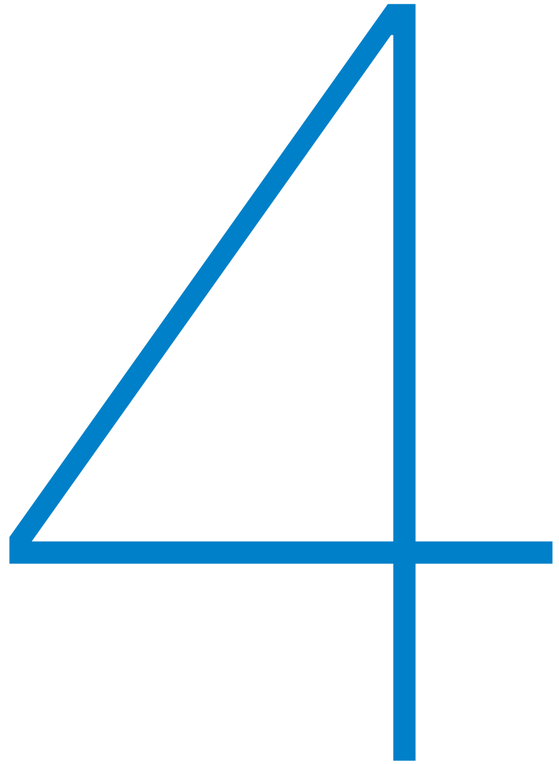
Acquisition of Uniper's activities in France

On 4 July 2019, EPPE and Uniper successfully concluded the negotiations announced at the end of December 2018 on the sale of Uniper's activities in France.

The scope of the transaction includes mainly Uniper's French sales business, two gas-fired power plants in Saint-Avold (Lorraine), two coal-fired power plants in Saint-Avold and Gardanne (Provence), the biomass power plant "Provence 4 Biomasse" in Gardanne and wind and solar power plants. Combined net installed capacity is 2.3 GW.

All three acquisitions confirm's EPH focus on low carbon (gas power plants in the Northern Ireland) and zero carbon (renewables in France and Italy) projects. Related coal capacities are perceived as non-core assets with closure currently scheduled by local goverments during 2020s.

Governance & ethics



EPH maintains consistently high standards in ethics throughout its operations and supply chain and does not tolerate corruption, money laundering, non-compliance with international sanctions, anti-trust law or with any other relevant regulation at any level.

4.1 Governance

EPH shareholders

Change in EPH shareholder structure

On 24 February 2017, EPH completed the previously concluded agreement with a consortium of global institutional investors led by MIRA on the sale of a 31% stake in EPIF. The remaining 69% of EPIF remains with EPH, which will also retain management control over EPIF.

Following the sale of a minority shareholding in EPIF, changes also occurred in the shareholder structure of EPH whereby the current shareholders of EPH concluded a series of transactions, through which Daniel Křetínský (94%) and selected members of the existing management of EPH (6%) became sole owners of EPH going forward.

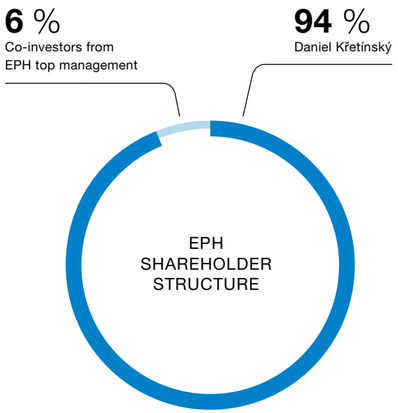


Fig. 18 Current EPH shareholder structure.

EPH management

The governance of EPH is based on a two-tier management structure consisting of the Board of Directors and the Supervisory Board. The Board of Directors represents the Company in all matters and is responsible for its day-to-day business management, while the Supervisory Board is responsible for the supervision of the Company's activities and of the Board of Directors in its management of the Company and in such matters as defined in the Czech Corporations Act and the Articles of Association. Under the Czech Corporations Act, the Supervisory Board may not make management decisions. However, certain matters, defined below, are subject to the approval of the Supervisory Board. The Company has established a Risk Committee, Investment Committee and Compliance Committee.

Furthermore, in order to emphasize risk management within the Company, particularly resulting from the acquisition growth and completion of several recent major transactions, EPH has created a centralised Risk Management role, which supervises all activities within the entire Company's portfolio of EPH from a group risk perspective.

Board of Directors of EPH

The Board of Directors has four members whereas the Chairman of the Board of Directors serves simultaneously as the Chief Executive Officer of the Company. The Board of Directors is the Company's statutory body, which directs its operations and acts on its behalf. No-one is authorised to give the Board of Directors instructions regarding the business management of the Company, unless the Czech Corporations Act or other laws or regulations provide otherwise. The business address of all members of the Board of Directors is Pařížská 130/26, 110 00 Prague 1, the Czech Republic.

The following table sets forth the members of the Company's Board of Directors as at the end of 2018 with no change before end of June 2019:

Name	Position
Daniel Křetínský	Chairman and Chief Executive Officer
Marek Spurný	Member and Chief Legal Counsel
Pavel Horský	Member and Chief Financial Officer
Jan Špringl	Member of the Board of Directors

Supervisory Board

The Supervisory Board of the Company has three members elected by the General Meeting of shareholders. The business address of all of the Supervisory Board members is Pařížská 130/26, 110 00 Prague 1, the Czech Republic.

The Supervisory Board is responsible for the revision of the activities of the Company and of the Board of Directors in its management of the Company, and which resolves such matters as defined in the Czech Corporations Act and the Articles of Association. The Supervisory Board's powers include the power to inquire into all documents concerned with the activities of the Company, including inquiries into the Company's financial matters, review of the year-end financial statements, including profit allocation proposals.

The following table sets forth the members of the Company's Supervisory Board as at the end of 2018 with no change before end of June 2019:

Name	Position
Petr Sekanina	Chairman of the Supervisory Board
Tereza Štefunková	Member of the Supervisory Board
Martin Fedor	Member of the Supervisory Board

Corporate governance on the sub-holding level

> EPH has undergone certain reorganisation measures during 2016 through which **two separate sub-holdings EPIF and EPPE emerged**.

All the legal reorganisation steps within EPIF were completed. Formation of the EPPE subholding is done. The power generation assets in Italy, the UK and Germany are, as of date of the Report, placed under the EPPE sub-holding structure. The company Slovenské elektrárne remains, for now, legally out of the EPPE scope. Nevertheless, from the management prospective and also in this Report, these assets are included within EPPE.

We have also progressed in our aim to establish a separate layer of statutory bodies and executive management responsible for day to day operations as well as key business decisions. Given these two businesses substantially cover all assets of EPH, we will still maintain the decision-making capability either through personnel representation in the relevant bodies or a list of reserved matters requiring the approval of EPH as main shareholder.

EP Infrastructure management

Board of Directors

Name	Position
Daniel Křetínský	Chairman of the Board of Directors
Gary Mazzotti	Vice-chairman of the Board of Directors
Jiří Zrůst	Vice-chairman of the Board of Directors
Stéphane Louis Brimont	Member of the Board of Directors
Milan Jalový	Member of the Board of Directors
Pavel Horský	Member of the Board of Directors
Marek Spurný	Member of the Board of Directors

Supervisory Board

Name	Position
Jan Špringl	Chairman of the Supervisory Board
William David George Price	Vice-chairman of the Supervisory board
Jan Stříteský	Member of the Supervisory Board
Rosa Maria Villalobos Rodriguez	Member of the Supervisory Board
Petr Sekanina	Member of the Supervisory Board
Jiří Feist	Member of the Supervisory Board

Overview of EPIF's management is shown in the table above as at the end of 2018 with no change before end of June 2019.

EP Power Europe management

Board of Directors

Name	Position
Daniel Křetínský	Chairman of the Board of Directors
Pavel Horský	Vice-chairman of the Board of Directors
Marek Spurný	Vice-chairman of the Board of Directors
Jan Špringl	Vice-chairman of the Board of Directors
Tomáš David	Vice-chairman of the Board of Directors
Leif Timmermann	Member of the Board of Directors
Jiří Feist	Member of the Board of Directors
Tomáš Novotný	Member of the Board of Directors
Brendan Massam	Member of the Board of Directors

Supervisory Board

Name	Position
Ivan Jakabovič	Member of the Supervisory Board
Martin Fedor	Member of the Supervisory Board
Miloš Badida	Member of the Supervisory Board

Overview of EPPE's management is shown in the table above as at the end of 2018 with no change before end of June 2019.

Profiles

Daniel Křetínský

Mr. Křetínský has been the Chairman of the Board of Directors since December 2013. Through his previous role as a partner in the J&T Group he was also involved in the founding of EPH, where he has served as chairman of the board of directors since 2009. Mr. Křetínský currently also serves on multiple boards of companies within the Group, as well as outside of the Group. These include positions with companies both affiliated and unaffiliated with EPH, including positions of chairman of the board of directors of Czech Media Invest, a.s., AC Sparta Praha fotbal, a.s., EP Power Europe, a.s., EPIF Investments a.s., EP Global Commerce a.s., EC Investments a.s., or SPP-Infrastructure, a.s.; a member of the board of directors of Czech News Center a.s. or EP Produzione S.p.A.; managing director of EP Investment Advisors, s.r.o. and EP UK Investments Ltd.; chairman of the supervisory board of EP Commodities, a.s., EP Industries, a.s., Mall Group a.s. or NAFTA a.s. and also member of the supervisory board of another companies.

Mr. Křetínský holds a Bachelor's degree in political science and a Master's and doctoral degree in law from the Masaryk University in Brno.

CHAIRMAN OF THE BOARD OF DIRECTORS
AND CHIEF EXECUTIVE OFFICER AT EPH

CHAIRMAN OF THE BOARD OF DIRECTORS
AND CHIEF EXECUTIVE OFFICER AT EP INFRASTRUCTURE

CHAIRMAN OF THE BOARD OF DIRECTORS
OF EP POWER EUROPE

Marek Spurný

Mr. Spurný has been working for EPH group and its legal predecessors since 2004. His main responsibilities are transaction execution, negotiations and implementation of merger and acquisition transactions, restructurings, and legal support in general. Mr. Spurný is currently (among others) the chairman of the board of directors of Pražská teplárenská Holding a.s.; a vice-chairman of the board of directors of EP Power Europe, a.s.; a member of the board of directors of EP Commodities, EP Energy, a.s., LEAG Holding, a.s., EPPE Italy N.V., EP Produzione S.p.A. or EPIF Investments a.s.; a managing director of EP Investment Advisors, s.r.o., Lausitz Energie Verwaltungs GmbH, EP Global Commerce GmbH, EP Slovakia B.V. or EP UK Investments Ltd.; chairman of the supervisory board of EP Cargo a. s., Pražská teplárenská a. s. or EP Logistics International, a. s.; a member of the supervisory board of CZECH NEWS CENTER, a.s., AC Sparta Praha fotbal, a.s., NADURENE a.s., EP Energy Trading, a.s., CZECH MEDIA INVEST a.s., EPPE Germany, a.s. Lausitz Energie Bergbau AG or Lausitz Energie Kraftwerke AG.

Mr. Spurný also serves on compliance committee and on Boards of Directors of the Company and supervisory boards and boards of directors of several of subsidiaries and affiliates of EPH, such as EP Produzione, LEAG Holding, EP Commodities or EP Cargo. Prior to formation of EPH, Mr. Spurný held various positions at the J&T Group. Between 1999 and 2004, Mr. Spurný worked for the Czech Securities Commission (the capital markets supervisory body at that time).

Mr. Spurný holds a law degree from Palacký University in Olomouc.

MEMBER OF THE BOARD OF DIRECTORS
AND CHIEF LEGAL COUNSEL AT EPH

MEMBER OF THE MANAGEMENT BOARD
OF EP INFRASTRUCTURE

VICE CHAIRMAN OF THE BOARD OF DIRECTORS
OF EP POWER EUROPE

Pavel Horský

Mr. Horský has been working for EPH since 2009. His main responsibilities include overall financial strategy and management of EPH and its subsidiaries as well as risk management. Mr. Horský also holds a number of other positions within EPH. Mr. Horský is currently the chairman of the board of directors of NPTH, a.s.; vice-chairman of the board of directors of EP Power Europe, a.s., a member of the board of directors of EP Industries, a.s., EP Commodities, a.s., EP Energy, a.s., NADURENE a.s., LEAG Holding, a.s., EPPE Germany, a.s. or EPIF Investments, a.s.; managing director of EP Slovakia B.V., EP UK Investments Limited, EP Global Commerce GmbH, EPPE Italy, N.V., Lausitz Energie Verwaltungs GmbH, EP Langage Limited or EP SHB Limited; a member of the supervisory board of EP Logistics International, a.s., Pražská teplárenská a.s., Pražská teplárenská Holding a.s., EP Cargo a.s., Mall Group a.s., EP Cargo Invest a.s., NAFTA a.s., SPP Infrastructure, a.s., Lausitz Energie Bergbau AG and Lausitz Energie Kraftwerke AG.

Mr. Horský holds a Master's degree in mathematics and physics from Masaryk University in Brno.

MEMBER OF THE BOARD OF DIRECTORS
AND CHIEF FINANCIAL OFFICER AT EPH

MEMBER OF THE BOARD OF DIRECTORS
OF EP INFRASTRUCTURE

VICE CHAIRMAN OF THE BOARD OF DIRECTORS
OF EP POWER EUROPE

Jan Špringl

Mr. Špringl has been working for EPH since 2009. Mr. Špringl is a chairman of the board of directors of NAFTA a.s.; vice-chairman of the board of directors of EP Power Europe, a.s.; member of the board of directors of Energetický a průmyslový holding, a.s., NADURENE a.s., LEAG Holding, a.s., EPPE Germany, a.s., EP Commodities, a.s. or EPIF Investments a.s.; managing director of EP Mehrum GmbH, EP UK Investments Ltd., JTSD Braunkohlebergbau GmbH, Lausitz Energie Verwaltungs GmbH, Lynemouth Power Limited, EP Langage Limited, EP SHB Limited or Slovak Power Holding B.V.; chairman of the supervisory board of EP Energy, a.s. and other companies,; member of the supervisory board of Lausitz Energie Bergbau AG, Lausitz Energie Kraftwerke AG or Mitteldeutsche Braunkohlengesellschaft mbH.

Mr. Špringl holds a Master's degree from the Faculty of Business Administration from University of Economics in Prague.

MEMBER OF THE BOARD OF DIRECTORS OF EPH

CHAIRMAN OF THE SUPERVISORY BOARD
OF EP INFRASTRUCTURE

VICE CHAIRMAN OF THE BOARD OF DIRECTORS
AND CHIEF EXECUTIVE OFFICER OF EP POWER EUROPE

4.2 Compliance

EPH business cannot be developed without our employees. Thus, EPH Group fully respects human rights and does not tolerate any form of discriminatory behavior.

EPH and its subsidiaries maintain consistently high standards in ethics throughout its operations and supply chain and do not tolerate corruption, money laundering, non-compliance with international sanctions, anti-trust law or with any other relevant regulation at any level. The EPH Group is aware that any breach of compliance could result in major and serious reputational damage. Compliance requirements are thus factored into all decisions when entering into business relations with suppliers or business partners. While these principles were adhered to in the past, their importance is increasing in today's environment and as such EPH has decided to provide comprehensive compliance policy applicable across the EPH, including all subsidiaries.

To deal with these issues, EPH adopted following internal policies:

- Anti-corruption and anti-bribery policy;
- Anti-money laundering policy;
- Sanctions policy;
- Anti-trust law policy;
- Tax governance policy (in effect for EPIF group companies);
- Know your customer ("KYC") procedures.

These policies are based on the following principles and guidelines:

- Receipt or payment of bribes, including facilitation payments is strictly prohibited;
- Acceptance of gifts and donations, including charitable donations is regulated;
- KYC procedures are required to be undertaken for business partners;
- The so called four-eyes principle is applicable for business transactions, and cash payments above predefined amount;
- EPH or its employees do not establish or maintain business relations with persons, entities or countries that are subject to economic or financial sanctions, trade embargoes or other restrictive measures imposed by the European Union, the United Nations, the United States of America, or the United Kingdom;
- All employees and directors are obliged to observe anti-trust laws and are aware of serious consequences that any infringement of anti-trust laws may have.

EPH has taken precautions to ensure **compliance with new data protection regulation** (GDPR) as well as regulation concerning energy sector (EMIR, REMIT, MAR & MIFID II).

GDPR challenge

The Group pays great attention to the protection of personal data of its employees and business partners especially considering the newest General Data Protection Regulation ("GDPR"). EPH approached the EU's GDPR challenge as an opportunity to review and further strengthen its processes connected to personal data protection. By keeping these data safe, the following risks are mitigated:

- Information risk: Only needful data for specific purposes should be stored and made accessible for persons in charge. This lowers the risk of information leakage.
- Reputation risk: If data are adequately protected and information leakage risk is low, then good name of the Company in the area of data protection will be secured as well.

During implementation phase we provided assistance to our subsidiaries to smoothen the process of becoming compliant with GDPR.

EPH has also taken steps to ensure compliance with regulation concerning energy sector (EMIR, REMIT, MAR & MIFID II).

EPH strives to operate all its facilities safely and in compliance with licensing regulations at all times. Our compliance with such systems is ensured with regular on-site checks. In addition, we regularly undertake analyses and evaluations of environmental issues in order to assess their relevance for our companies. The main focus of our internal compliance management is to raise the level of awareness among our employees in order to prevent any possible breaches.

Stakeholders

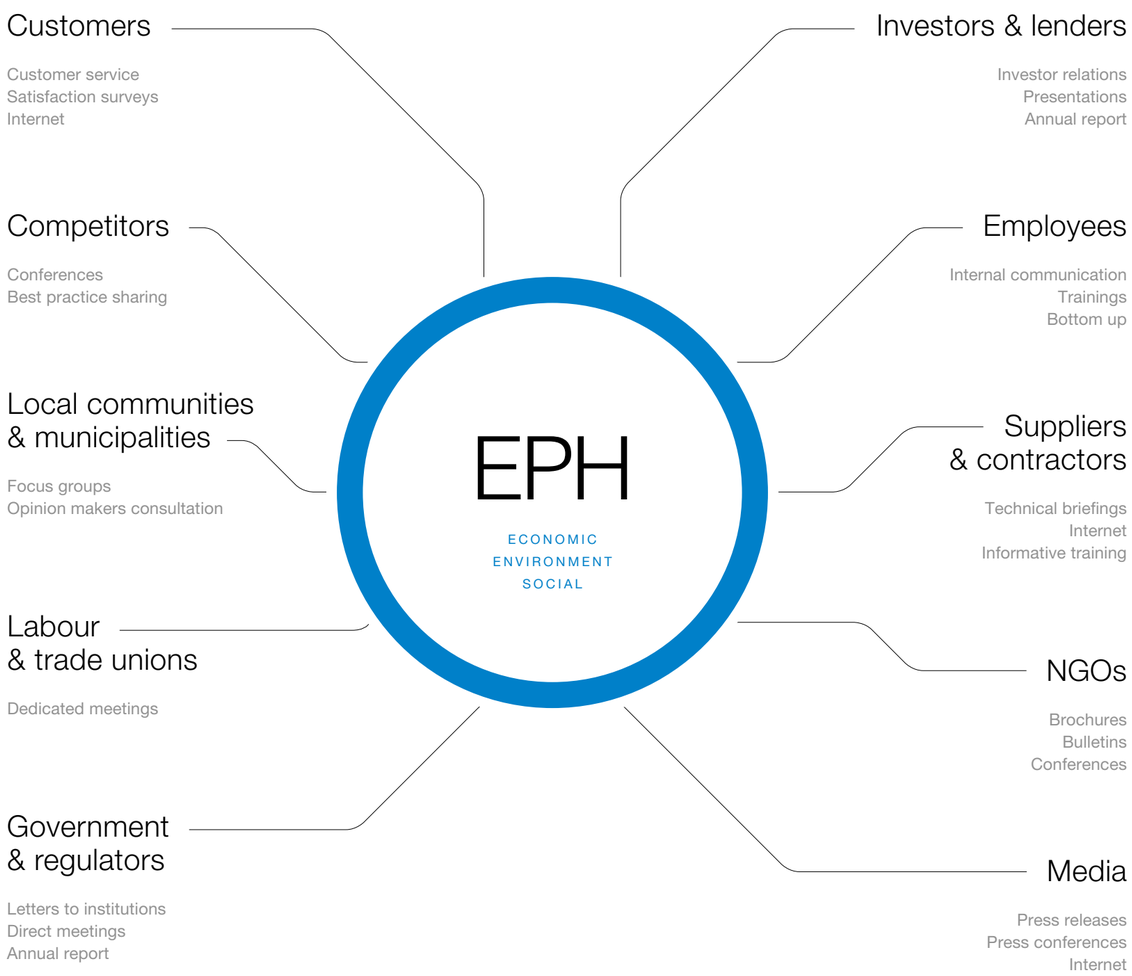
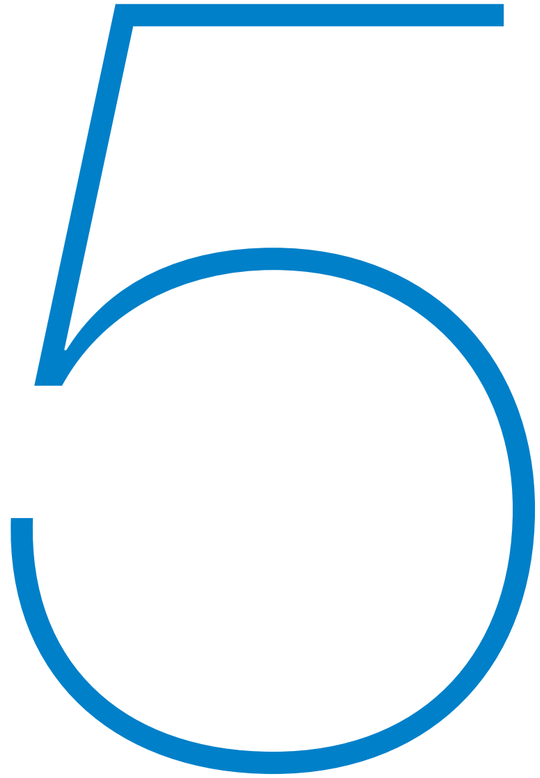


Fig. 19 Stakeholders overview.



At EPH, **we consider an open and transparent dialogue with our stakeholders to be an important part of the activities we perform**, together with our subsidiaries, across the different businesses and geographies.

Meeting and exceeding stakeholders' expectations is one of the main drivers in our decision making process and strategy execution.

As EPH acts as a decentralised holding company, the areas of stakeholders' interest on the level of our subsidiaries differ between our companies and the countries in which we operate. EPH considers its primary stakeholder groups those groups listed in the Figure 19. In order to maintain effective relations and be able to provide timely responses to particular needs, most stakeholder groups are managed at the local level, however, on top of managing relations with the direct stakeholders of EPH, we are also actively engaged and interact with some of the stakeholder groups of our subsidiaries. Across the Company, stakeholders are monitored throughout the year and their relevance in relation to our business strategy is assessed to better understand the underlying drivers, risks and opportunities from both the EPH/subsidiary company as well as the stakeholders' perspective; consequently the most appropriate form of communication and involvement is pursued. Stakeholder engagement with regard to its sustainability performance is done through a range of channels, as summarised in the Figure 20.

EPH consulted all its entities during the year in order to analyse the key topics and concerns raised by local stakeholders, balancing them with the requirements received at EPH holding level.

Each stakeholder group is interested in particular sets of sustainability issues. Depending on the stakeholder's presence, relevance and relation to the Company the concern can be demonstrated at the local level – only for certain subsidiaries or even assets, or at a global level, where either only EPH as a holding entity or EPH together with its subsidiaries are involved.

Primary stakeholder groups and priority areas

Stakeholder group	Economic aspects	Environment	Social aspects
Investors and lenders	● ▼	● ▼	○
Customers	▼	○	▽
Employees	● ▼	▽	▼
Government and regulators	● ▼	● ▼	▽
Suppliers and contractors	● ▼	●	● ▼
Competitors	●	○	▼
Local communities and municipalities	▼	▼	▼
Labour and trade unions	▽	▽	● ▼
NGOs	○ ▽	● ▼	○
Media	○ ▽	○ ▽	○

	At global level	At local level
High interest	●	▼
Medium interest	○	▽
Low interest	○	▽

Fig. 20 Primary stakeholder groups and priority areas.

Investors and lenders

This group is mainly represented by banks and financial institutions. Their interest in EPH sustainability performance is demonstrated at both EPH level and local level depending on their involvement in financing within the Group. The most relevant topics for them deal with economic and environmental aspects.

Customers

These stakeholders are very important for EPH as a whole, while their interest is significant mainly for our heat, gas and power distribution and supply business. Customers are mostly concerned with the economic and social aspects of our business.

Employees

EPH employees are interested in overall EPH economic performance. As internal stakeholders, they are engaged in business issues at the local level, being especially interested in the performance of the subsidiary they work for.

Government and regulators

This is a broad group, containing various national and transnational institutions. Due to this, the interest in sustainability is demonstrated at both levels. Local entities are concerned about the performance of individual subsidiaries, while European institutions are looking at the EPH business from a transversal perspective. Nevertheless, for both local and global levels the most relevant topics can be grouped under economic and environmental areas.

Suppliers and contractors

This group of stakeholders is also characterised by interest demonstrated locally and globally. Economic performance and social aspects can involve a single subsidiary or the whole Company, which is especially valid for the contractors engaged in a centralised process (large tenders, procurement for areas such as IT, pipes, etc.). These stakeholders demonstrate increased interest towards the environment on a global level as this issue can transversally affect procurement requirements.

Competitors

Depending on their size and business area, these stakeholders are more interested in economic performance and the environment of EPH as a whole. Issues such as compliance and anti-competitive behaviour are most important in relation to respective subsidiaries/geographies and thus are characterised as local interest.

Local communities and municipalities

The origin of these stakeholders predefines the level of their interest towards EPH sustainability activities. Concerns were expressed at local level but with the same importance given to all three aspects.

Labour and trade unions

Stakeholders active at the local level, they have relatively moderate interest in the economic and environmental performance of EPH subsidiaries, while social aspects are more important at both a local and global level. Strategies that EPH defines for its labour relations (for example employment) involve all subsidiaries and thus the interest towards this issue was expressed in relation to EPH as a whole. Issues such as collective bargaining agreements are of interest to stakeholders mostly at the local level.

NGOs

The main stakeholders forming this group are Environmental NGOs, therefore most attention is paid to environmental activities both at a local level (in relation to specific business – especially generation and mining) and a global level – over how EPH is going to face challenges regarding emission limits and other factors relating to sustainability in the upcoming years.

Media

This stakeholder is active at both a local and global level (particularly in the Czech Republic where EPH is headquartered) and demonstrates moderate concern towards the economic and environmental area, while social aspects are currently out of scope.

Based on this analysis, summarised in the Figure 20, we have defined the aspects which are material for our stakeholders and decided to provide the information split into EPH performance at a global level (through quantitative information) and into a presentation of various case studies at the local level (mainly through qualitative information). This analysis is then complemented by the full scope of data for the Group and its subsidiaries, which were relevant and available, and is presented with a breakdown into various constituents.

Priorities

GRI principles for Sustainability Reporting, including the Principles of Report Content and Report Quality as shown in the table below were the main source of inspiration for EPH in the preparation of this Report.

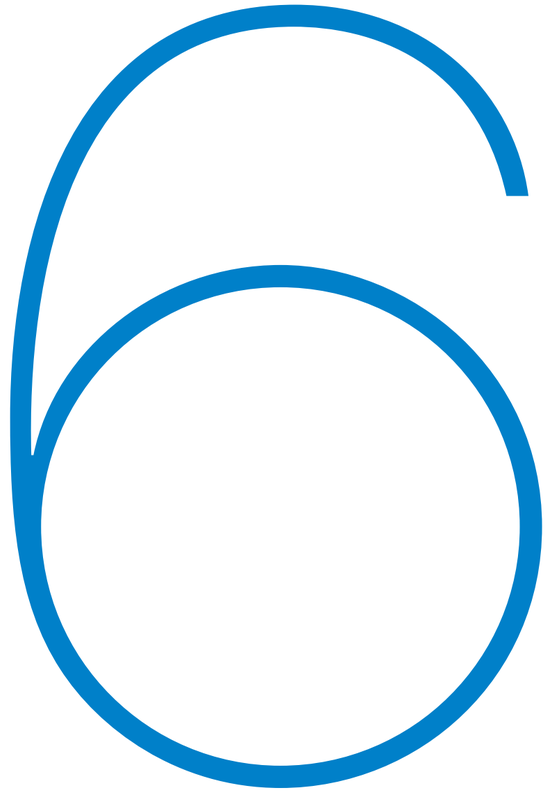
Principles for Report Content

Principle	EPH approach
Stakeholder inclusiveness	Mapping of stakeholders at local and global level
	Assessment of their relevance
	Analysis of stakeholder concerns and expectations
Sustainability context	Analysis of sustainability framework at global, European and country level (goals application)
	Study of statistics and trends in utility and energy sector
	Definition of future challenges at local and global level
Materiality	Creation of a materiality matrix
	Focus on material aspects and companies in the scope of our operations
Completeness	Detailed analysis of available data in relation to all companies under management control
	Inclusion of information on newly acquired companies

Principles for Report Quality

Principle	EPH approach
Balance	Assessment of strengths and weaknesses in relation to 2018 results and future goals
Comparability	Presentation of 2017–2018 trends for most indications and comments on changes in report scope and restatements
Accuracy	Establishment of internal analysis focused on quantitative measurements for all material aspects identified
Timeliness	Introduction of all relevant information on top of data related to reporting period 2018
Clarity	Consultations with local units interacting with stakeholders in order to define the most appropriate amount and quality of data
Reliability	Continued engagement of external assurance provider

Fig. 21 Principles for Report Content and Quality: EPH approach.



Materiality matrix

The finalised list of material items provided the framework for compiling the sustainability content of this Report. The areas that were deemed to be the most material are shown in the materiality matrix in the Figure 22 with further detail provided in the Figure 23, which shows how these areas were mapped to corresponding GRI indicators.

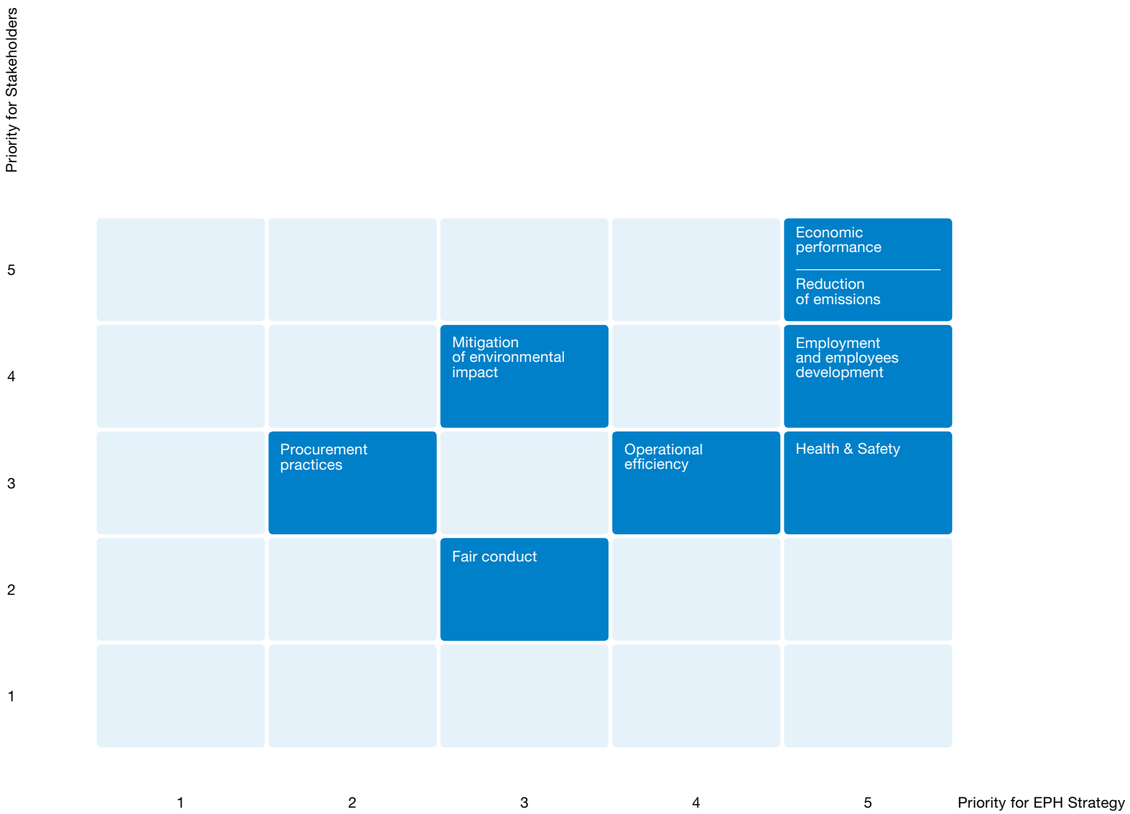


Fig. 22 Materiality matrix.

Notes on the Materiality matrix

The vertical axis represents the priority that stakeholders attributed to the topics discussed and the horizontal axis demonstrates the priority that the topics analysed represent for EPH and its strategy. The matrix demonstrates alignment between the strategy defined by EPH and the expectations of our local and global stakeholders. As a result of our materiality analysis, EPH has identified 8 priorities considered material both for the Company and our stakeholders. Within these 8 priorities, there are various material aspects under GRI Standards that have formed the basis, both quantitatively and qualitatively, for this Report.

EPH has classified the material topics identified above into the following 4 categories:

ABSOLUTE PRIORITY

- ECONOMIC PERFORMANCE
- REDUCTION OF EMISSIONS

HIGH PRIORITY

- EMPLOYMENT AND EMPLOYEE DEVELOPMENT
- HEALTH AND SAFETY

PARTICULAR ATTENTION

- OPERATIONAL EFFICIENCY
- FAIR CONDUCT
- MITIGATION OF ENVIRONMENTAL IMPACTS

OTHER FOCUS AREAS

- PROCUREMENT PRACTICES

Area	Priorities	GRI Standards topics – GR material aspects
Economic & Business	Economic performance	Economic performance
	Operational efficiency	Access
		System efficiency
	Fair conduct	Compliance and anti-corruption
	Procurement practices	Procurement practices
Environment	Reduction of emissions	Emissions
	Mitigation of environmental impact	Water
		Energy
		Effluents and waste
		Biodiversity
Social	Employment and employees development	Employment
		Training and education
	Health and safety	Health and safety

Fig. 23 Mapping of material areas to GRI indicators.

Economic
performance & business

EPH Group reported EBITDA of EUR 1.7 billion. The results of 2018 proved that EPH is very stable and reliable company.

7

7.1 Economic performance

2018 EPH financial performance

EPH is one of the 10 largest industrial groups based in the Czech Republic in terms of EBITDA. Within Europe, in 2018 EPH Group was the sixth largest net power producer in Europe. For the year ended December 2018, EPH recorded total consolidated sales and EBITDA of EUR 6,998 million* and EUR 1,743 million*, respectively.

The 2018 results proved that EPH is a very stable and reliable company with both financial and non-financial indicators showing continuous improvement and sustainable growth. This is the result of not only organic growth but also acquisitions.

The Group's policy is to maintain a strong capital base to support investor, creditor and market confidence and to sustain the future development of its business.

EPH generated sales in the Slovak Republic of EUR 1,931 million, or 27.6% of its 2018 total, through: (i) gas transmissions conducted by Eustream, which is the owner and operator of one of the major European gas pipelines and is the only gas transmission system operator in the Slovak Republic, (ii) gas distribution undertaken by SPP-D, providing access to natural gas for approximately 94% of the Slovak population, and (iii) electricity distribution by SSE in central Slovakia, where it operates as the only power distribution company with almost 750,000 connection points in its network. Further operations in the Slovak Republic include mainly the storage of natural gas, provision of storage related services and supply of power and natural gas to end-customers. Additionally, EPH owns a 33% stake in Slovenské elektrárne; however, this is not consolidated and therefore does not impact the sales figures.

* This data has been compared with EPH's 2018 Annual Report by the independent auditing firm EY.

EPH consolidated sales per country

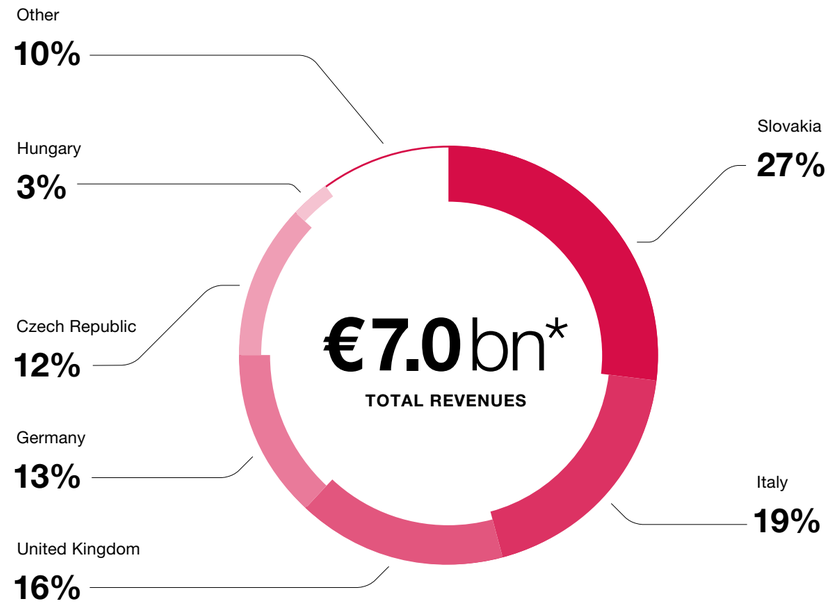


Fig. 24 EPH consolidated sales per country.
Source: EPH audited consolidated financial statements.

Italy is the second largest revenue contributor for EPH, with EUR 1,290 million in 2018 (EUR 1,260 million in 2017). This increase is primarily due to a significant production boost (75% more power generated in our CCGT plants) by our Italian assets, improved operations and price conditions on the Italian power market.

The United Kingdom is the third largest revenue contributor with EUR 1,086 million in 2018 (EUR 542 million in 2017). The increase in 2018 was caused by full-year operation of SHB and LAN power plants acquired in 2017, as well as the input of the Lynemouth power plant which began production from biomass in April 2018. The increase was significant even though Eggborough power plant ceased production in March 2018.

Sales totaling EUR 948 million were recorded in Germany in 2018 (EUR 744 million in 2017), mostly connected to the lignite mining operations of MIBRAG, partially also with the newly acquired hard coal power plant Mehrum and gas sold to Germany by EP Commodities.

In terms of revenues, the Czech Republic was the fourth most important market for EPH in 2018. EPH owns and operates three large-scale co-generation power plants with adjacent heating networks and also owns and operates the most extensive district heating system in the Czech Republic, which supplies heat to the City of Prague. EPH realized sales of EUR 927 million through its Czech based subsidiaries in 2018 (EUR 942 million in 2017). EP Commodities increased its revenues from gas sold from EUR 106 million in 2017 to EUR 131 million in 2018.

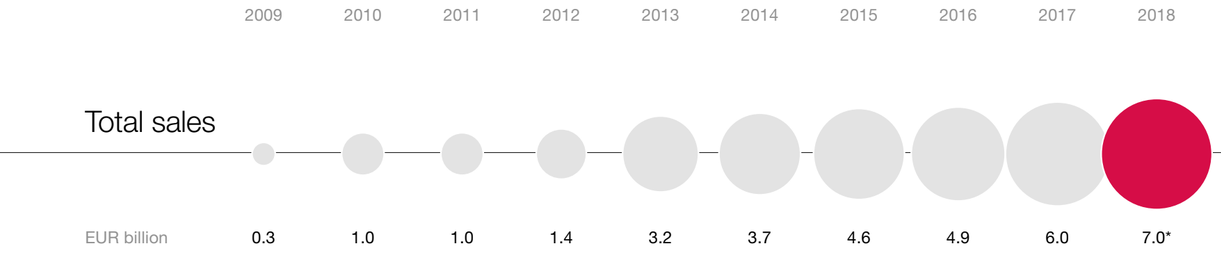
Despite the fact that the operations of Slovak companies account for 27.6% of EPH's total sales, Slovak operations have a 64.4% share in EPH's asset base. This is due to the capital-intensive nature of gas transmission and gas and power distribution businesses. Eustream, SPP-D and SSE have their respective gas pipeline and distribution networks on their balance sheets.

Other important market includes Hungary, which was entered via acquisitions during the course of 2015.

* This data, after giving effect to rounding, has been compared with EPH's 2018 Annual Report by the independent auditing firm EY.

EPH consolidated sales and EBITDA

EPH reported significant EBITDA and sales development



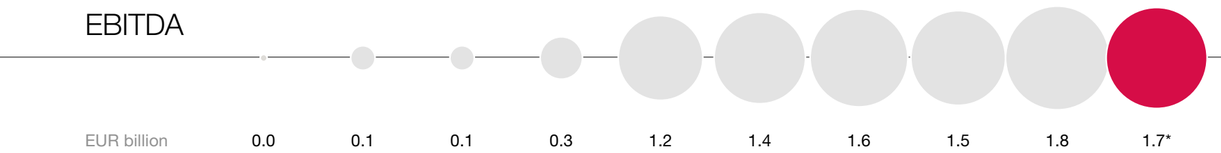


Fig. 25 EPH consolidated sales and EBITDA.
Source: EPH audited consolidated financial statements.

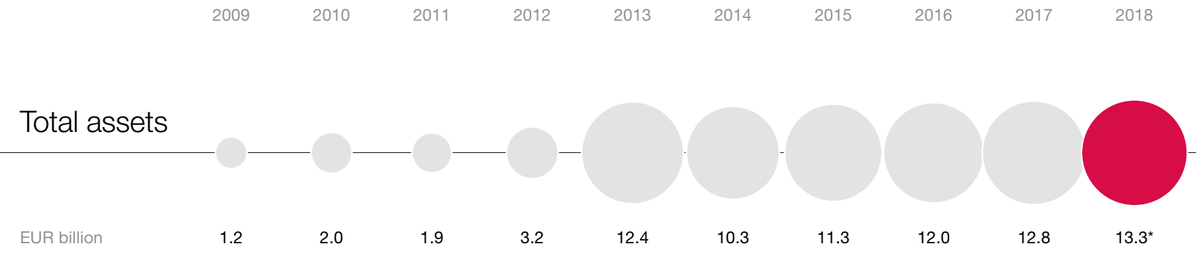
Growth of EPH

The acquisition growth of EPH can be illustrated by its sales: CAGR of 43% and EBITDA CAGR of 52% between 2009 and 2018. The most significant year-on-year increase occurred in 2013, as EPH acquired its shareholding in SPP-I Group in January 2013 and SSE in November 2013. Although EPH owns 49% of shares in each of the groups, their results are consolidated fully as EPH holds management control over both groups. The acquisition of both groups also had a considerable impact from the balance sheet perspective, specifically on EPH's total assets, which increased year on year by EUR 9.2 billion, or by 285%, to EUR 12.4 billion as of 31 December 2013.

* This data, after giving effect to rounding, has been compared with EPH's 2018 Annual Report by the independent auditing firm EY.

EPH total assets & equity

EPH performance is backed by a heavy and well invested asset base



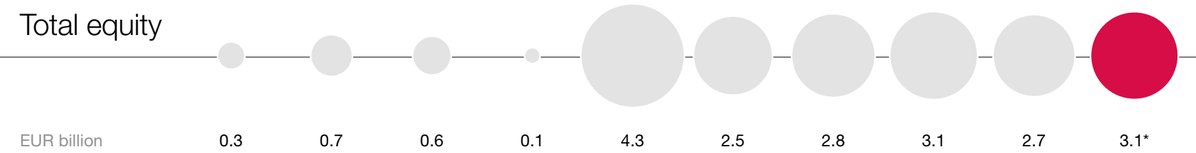


Fig. 26 EPH total assets and equity.
Source: EPH audited consolidated financial statements.

The growth of the business and its profitability has not only transformed EPH into one of the leading industrial conglomerates in the region, but it also follows that EPH and its subsidiaries are becoming a very important contributor to the state budgets of the respective countries via paid taxes that amounted to EUR 1,049 million cumulatively in the last three years.

* This data, after giving effect to rounding, has been compared with EPH's 2018 Annual Report by the independent auditing firm EY.

EPH income tax paid

EPH is a responsible tax payer

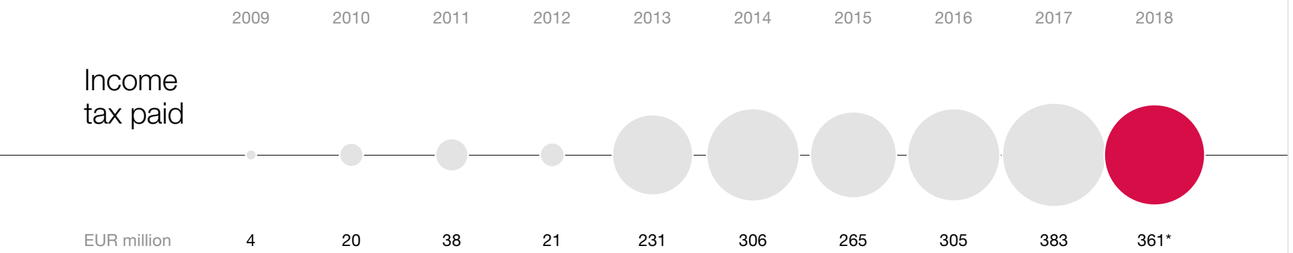


Fig. 27 EPH income tax paid.
Source: EPH audited consolidated financial statements.

* This data, after giving effect to rounding, has been compared with EPH's 2017 Annual Report by the independent auditing firm EY.

EPH, as a Czech based company with multiple operating subsidiaries across the different countries, is a responsible tax payer according to the tax rules of the respective jurisdictions and most taxes are paid locally, in the countries where we operate. Specifically, in the Slovak Republic, our four major subsidiaries (eustream, SPP-D, SSE and Nafta) represented approximately 3.4% of the Slovak Republic's budget income for 2018 with eustream being the largest corporate income tax payer with a bill of some EUR 149 million in 2018 (EUR 177 million in 2017) including levy tax. On the top of that, our Slovak companies paid dividends to Slovak state instutions in the height of three quarters of the taxes paid.

Furthermore, EPH operates in an energy sector that is subject to certain special levies which further increase our contribution to public finances. In Slovakia, a special levy on businesses in regulated industries was introduced in 2013. In 2016 and previously, this levy was payable by any regulated entity (i.e. a licensed entity) with revenues from regulated business activities exceeding 50% of company's total revenues. From 2017 it was modified and the levy had to be paid by all businesses in regulated industries with annual profit higher than EUR 3 million. Moreover, the levy itself was increased to 8.712% per year from profit before tax for 2017 and 2018 (twice more than in the previous year). In 2018, eustream, SPP-D, Nafta and SSE group incurred costs of EUR 57.7 million for this special levy. In Hungary, a similar situation is occurring where a special levy imposed on companies operating in the energy sector is impacting our subsidiary BERT.

7.2 System efficiency

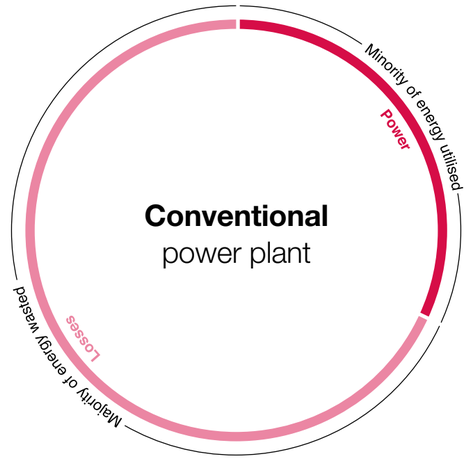
If the European climate protection targets or the goals as adopted at the Paris climate conference that came into force in November 2016 are to be met, it is clear that energy efficiency needs to be improved. At EPH, we are well aware of this and improvements to energy efficiency at our facilities is a key focus area for us. We strive to modernise our installations and make use of innovative technologies but at the same time we are also prepared to face reality and undergo decommissioning in the case of obsolete technology, risk of no compliance with environmental standards or simply where prolonged operations are not economically viable.

The commitment to improving energy efficiency across our operations is not only beneficial for the environment but it also makes good sense for business. Improving efficiency allows us to decrease our combustion fuel costs, one of our main cost drivers, and reduce our GHG emissions for each converted unit of energy. Moreover, this also reduces the amount of CO_2 certificates that our installations need to buy and helps mitigate the risk of potentially higher GHG costs in the future.

Cogeneration

We are improving our energy efficiency by placing a strong focus on EU supported heat and electricity cogeneration in particular through our operations in the Czech Republic and Hungary. The heat produced by these units is effectively a by-product of electricity generation. EPIF owns three lignite fired heat co-generation units in the Czech Republic as well as three gas fired units in Budapest, Hungary. All of the units are cogeneration sources, meaning that they produce heat and electricity simultaneously allowing for much higher overall efficiency (70–85%) compared to even the most efficient gas fired units (50–60%), which is also one of the reasons why cogeneration is widely supported by EU legislation. Cogeneration centralised heating systems carry a significant environmental advantage which is described in more detail in the section on GHG Emissions in this Report.

Typical brown coal fired power plant
(32% net fuel efficiency)



vs

Typical cogeneration power plant
(70% overall fuel efficiency)

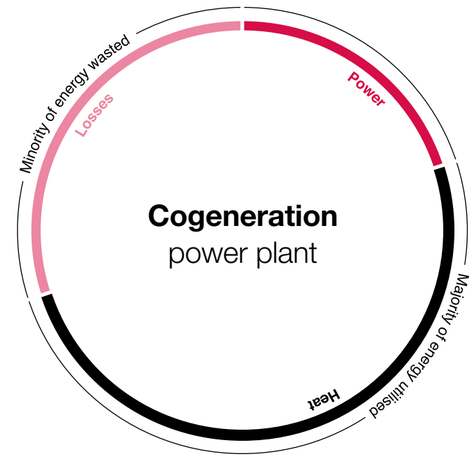
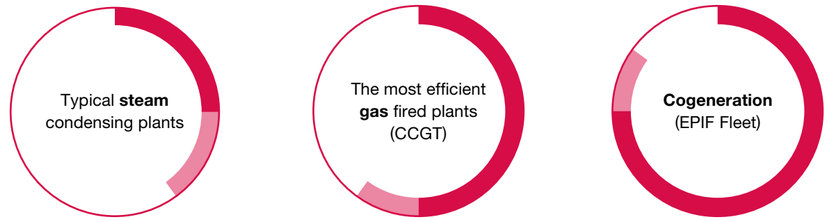


Fig. 28 Conventional vs. cogeneration power plant.

Maximum achievable efficiencies by technology type



Efficiency	**25–40** %	**50–60** %	**75–85** %
Carbon footprint	245–390 kg CO_2 per GJ produced	95–115 kg CO_2 per GJ produced	115–140 kg CO_2 per GJ produced

Fig. 29 Maximal achievable efficiencies by technology type.

7.3 Access

As one of our crucial responsibilities, we strive to provide affordable and high quality and reliable electricity, gas and heat supply, which is affordable for our customers.

Electricity is essential for a country's economic and social development, as well as for facilitating and enriching people's daily lives in the modern world. Consequently providing access to electricity and other basic commodities across all the communities where we operate is a primary goal of the Company, through the use of new technologies and the development of specific projects to create shared value. It is our responsibility to guarantee that the national electricity, gas and heat systems of the countries where we operate as a distributor or transmission system operator enjoy a continuous and safe energy supply. The quality of the supply is closely linked to the reliability and efficiency of the transmission and distribution infrastructure, which must be able to handle the levels of demand requested.

EPH, in coordination with our partners, works continuously to develop the distribution and transmission networks and make them more efficient.

There are many risks which the Group is exposed to such as failures, breakdowns, unplanned outages, as well as natural disasters, sabotage, or terrorism or public opposition may cause delays or interruptions in the Group's operations.

For example, in December 2017, the gas transmission in eustream's network was paralyzed for several hours due to an accident at the compressor station of the Austrian gas transporter Gas Connect Austria at the Central European gas hub in Baumgarten where the explosion of a gas filter caused a short-term inability to transmit natural gas to Austria. However, transmission was restarted immediately after the situation was stabilized.

Fig. 30 Slovak gas distribution network.

Other problems, such as the current crisis in Ukraine, create political and economic uncertainty which could adversely impact the business, financial condition, results of operations, cash flows and prospects of the Group.

Heightened levels of tension between Russia and Ukraine could have a direct impact on the Group in the future. Further escalation of the conflict may lead to fluctuations in gas prices, further U.S. and EU-backed sanctions affecting the long-term sustainable availability of Russian gas or decreased demand for gas due to any of the above factors. This could also affect Ukraine's ability to transport gas to or from eustream's system.

There are no significant domestic sources of gas in the Slovak Republic or the Czech Republic and there is no previous experience in the Slovak Republic or the Czech Republic of an extended period of disruption in gas supply from the Russian-Ukrainian route, except for the 13 days' disruption in January 2009. In case of a prolonged gas shortage, gas would have to be sourced from other state interconnectors such as the Czech Republic (from the Lanžhot entry point) and Austria (from the Baumgarten entry point) and / or gas stored by shippers in underground gas storage facilities.

Since November 2015, Ukraine has ceased imports of gas from Russia. As a result, Ukraine has been increasingly reliant on eustream's reverse flow facilities for its access to gas, thus increasing eustream's revenues from reverse flow bookings. If supplies of Russian gas to Ukraine were to resume, this may lead to lower demand for eustream's reverse flow facilities. On the other hand, further escalation of the dispute may ultimately lead to a sustained interruption of the flow of natural gas from Russia to the Slovak Republic, in which case the consequences might be much more severe and difficult to predict.

Distribution

As one of the leading distributors of electricity and gas in Slovakia and heat in the Czech Republic, we are responsible for ensuring reliable and safe deliveries.

EPIF owns 49% and has management control in SPP - distribúcia which is Slovakia's key strategic gas infrastructure asset constituting a natural monopoly of gas distribution with approximately 86% market share of gas distributed in Slovakia. It has a modern network with a total length of over 33 thousand km spanning the whole country and includes high-pressure long-distance gas pipelines as well as local gas distribution networks. SPP-D has a leading position in Europe in infrastructure penetration and has more than 1.5 million connection points in the country with over 94% of the population of Slovakia connected to piped natural gas. In 2018 and 2017 SPP-D distributed 4.8 billion m^3 and 4.9 billion m^3 of gas, respectively.

We continued with the renovation and reconstruction of our backbone network to ensure a reliable provision of our traditional distribution services and to reflect modern trends in terms of electricity distribution. Our total capital expenditures in this segment were EUR 78 million and we plan to continue our investment activities in the following years as well.

EPIF owns 49% and has management control in Stredoslovenská energetika which is predominantly active in electricity distribution and is the second largest out of three electricity distributor networks in Slovakia with approximately 6.3 TWh of power distributed in 2018.

SSE maintains low System Average Interruption Frequency Index ("SAIFI" average number of interruptions of electricity distribution to customers per year) and System Average Interruption Duration Index ("SAIDI" average cumulative duration of interruptions in electricity distribution to customers in minutes per year) as follows:

Operational KPIs	Unit	2018	2017
High Voltage (HV)	km	2,529	2,529
Medium Voltage (MV)	km	10,894	10,778
Low Voltage (LV)	km	21,393	21,311
Total network length	**km**	**34,816**	**34,618**
HV Substations	#	6	6
Transformers HV / MV	#	56	56
Switching stations HV / MV	#	70	64
Distribution substations	#	9,075	8,778

Fig. 31 Key distribution network data in 2017 and 2018.

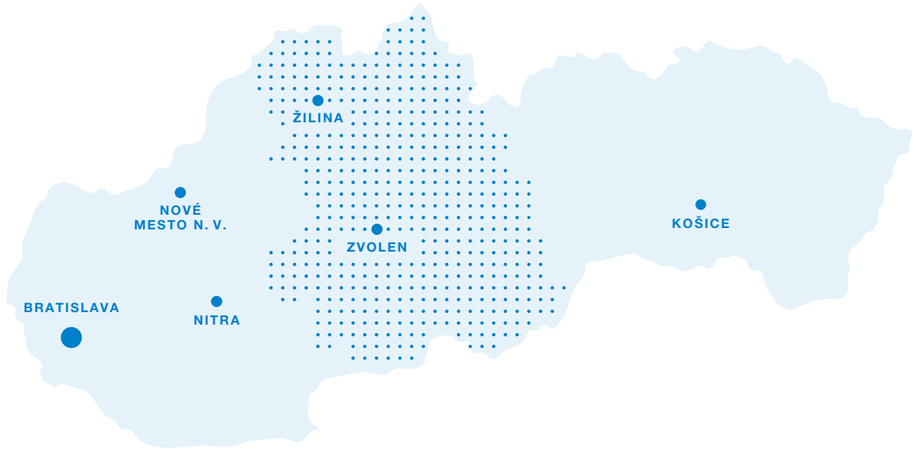


Fig. 32 Region covered by the SSD electricity distribution network.

		2018	2017
SAIFI	Index	2.1	2.1
SAIDI	Index	95.8	99.8

Fig. 33 SAIFI, SAIDI.

More than

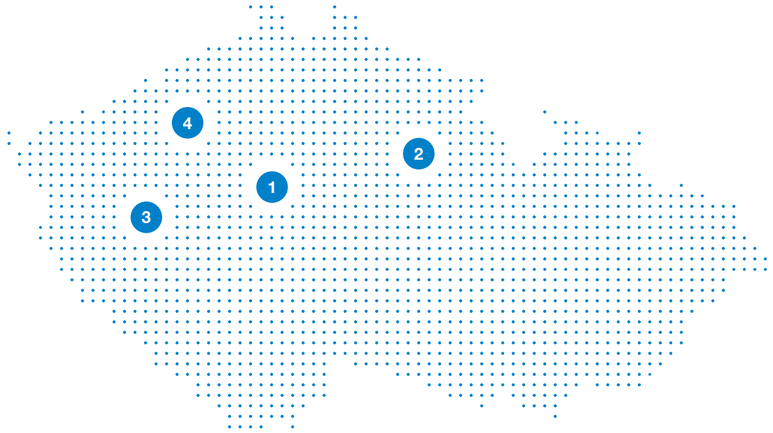
700,000 Connection points

Stredoslovenská energetika

Central Slovakia region

The development of unplanned SAIDI / SAIFI indicators is directly proportional to the frequency of failures and is largely dependent on weather conditions.

In 2018, the character of the weather (storm frequency, wind intensity) was more favorable than in 2017, which was also reflected in the achieved indicators.



9,676
Connection Points

230,000
Households

1

Pražská teplárenská

Heating network and peak source
Praha

2,617
Connection Points

61,000
Households

2

Elektrárny Opatovice

Heating network and source
Pardubice, Hradec Králové and Chrudim

2,787
Connection Points

50,000
Households

3

Plzeňská teplárenská

Heating network and source
Plzeň

874
Connection Points

34,000
Households

4

United Energy

Heating network and source
Most and Litvínov

Note: Numbers of supplied households are estimated as the companies do not have direct agreements with each one. Number of connection points are precise.

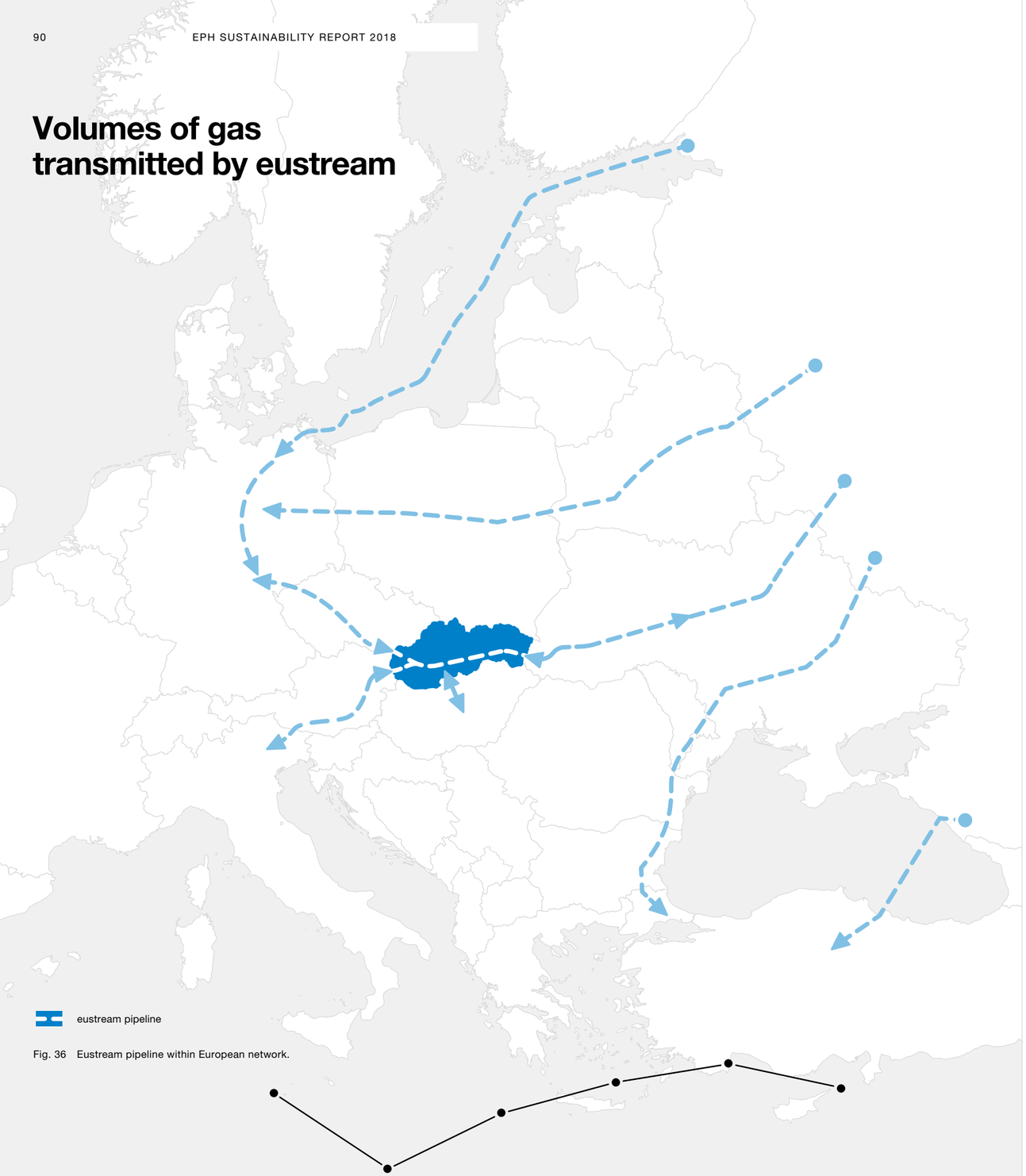
Fig. 34 Czech network.

EPIF operates heat generation plants & distribution networks in the Czech Republic with 1,300 km of district heating networks, **distributing 14.7 PJ of heat to approximately 380 thousand of customers**.

Company	Overview
Pražská teplárenská	Owns and operates the largest district heating network in the Czech Republic, as well as 8 heating stations
	Although PT owns cogeneration sources (which do not run in condensation mode), the company only directly generates heat and power through these sources during peak demand in the winter months
	PT as a business focuses on heat distribution and buys most of its heat from Energotrans, a former PT subsidiary, currently owned by ČEZ Group
EOP ELEKTRÁRNY OPATOVICE	Owner and operator of a combined heat & power plant and heat distribution network, supplier of heat to households and commercial customers in Hradec Králové – Pardubice – Chrudim area
	Provides among the lowest-priced heat in the Czech Republic because of its cogeneration capabilities
	EOP is also an important provider of grid balancing services to ČEPS, the Czech TSO
PLZEŇSKÁ TEPLÁRENSKÁ Více než energie	It is the largest company in the Pilsen region engaged in the production of electrical and thermal energy. The company runs three power generating plants – power plant, heating plant and refuse incineration plant
UNITED ENERGY	Together with its 100% subsidiary, Severočeská teplárenská, owns and operates a combined heat & power plant and heat distribution network and supplies heat to households and commercial customers in North-West Bohemia

Fig. 35 EPH Czech district heating companies.

Volumes of gas transmitted by eustream



eustream pipeline

Fig. 36 Eustream pipeline within European network.

Volumes of gas transmitted

2013	2014	2015	2016	2017	2018
59	**47**	**56**	**61**	**64**	**60** bcm

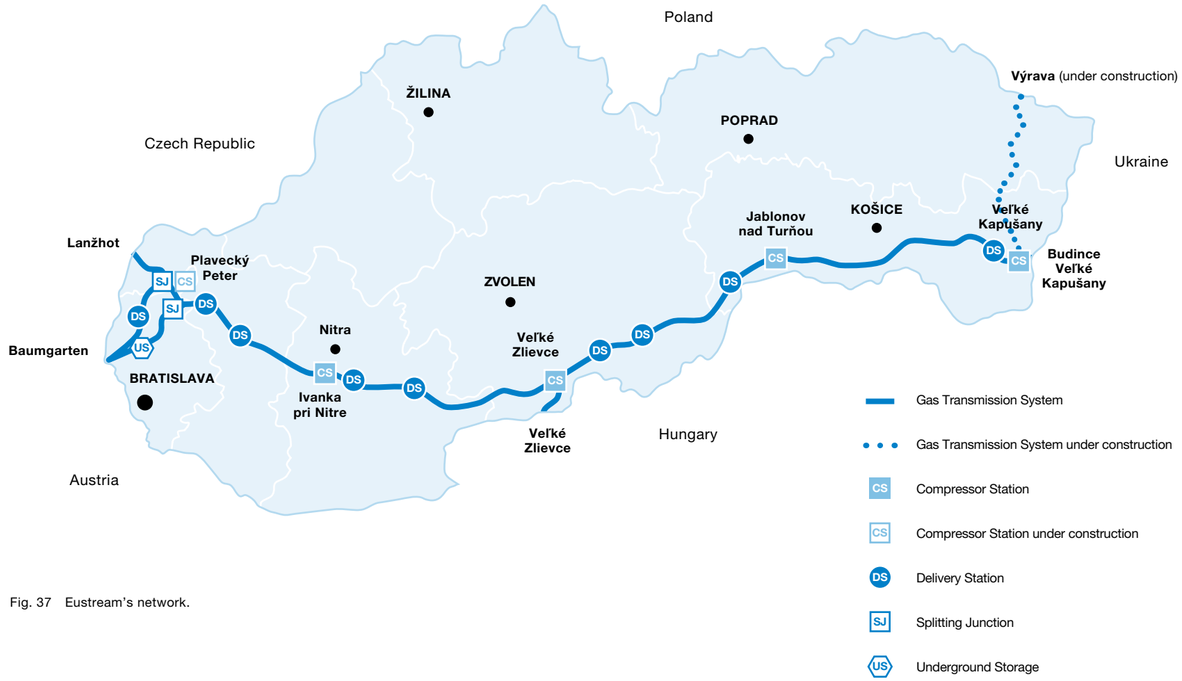


Fig. 37 Eustream's network.

Transmission

Through EPIF, EPH has 49% shareholding and management control in eustream, a strategic gas transmission network asset in Central Europe. eustream thanks to its bidirectional mode is able to provide flexibility of gas flows in all directions to whole Europe. eustream represents almost half of the European import capacity from Russia and transports the largest volumes of Russian gas into the western and southern Europe. At the same time, eustream is the largest and most utilized import route to Ukraine from western Europe. It has experienced high utilisation over the past years with 59.7 billion m^3 of gas transported in 2018. At the same time, eustream's pipeline offers the flexibility of gas flows in both directions.

eustream's network is well invested in with high quality, well maintained pipelines and significant investments in compressor stations in previous years.

Company	Overview
eustream SLOVAK GAS TSO	Critical infrastructure for Southern, Central Europe and Ukraine
	No other existing transmission route with sufficient capacity to supply major part of the above region
	Most of the volume was transmitted under long-term ship-or-pay transmission contracts
	Gas transmission business is a regulated activity in Slovakia since 2005
	Full applicability of EU regulatory principles
	Efficient third-party access implemented
	No request for network access has ever been rejected
	Entry/exit tariff system with fees being directly set by the regulator

Fig. 38 Interesting facts about eustream.

Connecting Europe with new energy sources Case Study

EPH operates one of the most critical import routes for Russian deliveries, **invests in its higher flexibility and develops new routes** connecting Europe with alternative sources of energy.

European natural gas demand is expected to hold broadly stable in the coming decades. At the same time, there will be a sharp decline in domestic production. The BP Energy Outlook[1] scenario estimates this decline in indigenous production from 261 bcm in 2017 to 159 bcm by 2040, which will lead to import requirements rising from the current 50% of European consumption to 73%.

The production gap will be filled mainly by a rise in the share of Russian exports and liquefied natural gas (LNG) deliveries. Therefore, it will be increasingly critical to have robust import pipeline capacities in Europe as well as access to alternative sources of natural gas (LNG, Turkey, Middle East).

Gas supply to Europe[1]

Bcm	2010	2020	2030	2040
Domestic production	308,9	244,9	196,0	159,3
Russia	172,6	185,1	203,0	245,2
LNG	89,1	99,0	126,0	134,8
Africa	42,9	41,0	37,8	26,7
Other	13,2	21,0	25,7	24,1

Fig. 39 Gas supply to Europe.

1 Source: BP, Energy Outlook – Fuels – Natural Gas, downloaded on 17 June 2019 from: https://www.bp.com/en/global/corporate/energy-economics/energy-outlook/demand-by-fuel/natural-gas.html

Natural gas

A long-term partner for renewable energy

With coal and oil gradually falling back and renewables on their rise there is a strong need for flexible energy source to guarantee security of power supply in every condition. Natural gas offers this **flexibility** and at the same time helps to meet **climate and environmental goals**.

Natural gas is the only large-scale dispatchable source of **cleaner energy**. It is the only source of energy along with renewables whose worldwide share in primary energy increases.[1]

Based on the mentioned reasons, natural gas becomes the largest single fuel in the global energy mix.[2] In Europe, the higher natural gas demand from last years is expected to continue in coming decades.

Here are some interesting facts about natural gas:

Protecting climate
Compared to coal, power generation based on natural gas emits up to **60% less CO_2** and 80% less NO_x.

Affordable energy
Natural gas has consistently been one of the most affordable fuel available to European consumers. According to the European Commission's report on energy costs and prices for heating, on average, one kilowatt-hour of electricity costs 4 time more than one kilowatt-hour of natural gas.[3, 4]

Clean air
Natural gas is a quick-win solution for better air quality. Compared to other solid fuels it emits up to **99.9% less particulate matter** – microscopically small solid particles damaging human respiratory system.

Globally available
Rise of global LNG – market leads to more competitive environment. LNG trade will more than double in year 2040 reaching almost 900 bcm.[5] Even in Europe with developed pipeline infrastructure LNG plays a role in enhancing market liquidity.

The future of gas
Proven and probable global natural gas reserves can meet demand for about 200 years while new natural gas fields are discovered. Natural gas can therefore serve not only as a bridge fuel for coming decades: given the strong potential in renewable gases like biomethan, synthetic methane or hydrogen from power-to-gas facilities, natural gas industry will be a part of **long term sustainable solution**.

1 Source: BP, Energy Outlook – Fuels, chart Shares of primary energy, downloaded on 17 June 2019 from: https://www.bp.com/en/global/corporate/energy-economics/energy-outlook/demand-by-fuel.html

2 Source: International Energy Agency, World Energy Outlook 2017, Executive Summary, p. 8, downloaded on 17 June 2019 from: https://www.iea.org/Textbase/npsum/weo-2017SUM.pdf).

3 Source: GasNaturally, section 4. Providing affordable energy to consumers, p. 10, downloaded on 17 June 2019 from: https://gasnaturally.eu/wp-content/uploads/2018/11/long-term-vision-of-the-european-gas-industry.pdf

4 Source: Eurostat, Database, tables Gas prices for household consumers – bi-annual data (from 2007 onwards) (nrg_pc_202) and Electricity prices for household consumers – bi-annual data (from 2007 onwards) (nrg_pc_204), downloaded on 17 June 2017 from: https://ec.europa.eu/eurostat/data/database

5 Source: BP, Energy Outlook – Fuels – Natural Gas, section LNG imports and exports, downloaded on 17 June 2019 from: https://www.bp.com/en/global/corporate/energy-economics/energy-outlook/demand-by-fuel/natural-gas.html

European projects of common interest Case Study
Poland–Slovakia interconnection

40 To build the 103-kilometer Slovak section, more than 6,200 lengths of 6–18 meter steel pipes of 1,016 mm diameter are required. Each steel pipe weighs an average of more than 7 tonnes.

103 km
Pipeline Length

DN 1,000
Pipeline Diameter

7.25 MPa(g)
Maximal Operating Pressure

5.7 bcm/year
SK → PL Capacity

4.7 bcm/year
PL → SK Capacity

Fig. 41 Basic data about Poland-Slovakia interconnection.

The Poland-Slovakia Interconnector is a great step towards achieving the goals of the EU energy policy. The project received a EUR 55 million implementation grant from the EU and a loan of EUR 65 million from the European Investment Bank.

The pipeline is part of European North-South priority corridor to ensure diversity in natural gas supplies in Central and South-Eastern Europe. Implementation of the project will enable CEE countries to benefit from direct access to the global LNG market and to a range of natural gas supply sources from the north (Świnoujście LNG, Klaipeda LNG, Gas Interconnection Poland-Lithuania, Baltic Pipe) as well as from the south, through the Slovakia-Hungary Interconnection and the planned Eastring pipeline.

This new pipeline is an example of excellent cooperation between Member States and the EU. The new interconnection will bring new possibilities for natural gas trade to the benefit of CEE customers. It will increase the competitiveness of the natural gas market in the region and the energy security of CEE citizens.

This new pipeline is an example of excellent cooperation between Member States and the EU. **The new interconnection will bring new possibilities for natural gas trade to the benefit of Central and Eastern European customers.**

42 Pipes positioned in preparation for welding as part of the PL-SK connection.

EASTRING pipeline Case Study

missing infrastructure
for alternative natural gas deliveries

The EASTRING pipeline is planned to be bi-directional, which would not only open up alternative import routes to the EU markets for natural gas transmitted through Turkey, but also create a way of supplying South East Europe and Turkey in the event of natural gas disruptions from West European hubs.

EPH through its Slovak transmission system operator eustream is the main proponent of the Eastring pipeline project proposed through Bulgaria, Romania, Hungary and Slovakia. With financial support from the European Union, eustream has completed the detailed Feasibility Study for the project in 2018.

EASTRING is the only project that offers direct routing between the developed EU markets and the South-East Europe region. As Turkey is becoming a major natural gas hub with excess import capacities, it will look for a way to export surplus of natural gas, while the same applies to the Balkan Gas Hub project in Bulgaria. New sources of natural gas (Caspian & Middle East Gas, LNG) will create an excess of natural gas in Turkey / Balkan region. However, there is currently no infrastructure to transfer this excess natural gas further into Europe. Therefore, EASTRING becomes a required infrastructure to cover the needs of this region.

The EASTRING pipeline is planned to be bi-directional, which would not only open up alternative import routes to the EU markets for natural gas transmitted through Turkey, but also create a way of supplying South East Europe and Turkey in the event of natural gas disruptions from West European hubs.

Fig. 43 Planned Eastring pipeline.
Source: Downloaded on 16 July 2019 from https://www.eastring.eu/

EPH invests in infrastructure to enhance its flexibility Case Study

KS05 case

EPH's eustream operates the EU's part of the Central Corridor – a traditional key infrastructure for Russian natural gas deliveries in Europe. In 2009, eustream made this system bidirectional, enabling physical reverse flows from Western Europe. As a result, from 2014 the system serves also as key infrastructure connecting western European hubs with Ukraine. Now this system will be even more flexible enabling higher flows from Western Europe towards CEE countries. The new compressor station under construction in Slovakia close to the Czech border will more than double existing reverse flow capacities.

The new compressor station under construction in Slovakia close to the Czech border **will more than double existing reverse flow capacities.**

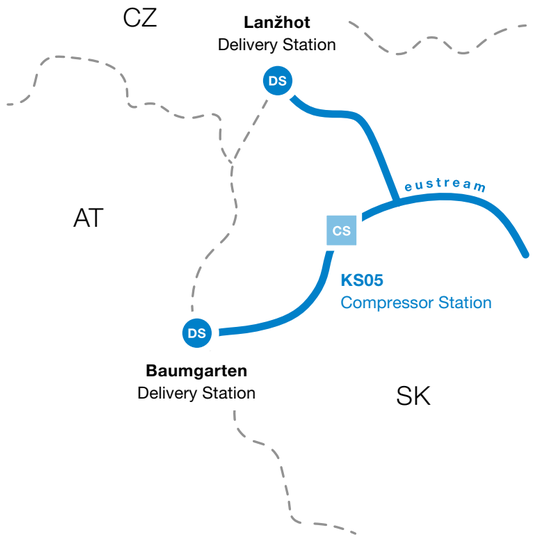
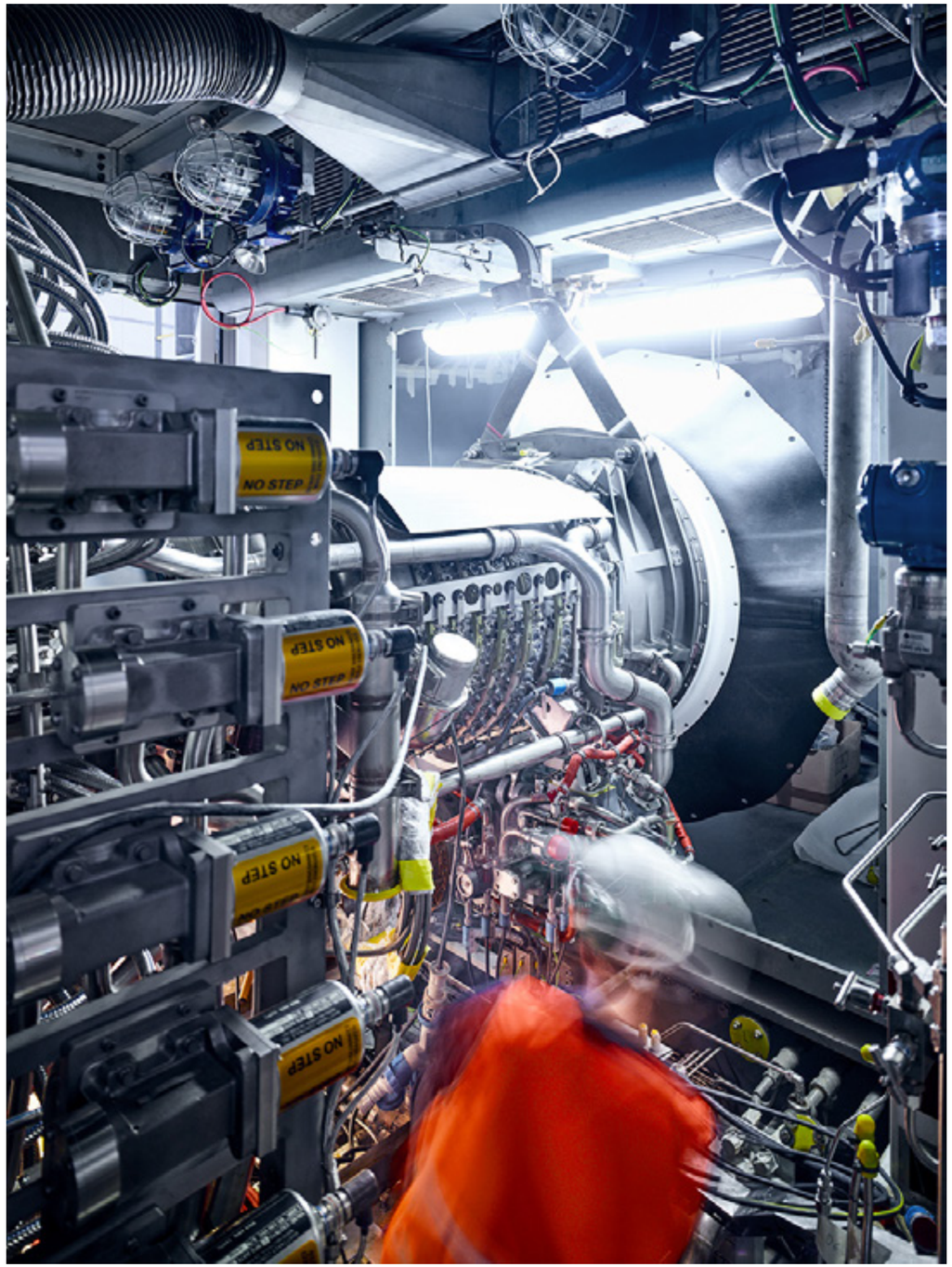


Fig. 44 Location of the new compressor station in Slovakia.



45 Testing of newly installed technology in KS05, Slovakia.

7.4 Procurement practices

EPH has a centralized procurement function managed by EPH Group Procurement ("EPH Group Procurement"). The key role of EPH Group Procurement is to develop and consistently apply best practices in strategic procurement across individual subsidiary companies primarily with the aim of minimizing the total cost of ownership of external purchases.

EPH Group Procurement has a matrix responsibility over individual procurement departments within our subsidiaries, whereby the centralised function focuses mainly on strategic areas – large tender process and contract renewals negotiations. Where appropriate, EPH Group Procurement tenders selected categories for the entire Group (e.g. IT, office supplies, pipes, etc.).

EPH Group Procurement has a well-defined and comprehensive process through which it drives the EPH/subsidiary cooperation during the end-to-end tendering process. This process contains a full set of guidelines and tools, which are consistently applied across the Group.

Thanks to the standardised and unified approach towards suppliers across EPH, EPH Group Procurement activities are transparent, fair and correct and EPH is viewed as a stable and reliable partner for our suppliers.

To further foster transparency, EPH Group Procurement has actively introduced an electronic auction process (eAuction) across EPH and tripled coverage of tenders via eAuctions since 2014.

Key tenders from across our subsidiaries are published on the EPH web page (http://www.epholding.cz/en/suppliers/), which led to increased supplier participation.

Total spend covered by EPH Group Procurement is a function of the budgeting process within the organization which is based on prudent demand management and evaluation of actual needs. In general, the spend value under the umbrella of EPH Group Procurement is growing proportionately to the overall growth of EPH. In 2018 the value exceeded EUR 2 billion of non-commodity spend.

Joint cooperation among EPH Group Procurement and EPH companies' procurement has brought significant monetary savings, however there are multiple other additional aspects through which we believe EPH as well as its stakeholders are benefitting from:

- Cross border cooperation and coordination among EPH companies;
- Supplier sharing leading to increased suppliers tender participation;
- Standardised approaches and methodologies across EPH for increased transparency;
- Know-how and best practice sharing for people development;
- Group synergies in selected categories.

EPH Group Procurement is consistently focusing on the demand management aspects of procurement activities, engaging broader function across organization to drive down costs.

Finally, at EPH Group Procurement we also strive to promote environmentally friendly methods of communication using emails for document exchanges, preferring telephone conversations over physical meetings including the use of video conferencing for supplier negotiations with face to face meetings limited to the final stages of negotiations.

From 2018, we have introduced the eRFP process of tendering, where all documents sent out or received will be published via eTool, thus reducing the consumption of paper and improving process efficiency.

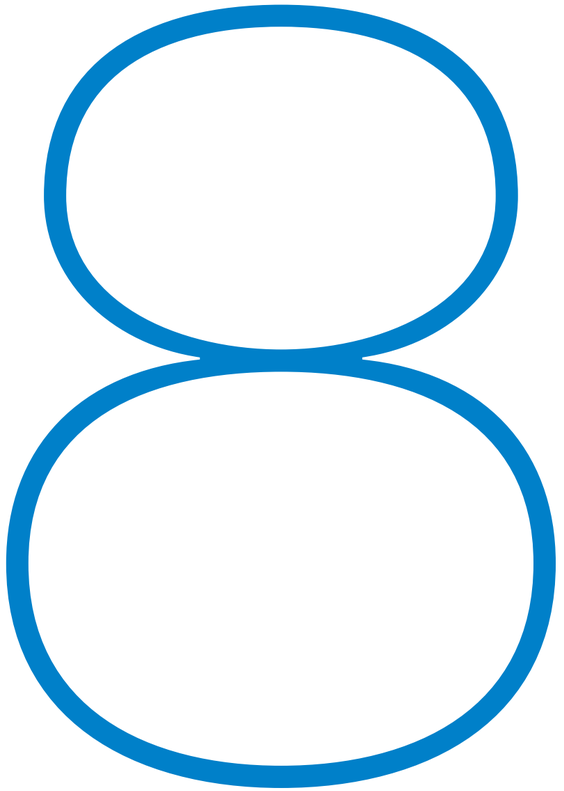
We continue the focus on paper less and efficient procurement processes. In 2018, in key companies, we have focused on P2P procurement process automation, especially via using work-flows and approval tools enabling acceptance and approvals throughout the process via internal IT systems. We will focuse especially on eOrdering as well to eliminate printing and signing purchase orders. That will also have a significant impact on further reduction of sources – it will eliminate print outs of procurement documents and need for transportation of these for approvals across sites.

From 2018, we systematically look into **automation of P2P procurement process** – it will lead to elimination of print-outs of procurement documents and need for transportation of these for approvals across sites.

46 Storage facility technology in detail, Wolfersberg.

Environment

Our environmental performance and impact
In this section of the Report, EPH reports information relating to its environmental performance and impacts during the reported period. The topics reported in this section have been driven by our materiality analysis, as described in the section 6 Priorities. Given the importance of climate change and the level of interest amongst our stakeholders in this subject, the first part of this environmental section focuses on our performance and impact in terms of climate change. In addition, given the close connection between energy and climate change management, this section reports our combined approach and footprint for both these topics. The next parts of the Report then focus on the other environmental topics identified as materially relevant to our organization.



8.1 Climate change and energy

EPH operates in industries that are essential to the development of the communities and areas where we are present or which are impacted by our products and services. These industries are, however, also associated with high energy intensity. Consequently, we place great importance on managing our environmental risks as we fully appreciate that we will only be able to operate our installations in the future if we handle these resources carefully and efficiently now. Governments, society and our stakeholder groups have increasingly high expectations that we must meet in order to secure our continued licenses to operate and avoid the financial penalties or other burdens that may be placed on us. We are proud to report that during 2018, there were no major incidents or fines at any of the businesses of EPH that resulted in significant impacts relevant to the environment. Compliance with all licensing regulations was consistently ensured across our operations.

We take environmental matters very seriously within our organization. This is underpinned by hard facts along with a number of initiatives and measures that EPH and our subsidiaries have taken or are planning to undertake. A non-exhaustive list of such measures is shown below and more detail is provided throughout this Report. However, we realize that sustainability is a journey that requires continual improvement and therefore, by working with our key stakeholders, we are committed to driving further improvement across our businesses in the upcoming periods, including but not limited to improvement of our environmental performance and reduction of our GHG footprint.

The greenhouse gases ("GHG") are those currently defined by the United Nations Framework Convention on Climate Change and the Kyoto Protocol. These GHGs are currently: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3). For more details about GHG please refer to the section 8.2 Air emissions.

There are various locations, activities or factors which are responsible for releasing pollutants into the atmosphere:

- Stationary sources include smoke stacks of fossil fuel power stations, manufacturing facilities (factories) and waste incinerators, as well as furnaces and other types of fuel-burning heating devices. In developing and poor countries, traditional biomass burning is the major source of air pollutants; traditional biomass includes wood, crop waste and dung.
- Mobile sources include motor vehicles, marine vessels, and aircraft.
- Controlled burn practices in agriculture and forest management. Controlled or prescribed burning is a technique sometimes used in forest management, farming, prairie restoration or greenhouse gas abatement. Fire is a natural part of both forest and grassland ecology and controlled fire can be a tool for foresters. Controlled burning stimulates the germination of some desirable forest trees, thus renewing the forest.
- Fumes from paint, hair spray, varnish, aerosol sprays and other solvents. These can be substantial; emissions from these sources was estimated to account for almost half of pollution from volatile organic compounds in the Los Angeles basin in the 2010s.
- Waste deposition in landfills which generate methane. Methane is highly flammable and may form explosive mixtures with air. Methane is also an asphyxiant and may displace oxygen in an enclosed space. Asphyxia or suffocation may result if the oxygen concentration is reduced to below 19.5% by displacement.

Although electricity is a clean and relatively safe form of energy when it is used, the generation and transmission of electricity affects the environment. Nearly all types of power plants have an effect on the environment, but some power plants have larger effects than others.

Electricity generation is responsible for 42.5% of global CO_2 emissions. Of this, 73% can be attributed to coal-fired power plants, which emit around 950 grams of CO_2 for every kilowatt-hour of electricity they generate, compared with approx. 350 grams for gas-fired power plants. For power plants that run on renewable energies, such as hydro, wind, solar PV and solar thermal, the only CO_2 emissions are attributable to their construction. Accordingly, for every kilowatt-hour of electricity generated, a solar PV system "emits" between 60 and 150 grams of CO_2 (depending on where the solar panels were manufactured), a wind turbine between 3 and 22 grams, and a hydropower plant 4 grams. As for nuclear power plants, even after the future need to dismantle aging facilities is factored in, CO_2 emissions still only represent 6 grams per kilowatt-hour of electricity generated – a stark contrast with the 950 grams emitted by coal-fired power plants.

Examples of EPH's key measures and initiatives in sustainability

Reducing GHG emissions

2 GW hard coal power plant Eggborough was decommissioned in 2018, reducing GHG emissions by some 7–8 million tonnes on an annualized basis compared to 2014.

Conversion into biomass

Acquisition of Lynemouth, a hard coal power plant which ceased burning coal in December 2015 and financing of its full conversion into biomass, which will save up to 1.5 million tonnes of CO_2-eq in average annually compared to coal. Production was commenced from April 2018 and combustion optimization will continue probably to the end of 2019. Net installed capacity is more than 400 MW.

Focus on co-generation

Focus on the EU supported heat and electricity co-generation in the Czech Republic and Hungary, eliminating local GHG emissions within city centers and maintaining overall fuel efficiency on 70–85% levels.

Agreement in Germany

Agreement to place the Buschhaus power plant in Germany into a security stand-by mechanism from October 2016, 14 years prior to the end of its technical lifetime, which is expected to reduce CO_2-eq emissions by some 30–35 million tonnes compared to original plans.

Security stand-by mechanism

Commitment to respect the decision of the German government to place two units of Jänschwalde power plant into the security-stand by mechanism by 2018 and 2019, respectively saving a further 7 million tonnes CO_2-eq annually and preparedness to contribute to a safe and affordable transition of the German energy system (Energiewende). The first part of this commitment was fulfilled in October 2018.

Modernization of CHP fleet

Complete modernization of the Czech CHP fleet and active involvement in the closure of a coal fired source in the district of Prague saving local GHG emissions.

Fig. 47 Examples of EPH's key measures and initiatives in sustainability.

Climate Protection targets

The reduction of GHG emissions is a key objective for European energy policy as well as in the energy policies of the EU Member States. We recognize that we have an important role to play in helping achieve this objective and that we can make substantial contributions by expanding renewable energy and by reducing the specific GHG emissions from our conventional power stations and mining facilities. In addition, in some of our businesses (e.g. SSE) we also offer our customers energy efficiency products and advice which allows them to bring down the amount of electricity and heat that they consume, and as a result also reduce corresponding GHG emissions.

According to the assessments by the Intergovernmental Panel on Climate Change (“IPCC”), climate change risks causing significant modification to the living conditions of people and the environment of the world over and resulting in significant additional macroeconomic costs. The resolutions passed by the Paris Climate Conference (“COP 21”) in December 2015 have jointly committed all involved countries to limiting the global temperature increase to significantly below 2 degrees Celsius compared with the pre-industrial level.

Though many of the details will be clarified in upcoming periods, EPH welcomes the climate change agreement, as a broad international consensus is the only way of bringing about genuine structural change at a global level that can create a more sustainable economic model. That being said, EPH believes that the transition process needs to happen gradually to minimize unnecessary risks that would hinder economic development or cause other problems that could have unimaginable impacts on the society as a whole (e.g. a longer period of black-outs etc.). In reality we also believe that this will be the case considering that:

1. Environmentally friendly sources were built only on the back of huge state subsidies, which are being substantially reduced (solar and on-shore wind) and future development might slowdown;

2. Important investments into associated infrastructure would also be necessary to support this new system

As such, a fully-fledged transition towards purely renewable and carbon free energy sources that will be able to provide security of supply in reliable base load operations (e.g. through possible inventions of energy storage) will be a longer and financially intensive process. However, EPH is prepared to take an active part in this process in our markets of operation.

The ambition of the European Union is to achieve a 40% reduction in the GHG emission by 2030 compared to 1990 as a baseline year. The EU is on track to meet its emissions reduction target for 2020 and is putting in place legislation to achieve its 2030 target. EU emissions were reduced by 22% between 1990 and 2017. Between 2016 and 2017 it slightly increased (by some 1.5 percentage point reaching approximately the value from 2015) and based on the Eurostat’s estimate it should decrease in 2018 in comparison with 2017.[1] Furthermore, some countries where we operate, such as Germany, have already made even more ambitious commitments to achieving this reduction by 2020. As a major emitter of GHG, EPH intends to make a substantial contribution and support these targets and has already taken certain important steps into this direction as described through this report.

1 Source Eurostat, downloaded on 12 June 2019:
https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=sdg_13_10&plugin=1 and
https://ec.europa.eu/eurostat/documents/2995521/9779945/8-08052019-AP-EN.pdf/9594d125-9163-446c-b650-b2b00c531d2b

Historical data on the evolution of emissions in Europe

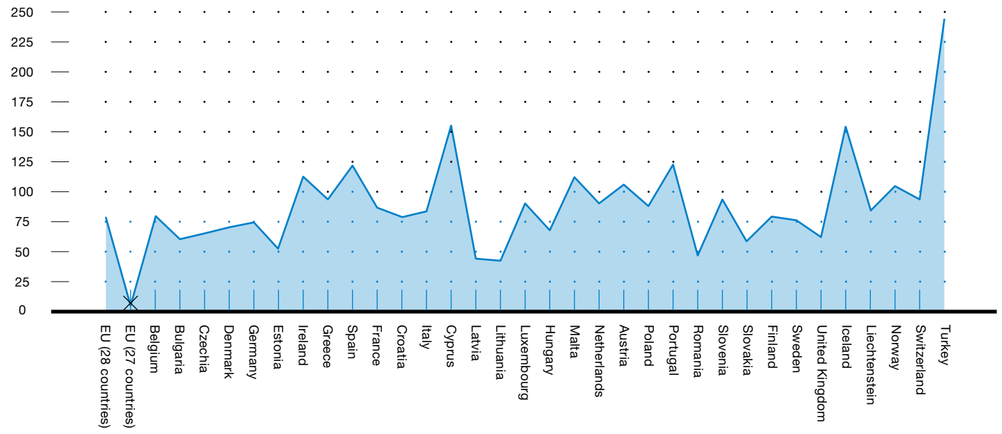


Fig. 48 Greenhouse gas emissions in 2017 in comparison with the base year 1990, index (1990 = 100). No data

Source: Eurostat: Greenhouse gas emissions, base year 1990, downloaded 17 July 2019,
https://ec.europa.eu/eurostat/tgm/graph.do?tab=graph&plugin=1&language=en&pcode=t2020_30&toolbox=type

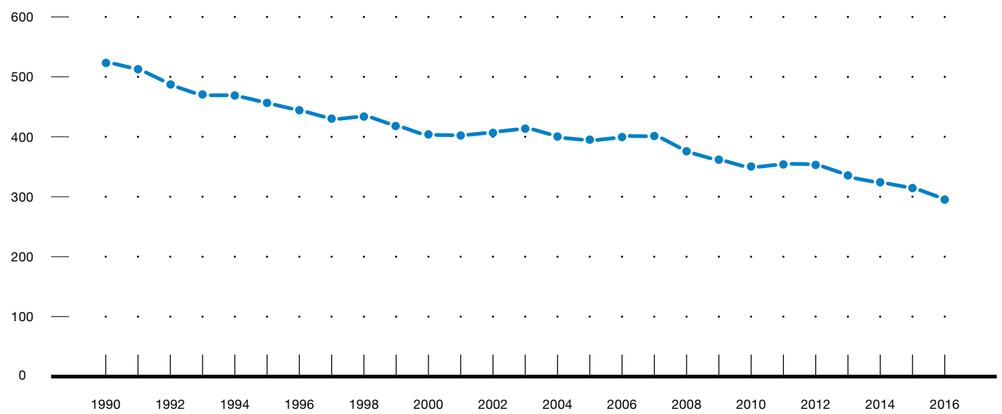


Fig. 49 Electricity generation – CO_2 emission intensity (g CO_2/kWh) – European Union.

Source: European Environment Agency: Data and maps: Data visualizations: CO_2 emission intensity, Created 17 September 2018, published 18 December 2018, last modificaton 18 December 2018, downloaded 17 July 2019,
https://www.eea.europa.eu/data-and-maps/daviz/co2-emission-intensity-5#tab-googlechartid_chart_11_filters=%7B%22rowFilters%22%3A%7B%7D%3B%22columnFilters%22%3A%7B%22pre_config_ugeo%22%3A%5B%22European%20Union%20(current%20composition)%22%5D%7D%7D

EU ETS[1,2]

The European Union regulation concerning the method of GHG emissions level monitoring, provides in detail how measurements and calculations should be conducted so that the annual GHG emission report can be prepared, and the accuracy of the adopted calculations can be confirmed during the independent verification. The financial risks associated with GHG emissions trading are reflected in our risk management approach. We seek to manage and reduce these risks through hedging. At the same time that we sell a specific amount of electricity in the future market, we procure the combustion fuel required and purchase any necessary GHG emission certificates.

The EU Emissions Trading Scheme (EU ETS) is a 'cap and trade' system to reduce greenhouse gas emissions cost-effectively. A cap is set on the total amount of certain greenhouse gases that can be emitted by installations covered by the system. The cap is reduced over time so that total emissions fall. Within the cap, companies receive or buy emission allowances which they can trade with one another as needed.

After each year a company must surrender enough allowances to cover all its emissions, otherwise heavy fines are imposed. If a company reduces its emissions, it can keep the spare allowances to cover its future needs or else sell them to another company that is short of allowances. Every year, operators must submit an emissions report. The data for a given year must be verified by an accredited verifier by 31 March of the following year. Once verified, operators must surrender the equivalent number of allowances by 30 April of that year. Trading brings flexibility that ensures emissions are cut where it costs least to do so. A robust carbon price also promotes investment in clean, low-carbon technologies.

Set up in 2005, the EU ETS is the world's first international emissions trading system. It remains the biggest one, accounting for over three-quarters of international carbon trading. The EU ETS has proved that putting a price on carbon and trading in it can work. Emissions from installations in the system are falling as intended – by slightly over 8% compared to the beginning of phase 3. In 2020, emissions from sectors covered by the system will be 21% lower than in 2005. In 2030, under the revised system they will be 43% lower. The Emissions Trading Scheme phases:

Key features of phase 1 (2005–2007):

- Covered only CO_2 emissions from power generators and energy-intensive industries.
- Almost all allowances were given to businesses for free.
- The penalty for non-compliance was EUR 40 per tonne.

Key features of phase 2 (2008–2012):

- Lower cap on allowances (some 6.5% lower compared to 2005).
- 3 new countries joined – Iceland, Liechtenstein and Norway.
- Nitrous oxide emissions from the production of nitric acid included by a number of countries.
- The proportion of free allocation fell slightly to around 90%.
- Several countries held auctions.
- The penalty for non-compliance was increased to EUR 100 per tonne.
- Businesses were allowed to buy international credits totalling around 1.4 billion tonnes of CO_2-equivalent.
- Union registry replaced national registries and the European Union Transaction Log (EUTL) replaced the Community Independent Transaction Log (CITL).
- The aviation sector was brought into the EU ETS on 1 January 2012 (but application for flights to and from non-European countries was suspended for 2012.

Key features of phase 3 (2013–2020):

- A single, EU-wide cap on emissions applies in place of the previous system of national caps.
- Auctioning is the default method for allocating allowances (instead of free allocation), and harmonised allocation rules apply to the allowances still given away for free.
- More sectors and gases included.
- 300 million allowances set aside in the New Entrants Reserve to fund the deployment of innovative renewable energy technologies and carbon capture and storage through the NER 300 programme.

Key features of phase 4 (2021–2030):

- Strengthening the EU ETS as an investment driver by increasing the pace of annual reductions in allowances to 2.2% as of 2021 and reinforcing the Market Stability Reserve (the mechanism established by the EU in 2015 to reduce the surplus of emission allowances in the carbon market and to improve the EU ETS's resilience to future shocks).
- Continuing the free allocation of allowances as a safeguard for the international competitiveness of industrial sectors at risk of carbon leakage, while ensuring that the rules for determining free allocation are focused and reflect technological progress.
- Helping industry and the power sector to meet the innovation and investment challenges of the low-carbon transition via several low-carbon funding mechanisms.

1 Calculation of Emissions intensity indicators excludes emissions from non-energy producing operations, namely eustream, SPP - distribúcia, Emissions intensity – Including heat component. Nafta and Pozagas in Slovakia and SPP Storage in the Czech Republic and in respective summary indicators, with an insignificant quantity for both years.

2 Source: EU Emissions Trading System (EU ETS), European Comission, downloaded on 12 June 2019: https://ec.europa.eu/clima/policies/ets_en

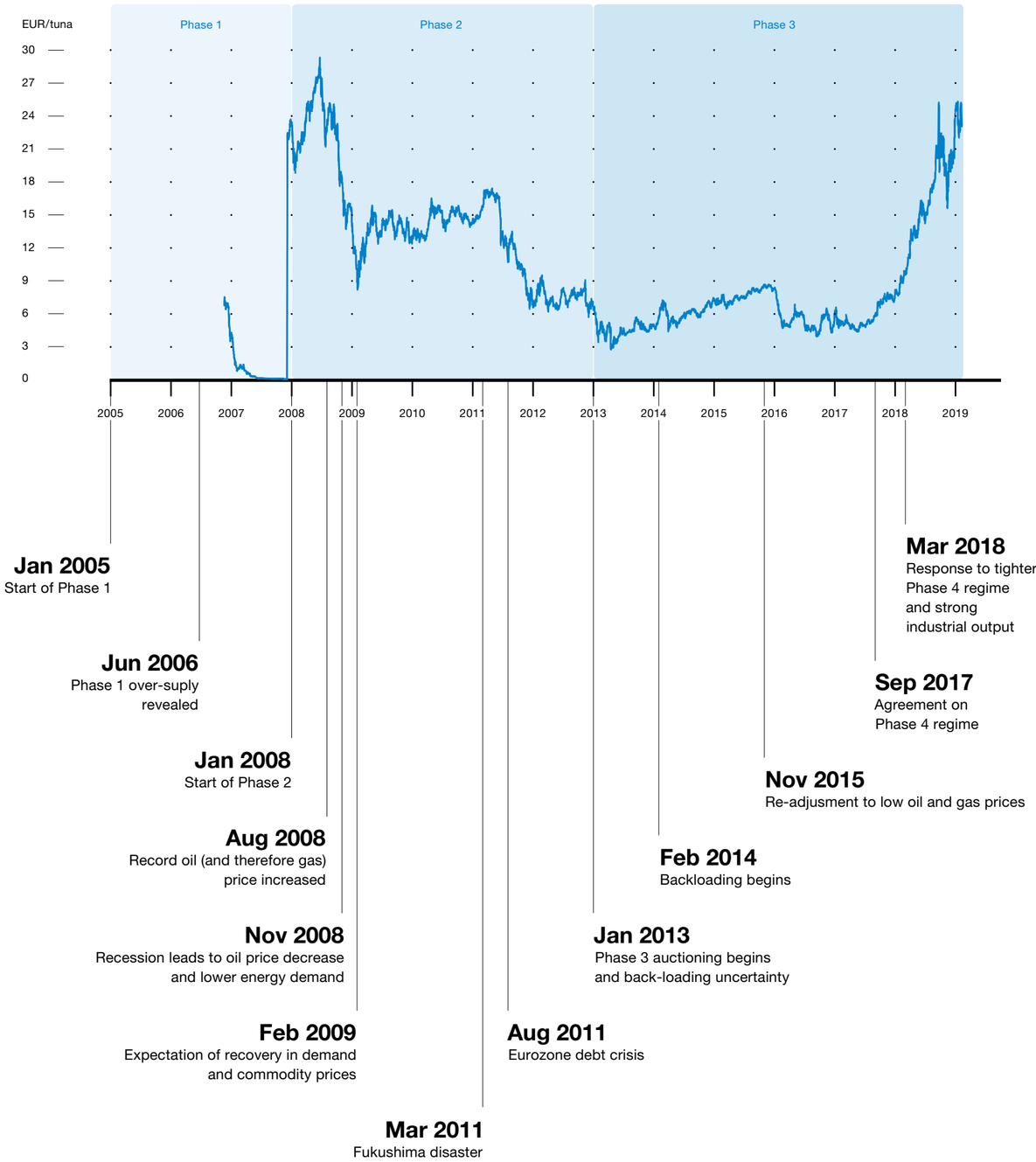


Fig. 50 Carbon prices EUR/tCO_2.
Source: Intercontinental Exchange section Data, downloaded on 17 July 2019, https://www.theice.com/products/197/EUA-Futures

Global carbon emissions reached an all-time high in 2018, an extraordinary watermark in Earth's history that underscores the need for faster and stronger action to address accelerating climate change, according to dozens of scientists. While coal use remains below the historically high level of 2013, it has grown again this year. China, the world's largest emitter saw emissions rise an estimated 4.7%. At UN climate talks in Katowice, the lead researcher Prof. Corinne Le Quéré, from the University of East Anglia, told BBC News that the rise in China was down to government activity. But emissions from cars, trucks and planes using fossil fuels continue to rise in all parts of the world. Renewables have also grown this year, but are not keeping pace with the CO_2 rise.

On 17 December 2018, the EU's negotiators agreed on CO_2 emission rules for cars and vans, as the Austrian presidency of the EU defied expectations and brokered a compromise. But the deal has already been branded as both "insufficient" by green campaigners and "unrealistic" by the car industry. According to an agreement reached by the European Parliament and the 28 EU Member States, CO_2 emissions from new cars will have to decrease by 37.5% by 2030 and 31% for vans.

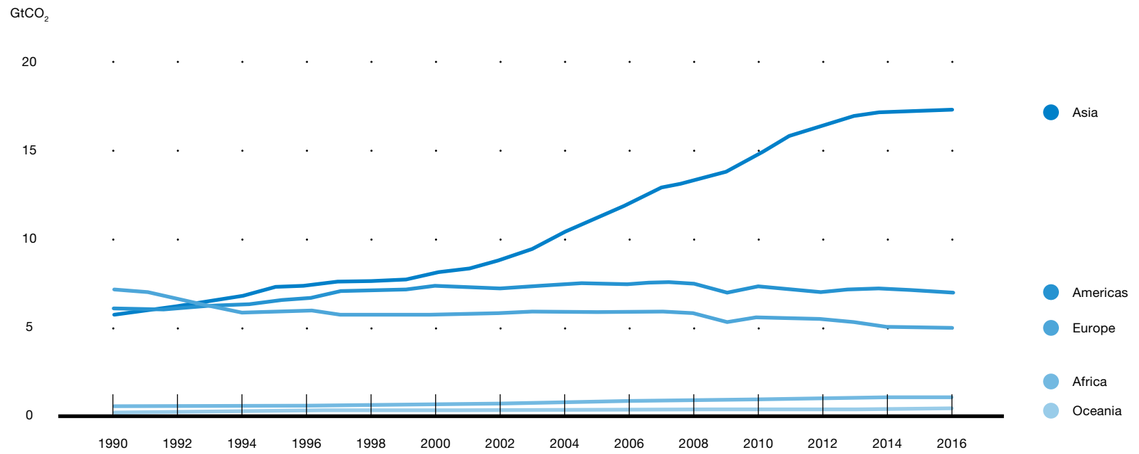


Fig. 51 CO_2 emissions from fuel combustion by region.
Source: The International Energy Agency, CO_2 Emissions Statistics, downloaded on 17 July 2019; https://www.iea.org/statistics/co2emissions/

Shares of generation by source in each OECD region

IEA Monthly Electricity Data

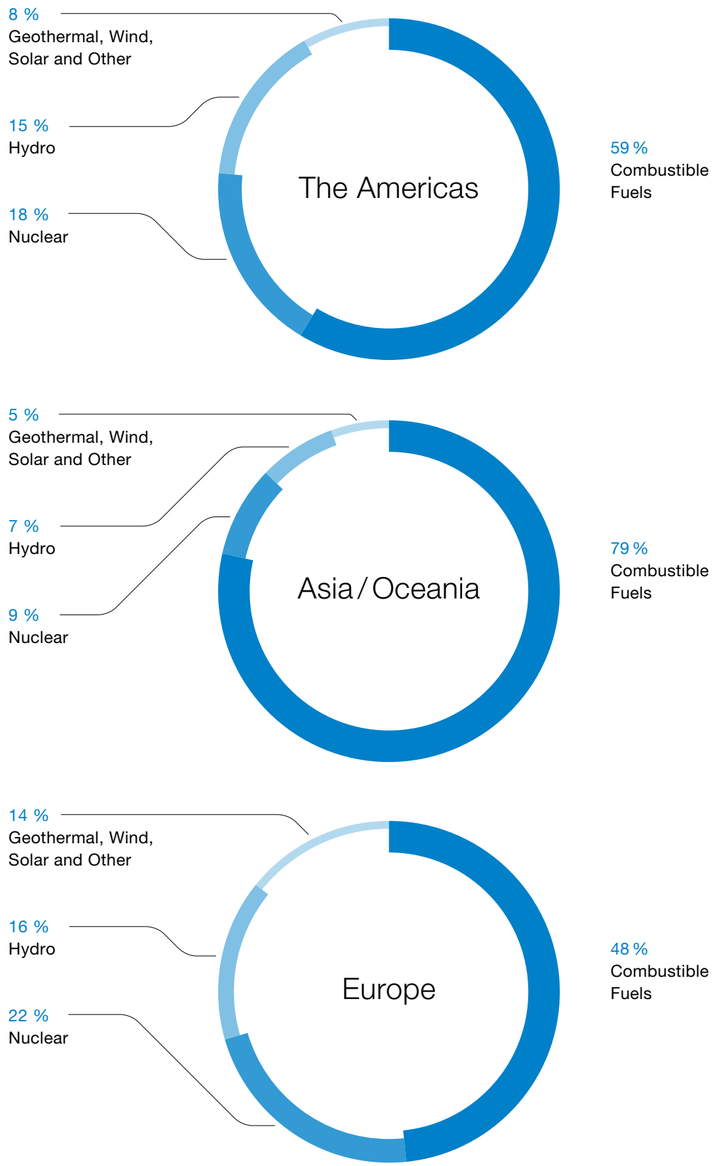


Fig. 52 Combustible fuels per continent.

Source: International Energy Agency: Key electricity data 2017 based on monthly data, p. 4. Downloaded on 17 July 2019, https://www.iea.org/media/statistics/KeyElectricityTrends2017.pdf

More than 59% of total global electricity generation in 2017 was produced from fossil fuels (coal, natural gas, and petroleum), materials that come from plants (biomass), and municipal and industrial wastes.

Future

Germany, one of the world's biggest consumers of coal, will shut down all 84 of its coal-fired power plants over the next 19 years to meet its international commitments in the fight against climate change, according to government commission. Germany's ruling coalition will move quickly to begin implementing the recommendations of a government-appointed commission for exiting coal power by 2038, Economy Minister Peter Altmaier told German broadcaster ARD[1]. The plans call for shutting down the last of Germany's coal-fired power plants by 2038 at the latest and providing at least EUR 40 billion in aid to regions affected by the phase-out. The plan to eliminate coal-burning plants as well as nuclear means that Germany will be counting on renewable energy to provide 65%to 80% of the country's power by 2040. In 2018, renewables overtook coal as the leading source and accounted for 41% of the country's electricity.

2020 targets

The EU's Renewable energy directive sets a binding target of 20% final energy consumption from renewable sources by 2020. To achieve this, the EU countries have committed to reaching their own national renewables targets ranging from 10% in Malta to 49% in Sweden. They are also each required to have at least 10% of their transport fuels come from renewable sources by 2020. All EU countries have adopted national renewable energy action plans showing what actions they intend to take to meet their renewables targets. These plans include sectorial targets for electricity, heating and cooling, and transport; planned policy measures; the different mix of renewables technologies they expect to employ; and the planned use of cooperation mechanisms. Another goal for 2020 is to achieve 20% improvement in energy efficiency.

Emissions should drop by 20% from 1990s to have 4,576 mt of GHG, but this is above the current prediction for 2020 (which says that emissions to be: 4,218 mt with existing measures or 4,187 mt with additional measures). Now it seems that in 2020 emissions could be 21% lower in comparison with 2005.

A new target for 2030

Renewables will continue to play a key role in helping the EU meet its energy needs beyond 2020. EU countries agreed in 2014 on a new renewable energy target of at least 27% of EU's final energy consumption by 2030, as part of the EU's energy and climate goals for 2030. On 30 November 2016, as part of the Clean Energy for All Europeans package[2], the Commission published a proposal for a revised Renewable Energy Directive to make the EU a global leader in renewable energy and to ensure that the 2030 target is met. On 14 June 2018 the Commission, the Parliament and the Council reached a political agreement which includes a binding renewable energy target for the EU for 2030 of 32%, with a clause for an upwards revision by 2023. Energy efficiency should improve by 32.5%. GHG emissions should be lower by 40% or 78.6 mt per year.

2050 target

From -80% to -95% or 157 mt per year, targeted amount of GHG is 1,144 mt (for -80%) or 286 Mt (for -95%) in 2050.

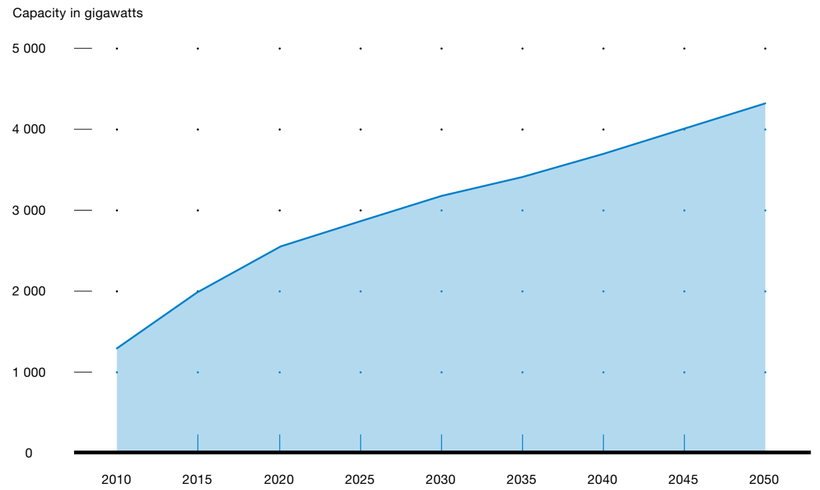


Fig. 53 Projected installed renewable energy generation capacity worldwide from 2010 to 2050.

Source: Statista: Projected installed renewable energy generation capacity worldwide from 2010 to 2050 (in gigawatts), downloaded on 19 July 2019; https://www.statista.com/statistics/217270/global-installed-hydropower-generation-capacity/

1 Source: Thomson Reuters: Germany to move ahead quickly on implementing coal exit, 27 January 2019, downloaded on 17 June 2019 from https://de.reuters.com/article/us-energy-coal-germany-idUSKCN1PL001

2 Source: Clean energy for all Europeans, available here: https://publications.europa.eu/en/publication-detail/-/ publication/b4e46873-7528-11e9-9f05-01aa75ed71a1/language-en?WT.mc_id=Searchresult&WT.ria_c=null&WT. ria_f=3608&WT.ria_ev=search

Emissions, emission intensity and energy consumed in EPH

The GHG intensity of our operations decreased by approximately 6% for EPH overall in 2018. However, our countries of operation have substantial differences in GHG intensity. This can for example be illustrated by the difference between our Czech, Hungarian and German operations. The GHG intensity of our German operations is relatively higher as lignite is the main fuel and use of co-generation is limited although the trend shows gradual decrease. Our Czech operations are also lignite based, however they are run in co-generation mode, producing heat and electricity simultaneously which lowers their overall GHG intensity. Finally, our Hungarian operations also run in co-generation mode, but are based on gas which means that they have comparably lower GHG intensity.

However, as explained previously, absolute GHG emissions in Germany decreased in 2018 and will decrease significantly in the upcoming periods due to some assets being placed into the security stand-by mechanism and future development of the coal business. For example, the agreement to place the Buschhaus power plant into the security stand-by mechanism from October 2016 is expected to reduce GHG emissions by some 30–35 million tonnes CO_2-eq in total compared to the original plans.

The situation is similar for our operations in the UK where the GHG intensity is 33% lower year-on-year. The facts behind this reduction are: Eggborough power plant stopped production in March 2018, Lynemouth power plant started production in April but with negligible emissions and SHB and LAN gas fired plants have stable low intensity (under 400 tonne CO_2-eq/GWh each).

In the UK the total GHG emissions drop by 2.7 million tonnes CO_2-eq in 2016 compared to 2015, 1 million tonnes CO_2-eq in 2017 and additionally by 0.5 million tonnes CO_2-eq in 2018 due to Eggborough's phase-out. In addition, the full conversion of the Lynemouth hard coal power plant into biomass avoided up to 1.5 million tonnes CO_2-eq per annum on average. Contrary to this, total emissions coming from SHB and LAN were higher than in 2017 as these assets operated under the Group for the whole of 2018 whilst only Q4 in 2017.

GHG intensity for our operations in Hungary was 247 tonnes CO_2-eq/GWh in 2018, reflecting the fact that the CHP operations are efficient and powered mainly by natural gas.

The GHG intensity of our operations in Italy was at 533 tonnes CO_2-eq/GWh in 2018, reflecting the combination of efficient CCGTs and the more conventional facility at Fiume Santo.

Finally, our operations in Slovakia have the lowest GHG intensity (2018: 10 tonnes CO_2-eq/GWh) due to their wide-scale use of renewables, biogas generation and some photovoltaic. In 2017, the intensity was 27 tonnes CO_2-eq/GWh, decrease in the reported period is driven by SSE, where much less power was produced from OCGT.

Total direct GHG emissions for our EPH portfolio of companies was 17.8 million tonnes CO_2-eq in 2018, representing an increase by 1.8 million tonnes CO_2-eq compared to 2017.

Though most of our business from a financial perspective sits within EPIF, their corresponding GHG emissions were less than 30% of the total and underlines the fact that within EPIF we operate predominantly pure infrastructure assets with marginal carbon footprint and highly efficient co--generation plants. Total direct GHG emissions for our EPIF sub-holding increased by 3% or 0.2 million tonnes CO_2-eq from the prior year, mainly due to increased production in the Czech Republic. Since materially, all GHG emissions from EPIF subholding arise from combustion, the trend in GHG emissions is also closely aligned with the trend in energy consumption data between the two years. Total energy consumption for EPIF was 63.9 PJ in 2018, increase of 7% from 59.9 PJ in 2017. Hence, energy and GHG emissions both increased in 2018 mainly due to increased production.

Logistics consumed 0.1 PJ in 2018, this is in line with previous years.

Though closely aligned, the energy consumption trend does not exactly follow the GHG emissions trend since it also reflects changes in fuel mix, and their correspondingly different contribution to GHG emissions. The main fuels used in EPIF in both years were lignite, natural gas and hard coal. Recently, there is also consumption of biomass and waste reported. This is a result of new capacities obtained based on the merger of Plzeňská energetika and Plzeňská teplárenská. There were also other fuels used in some of our operations but in aggregate these were minor and under 1%.

Most of the GHG emissions in both years came from our businesses within the EPPE sub-holding. Total direct GHG emissions in EPPE increased by 1.6 million tonnes CO_2-eq in 2018 or 14% compared to 2017 (equal to 13.0 million tonnes CO_2-eq in 2018). This rise was mainly driven by new acquisitions partially compensated mainly by lower power production in Italy. Still the GHG emissions are lower in 2018 compared to 2015 by 1.7 million tonnes CO_2-eq, or 12% (2015: 14.7 million tonnes CO_2-eq), mainly due to reduced production from the Eggborough plant in recent years with its end in March 2018. On the other hand, in 2018, Lynemouth produced similar amount of electricity from biomass as in 2015 from hard coal, but the with minimum carbon footprint in 2018 compared to 1.3 million tonnes CO_2-eq in 2015. As with EPIF, the trend in direct GHG emissions from the EPPE sub-holding closely follows the trend in the underlying energy consumption data. Total energy consumption in EPPE increased by 35% to 207.8 PJ in 2018 from 153.6 in the prior year. Main fuels used in operations were natural gas, hard coal and biomass. More detailed quantitative information on our GHG emissions and energy performance is included in the appendix.

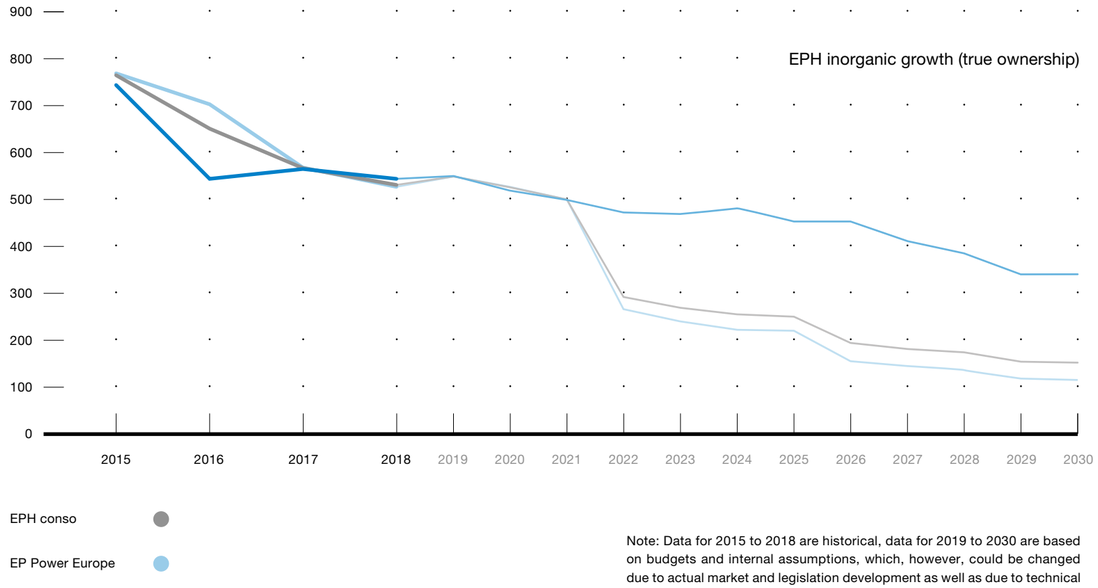


Fig. 54 Emissions intensity – Including heat component (ton of CO_2-eq/GWh).

Note: Data for 2015 to 2018 are historical, data for 2019 to 2030 are based on budgets and internal assumptions, which, however, could be changed due to actual market and legislation development as well as due to technical aspects of our plants. It could be also influenced by future acquisitions or divestments.

Calculation of Emissions intensity indicators excludes emissions from non-energy producing operations, namely eustram, SPP - distribúcia, Nafta and Pozagas in Slovakia and SPP Storage in the Czech Republic.

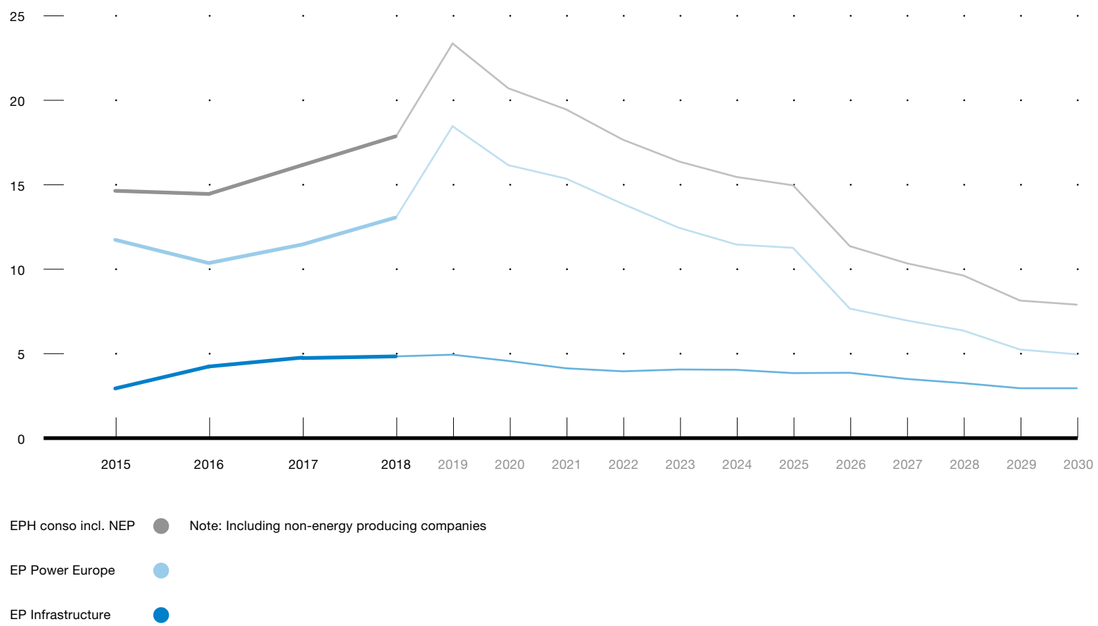


Fig. 55 Total CO_2 Emissions (mt).

Emissions and emission intensity between 2015 and 2030

In Figure 56 we present historical data for the period 2015 to 2018 and forecast data for 2019 to 2030. This forecast is based on the currently available information and assumptions about consolidated subsidiaries. Thus, effects of acquisitions, divestments, closures or conversion projects are included in the above-presented data. This, of course, could change in the upcoming years as the situation on the energy market is developing as well.

The change of emissions between 2019 and 2030 is influenced by the following.

Effects preserving from the past are (all affecting EPPE):

- 2015: acquisition of Eggborough, a coal power plant and EP Produzione, gas plant will cause an increase in emissions;
- 2016: Buschhaus power plant transferred to security stand-by mechanism (no production and a drop in emissions);
- 2017: acquisition of two gas and one coal plant and a smaller biomass station, mainly the coal plant will increase emissions in the following years;
- 2018: Eggborough power plant was decommissioned; Lynemouth power plant started production after a coal-to-biomass conversion, which will cause an improvement in emissions.

Effects in 2019 and the near future:

- 2019: acquisition of the French portfolio (coal and gas) will have the largest impact on the emissions we consolidate; minor impact of Irish acquisitions (coal and gas);
- 2022: an increase in power production due to an additional acquisition of shares of Slovenské elektrárne with only a minor impact on emissions (a rise of nuclear share anticipated);
- Ongoing CO_2 savings due to a lower power production and changes in infrastructure.

The above-mentioned effects will also have an impact on the power production, which should increase between 2019 and 2022 and should be mainly driven by the acquisition of the French portfolio and an increased share in Slovenské elektrárne. A gradual decrease is expected due to an anticipated coal phase-out in Europe in the following years.

For a better comparison we analyzed a development only on our portfolio from 2015. This means that we focused on the key performance indicators of the companies which EPH owned at the end of 2015 and track its performance until 2030. This enables us to see our business excluding the impact of acquisitions. During that period, EPH's portfolio 2015 is saving more than 60 mt or 50% of emissions produced. Main impacts are:

- Eggborough decommissioned the coal plant in 2018;
- JTSD Group (lignite plants):
  - Buschaus voluntarily placed to security stand-by (no generation) in 2016;
- Lower production from coal due to phase-out.

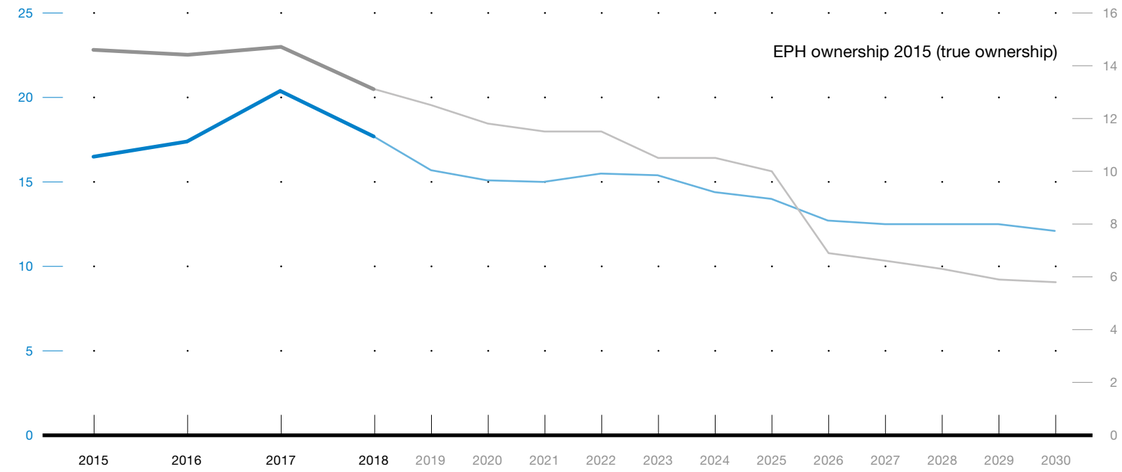


Fig. 56 Development of companies consolidated by EPH between 2015 to 2030. These companies are: BERT, Pražská teplárenská, Plzeňská teplárenská, Elektrárny Opatovice, United Energy, Stredoslovenská energetika, MIBRAG, EP Produzione, Helmstedter Revier, Ebborough, moreover consolidaed are also companies which have emissions but do not produce power: Eustream, NAFTA, SSP - distribúcia and SPP Storage and finally EPET, which does have nor power production neither emissions.

Data for 2015 to 2018 are historical, data for 2019 to 2030 are based on budgets and internal assumptions, which, however, could be changed due to actual market and legislation development as well as due to technical aspects of our plants.

EP Infrastructure

EP Infrastructure

Approximately 90% of EPIF's EBITDA is derived from gas transportation, gas and electricity distribution and gas storage activities that are very marginal emitters of GHG emissions. GHG emissions from these activities are effectively linked only to compressor stations within our gas transmission, gas storage and exploration businesses. In total, the infrastructure / distribution part of EPIF produces approximately 335 thousand tonnes CO_2-eq per annum. These GHG emissions were produced mainly by eustream via its natural gas fuelled compressor operations amounted to only 296 thousand tonnes CO_2-eq in 2018, which is a substantial reduction as compared to previous levels due to the refurbishment of the facilities. For example, the corresponding GHG emissions were 439 thousand tonnes CO_2-eq in 2012.

A smaller part of EPIF's business (approximately 10% of 2018 EPIF's EBITDA) is concentrated around heat infrastructure in the Czech Republic and Hungary, which is a unique type of asset specific mainly to the regions of Eastern and Northern Europe. EPIF owns and operates approximately 1,300 km of central district heating networks that distributed 14.7 PJ of heat (through hot water within the pipelines) to over 385 thousand customers in the Czech Republic. Together with heat supplied in Hungry it is in total almost 26 PJ of heat supplied to district heating networks (before heat losses in networks). Such centralised systems provide a meaningful environmental advantage, given that the co-generation heating unit is usually located outside of the main city perimeter leading to a reduction of GHG emissions within the most crowded areas.

EPIF is an environmentally responsible operator and we continue to commit significant investment in order to further decrease our GHG emissions footprint, including initiatives such as a complete changeover of the car fleet within EPH, whereby most of the vehicles in the fleet are less than one year old and hence meet all of the latest GHG emissions criteria.

EP Power Europe

EP Power Europe

EPPE comprises the following core operations:

- Italian operations represented by EP Produzione (acquired in 2015) and Biomasse Italia and Biomasse Crotone (acquired at the end of 2017);
- UK operations currently represented by Lynemouth Power (acquired in 2016 and coverted from coal to biomass) and Langage and South Humber Bank CCGT plants (acquired in 2017), former Eggborough power plant (acquired in 2015 was decommissioned in 2018);
- German operations represented by MIBRAG (initial acquisition in 2009 with an additional share increase in 2012), Saale Energie[1] (acquired in 2012) and Kraftwerk Mehrum (acquired in 2017).

Through the transactions between EPH and Enel (relating to acquisition of 33% stake in Slovenské elektrárne) and with Vattenfall (relating to the acquisition of a 50% stake in its German lignite assets rebranded to LEAG), EPPE acquired minority stakes, or stakes without management control and as such these are not fully consolidated.

Our acquisitions in the power generation segment already include significant low and zero carbon assets as underlined by the following figures:

- 89% of the net installed capacity of the 3.8 GW acquired in Slovakia is carbon free technology;
- 73% of the acquired installed capacity in Italy is based on modern gas fired CCGT low carbon technology and based on the acquisitions from 2017 of Biomasse Italia and Biomasse Crotone we added another 73 MW of net installed capacity in biomass;
- the acquisition of the coal power plant Lynemouth in the UK and its conversion into biomass unit with net installed capacity of more than 400 MW.

At the same time, we are well aware of the fact that our fleet also consists of a number of carbon intensive assets. This is fundamentally the result of a lack of viable alternative technologies at scale in some areas where we operate. As a matter of fact, EPH has only acquired hard coal or lignite fueled power plants in markets that are or will physically be unable to secure stable power supplies from alternative sources (Germany, the UK, Sardinia). We are convinced that rejecting the operation of coal sources in markets with no physical alternatives is an unacceptable gesture that ignores the basic needs of citizens in such countries. The fact that EPH is prepared to take on the role of provider of this basic security of supply service in such markets does not mean that we are not conscious that our role is only temporary and more importantly, it does not mean that EPH will not actively contribute to the fulfillment of European or local environmental targets.

Each of the markets where we operate or where we aim to establish our operations is very specific, with unique determinants of its current and prospective energy mix (e.g. geography, natural resources, legislation). In order to preserve the security of supply and economic continuity of a given country, it is our view that any change of the energy mix needs to happen gradually whereby all market participants from legislators, through to energy companies all the way to financing institutions need to behave rationally and responsibly in order to make such a transition successful. At EPH, we have adopted a separate approach to each of our markets of operations and have carefully considered their respective energy market situation. Hence, all our actions and plans need to be viewed from the perspective of the respective country's prevailing energy market conditions.

1 Since Saale Energie is an equity investment it has not been consolidated in this Report as a control approach has been followed in reporting the sustainability data.

United Kingdom

Eggborough power plant played a crucial role in securing the electricity supply in the UK market, with its extremely tight reserve margins. Following agreement with the authorities in the UK, Eggborough entered into a Supplemental Balancing Reserve regime in December 2015 and served as a strategic reserve for the TSO until February 2017, which was a result of our continuous dialogue with stakeholders.

At the beginning of 2017, Eggborough entered a capacity agreement with National Grid, and was ready to provide power namely in the winter of 2017–2018 but failed to qualify for the capacity agreement in period from October 2018 to September 2019. Thus, decommissioning was planned and realized during 2018. Under the scheme, the overall GHG emissions were decreasing significantly in recent years: 0.5 million tonnes CO_2-eq in 2018 compared to approximately 1.0 million tonnes CO_2-eq in 2017, 2.1 million tonnes CO_2-eq in 2016 and 4.7 million tonnes CO_2-eq emissions in 2015.

In line with our strategy to build a sizeable and lasting presence in the UK market and diversify into the renewables segment, EPH acquired Lynemouth power plant, a hard coal power plant, and converted it into biomass. Major works were finished in 2018 and Lynemouth is operating under CfD (Contract for Difference) from June 2018. However, combustion optimization is still ongoing in 2019. The plan is to operate the power plant as a base-load unit generation with about 2.3 TWh (equivalent to the annual consumption of approximately 0.7m homes) of low carbon emission electricity production under the contract with the UK Government until 2027 for 100% of station output.

Lynemouth power plant stopped burning hard coal in December 2015, which alone resulted in a 1.3 million tonnes reduction in CO_2-eq in 2016 compared to 2015. The same amount of CO_2-eq is saved every year thanks to the biomass technology used. Between 2016 and 2018 emissions were negligible.

From September 2017 we have in our portfolio two gas fired power plants, South Humber Bank and Langage, these assets increased our power production by almost 6,000 GWh in 2018 as well as it rose our total GHG emissions. On the other hand, emission intensity remain stable for these plants and the overall trend within all our assets in the UK is diminishing.

Italy

We own and operate a fleet of four modern, efficient and active CCGT power plants (total installed capacity of 3.1 GW) in Italy as well as one OCGT power plant in Sicily (0.2 GW) and one hard coal power plant in Sardinia (0.6 GW). One oil unit (0.3 GW) is authorized but it is mothballed. And from the end of 2017 we added to this portfolio two new biomass plants: Biomasse Crotone (0.027 GW) and Biomasse Italia (0.047 GW out of which 0.001 GW is photovoltaic).

EPH is decommissioning two older oil units (Fiume Santo Unit 1 and Unit 2) and is focusing its strategy on the more efficient gas generation units. This strategy, together with other measures, was reflected in a lower GHG emissions intensity for the Italian assets in 2018 of 510 kg whilst in 2017 it was 529 kg and in 2016 it was 551 kg of GHG per MWh of net electricity produced.

The situation in Sardinia, where the Fiume Santo power plant is the key generation source on the island, is different and EPH believes that local production of hard coal power is irreplaceable to ensure a stable and non-intermittent energy supply. However, the Fiume Santo power plant has also already decommissioned older units in line with valid legislation and environmental requirements. Fiume Santo is expected to remain as the backbone of power supply in Sardinia for the foreseeable future.

Germany

In 2013, EPH decommissioned the Mumsdorf power plant, which caused GHG emissions within MIBRAG to decrease by over 40% or approximately 800 thousand tonnes CO_2-eq p.a. In 2015, we agreed to voluntarily participate in the security stand-by mechanism that was being set up by the German government in relation to our Buschhaus power plant. This effectively shortened the power plants' lifetime by 14 years. The plant enetered into the security stand-by mechanism in Q4 2016 and hence reduced GHG emissions by over 2 million tonnes CO_2-eq p.a. and approximately 30–35 million tonnes CO_2-eq for its remaining technical life time[1].

Following the entry of the Buschaus plant into the security stand-by mechanism, we will only own smaller combined heat and power generation units in MIBRAG that are mainly producing power for our mining operations (please note that the majority of the machinery is powered by electricity and not by oil / diesel).

EPH acquired 690 MW hard coal power plant Mehrum in 2018 with production higher than 2 TWh and about 2 million tonnes CO_2-eq of GHG emissions annually. EPH's position in Germany is influenced by our acquisition

EPH's position in Germany is influenced by our acquisition of a 50% stake in LEAG. With regard to LEAG's CO_2 emissions, we plan to save more than 100 million tonnes in comparison with the previous owner until 2030. This amount corresponds to nerly two years of current production. For more details please refer to section 3.2 Lausitz Energie Verwaltungsgesellschaft.

1 It is assumed that power plants will only be called into operation for a very limited number of hours until 2020 and then decommissioned while the original business plan was to operate the power plant until approximately 2030.

8.2 Air emissions

We have invested EUR 100 million within EOP towards reduction of dust, SO_X and NO_X emissions in the last four years, four out of six boilers have been refurbished and EOP now meets the strict IED requirements for all our units, which has led to a reduction of almost 50% of these emissions.

The biggest atmospheric pollutants associated with our activities are sulphur (SO_2), nitrogen oxides (NO_X), and particulate matter that can be generated in the following ways.

Sulphur dioxide emissions

The combustion of sulphurous coal is the primary source of SO_2 emissions. Two methods by which we can reduce our SO_2 emissions are by improving desulphurisation equipment and by increasing the proportion of natural gas in our energy mix. SO_2 causes acid rain, which is harmful to plants and to animals that live in water. It also worsens respiratory illnesses and heart diseases, particularly in children and the elderly.

Nitrogen oxide emissions

Nitrogen oxide (NO_X) is mainly generated from the combustion of nitrogen contained in the air at high temperatures. For example, the combustion of gas or coal in our power plants is connected with NO_X emissions. This gives us a special responsibility to achieve further reductions in NO_X emissions. In almost all large plants these pollutants are measured continuously through analysers installed on stacks, while in small plants it is done periodically through analysis and measurement campaigns or by using statistical parameters. NO_X contributes to ground-level ozone, which irritates and damages the lungs

Particulate emissions

Coal-fired power plants emit dust particles, despite highly sophisticated filters. Particulate emissions results in hazy conditions in cities and scenic areas and coupled with ozone, contributes to asthma and chronic bronchitis, especially in children and the elderly.

Mercury emissions

Coal-fired power plants also emit small amounts of mercury. New European legislation sets limits for the first time on mercury emissions from large coal-fired power plants throughout Europe. Therefore, we are developing the respective technical measures to reduce our mercury emissions.

Total emissions

Total SO_2, NO_X emissions increased in relation to the volume of generated energy, however, dust emissions remains on the level of the previous years.

In terms of SO_2, NO_X and dust emission intensity both EPPE and EPIF shows stable ratios. More detailed quantitative information on our air emissions performance is included in the section 11.1 GRI Index.

Air pollution emission standards limit the amounts of some of the substances that power plants can release into the air. Some of the ways that power plants meet these standards include:

Burning low-sulfur-content coal to reduce SO_2 emissions. Some coal-fired power plants co-fire wood chips with coal to reduce SO_2 emissions. Pretreating and processing coal can also reduce the level of undesirable compounds in combustion gases.

Different kinds of particulate emission control devices treat combustion gases before they exit the power plant:

- Bag-houses are large filters that trap particulates.
- Electrostatic precipitators use electrically charged plates that attract and pull particulates out of the combustion gas.
- Wet scrubbers use a liquid solution to remove PM from combustion gas.

Wet and dry scrubbers mix lime in the fuel (coal) or spray a lime solution into combustion gases to reduce SO_2 emissions. Fluidized bed combustion also results in lower SO_2 emissions.

NO_X emissions controls include low NO_X burners during the combustion phase or selective catalytic and non-catalytic converters during the post combustion phase.

Company	Examples of key measures and initiatives in sustainability
PLZEŇSKÁ TEPLÁRENSKÁ Více než energie	In Plzeňská teplárenská, two projects were prepared that are related to legislative requirements for the tightening of the Industrial Emissions Directive (IED), related investments included: • DeNO$_x$ of boiler K3; • Intensification of wet scrub desulphurization – a modern technology of desulphurization in a flue gas absorber. Realization of these will take place in the period 2019–2020 and we expect investment expenses in the order of several tens of million EUR.
EOP ELEKTRÁRNY OPATOVICE	The most significant projects in the area of ecology in EOP were realized in the period 2014–2016. A total investment of approximately EUR 100 million was spent to meet the new emission limits. The works included reconstruction of 4 boilers, construction of 4 new dust separators and 2 desulphurization lines. In 2017 there were partial projects related to further finalisation of the mentioned investments. These included retrofits of boiler, FGD and electro-separators and amounted to about EUR 280 thousand.
SLOVENSKÉ ELEKTRÁRNE	Wood chips and pellets are used in Vojany power plant (Slovenské elektrárně) for co-incineration during unit start-ups. This saves gas consumption and increases usage of renewable biomass.

Fig. 57 Examples of key measures and initiatives in sustainability.

Attitude of Plzeňská teplárenská to emission mitigation

Case Study

901 MW
Installed capacity – heat

274 MW
Electric power production capacity

518 km
Length of heat transmission network

6 MW
Installed capacity – cooling

2,787
Connection points

50,000
Connected households

Fig. 58 Basic data about Plzeňská teplárenská.

Plzeňská teplárenská, a.s. is the biggest producer of heat and electric energy in Pilsen and in the whole region. It produces heat for heating as well as for water heating, electric energy and cooling energy for more than ¾ of customers in Pilsen. It is the biggest heat supplier in Pilsen with growing number of connection points.

Fuels used are lignite and biomass. Biomass is co-incinerated with coal from 2003 (where biomass is approximately one third from the total volume) as well as there is another boiler for biomass only (from 2010).

Benefits from biomass co-incineration as well as from separate burning are:

- Lower consumption of fossil fuels;
- Lower SO_2 emissions and thus lower consumption of additives;
- Lower CO_2 emissions;
- Green bonuses.

59 Waste combustion plant in the Pilsen region which is a part of Plzeňská teplárenská a.s.

The modern facility ZEVO Pilsen burning waste provides **ecological source of energy**.

Plzeňská teplárenská, a.s. was previously solely owned by the City of Pilsen. Due to the merger of Plzeňská teplárenská, a.s. with Plzeňská energetika a.s. in 2018 its portfolio grew for water, sewage and condensed gas distribution into Škoda construction area.

Since 2016, Plzeňská teplárenská has started to participate in communal waste liquidation from the whole region transforming it into energy. The modern facility ZEVO Pilsen burning waste provides ecological source of energy with capacity of 10.5 MWe / 31.7 MWt. Due to use of modern technology its emission production is very low.

ZEVO is designed to burn 95 thousand tonnes of communal waste per year. In 2018, ZEVO Pilsen burned 91 thousand tonnes of waste which was composed mainly from communal waste (79%) and over- sized waste (13%). It is assumed to produce 400 thousand GJ of heat and 36 thousand MWh of electric energy.

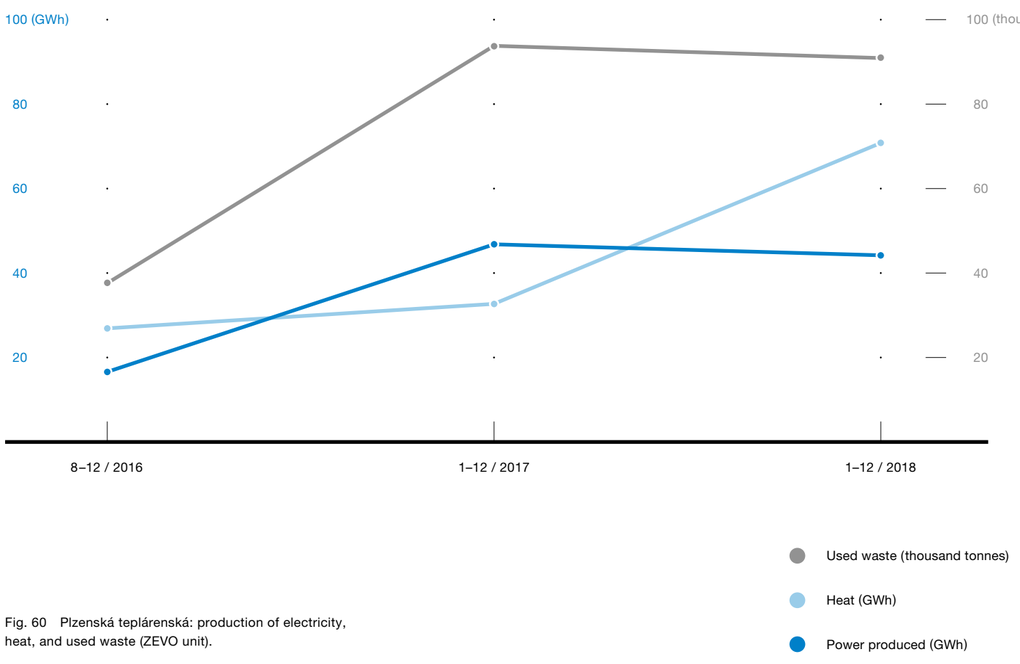


Fig. 60 Plzenská teplárenská: production of electricity, heat, and used waste (ZEVO unit).

Update on Lynemouth conversion project Case Study

Lynemouth Power Station (LPL) is in the final stages of a major, multi-million pound conversion program that will see the former coal-fired plant convert to full biomass electricity production, becoming a flagship site for the UK's renewable energy sector.

It is one of the largest and most complex civil engineering projects undertaken in the UK over recent years and once complete, will be at the forefront of clean electricity generation, powering circa 450,000 homes and contributing to future net zero carbon emission targets.

This complex and collaborative industrial development has involved a nationwide supply chain of the highest expertise, including approximately 150 highly-skilled, onsite LPL staff and partnerships with many contractor organizations. It has included the construction of six new, 59 meter tall silos housing 50,000mt of biomass wood pellets at Lynemouth, the development of bespoke, large-scale warehouse and fuel-handling facilities at the Port of Tyne, resurrection of the train line from the port directly to the plant, and a comprehensive overhaul of all onsite materials.

Commissioning started early in 2018 with CfD being awarded on 23 June 2018. Lynemouth Power Station is now successfully working through combustion optimisation and once complete, will be a trailblazing site for renewable energy in Europe, generating 420 MW of gross electricity using sustainably-sourced biomass wood pellets, primarily from the USA and Canada.

For more details go to www.lynemouthpower.com

61 Lynemouth biomass power station.

8.3 **Water**

SSD **reduced the amount of oiled water** (hazardous waste) generated in the detention tanks at the power stations.

Amount of disposed oiled water decreased between 2016 and 2018 by almost 2,500 tonnes or by almost 100%.

Water is extremely important to our operations for

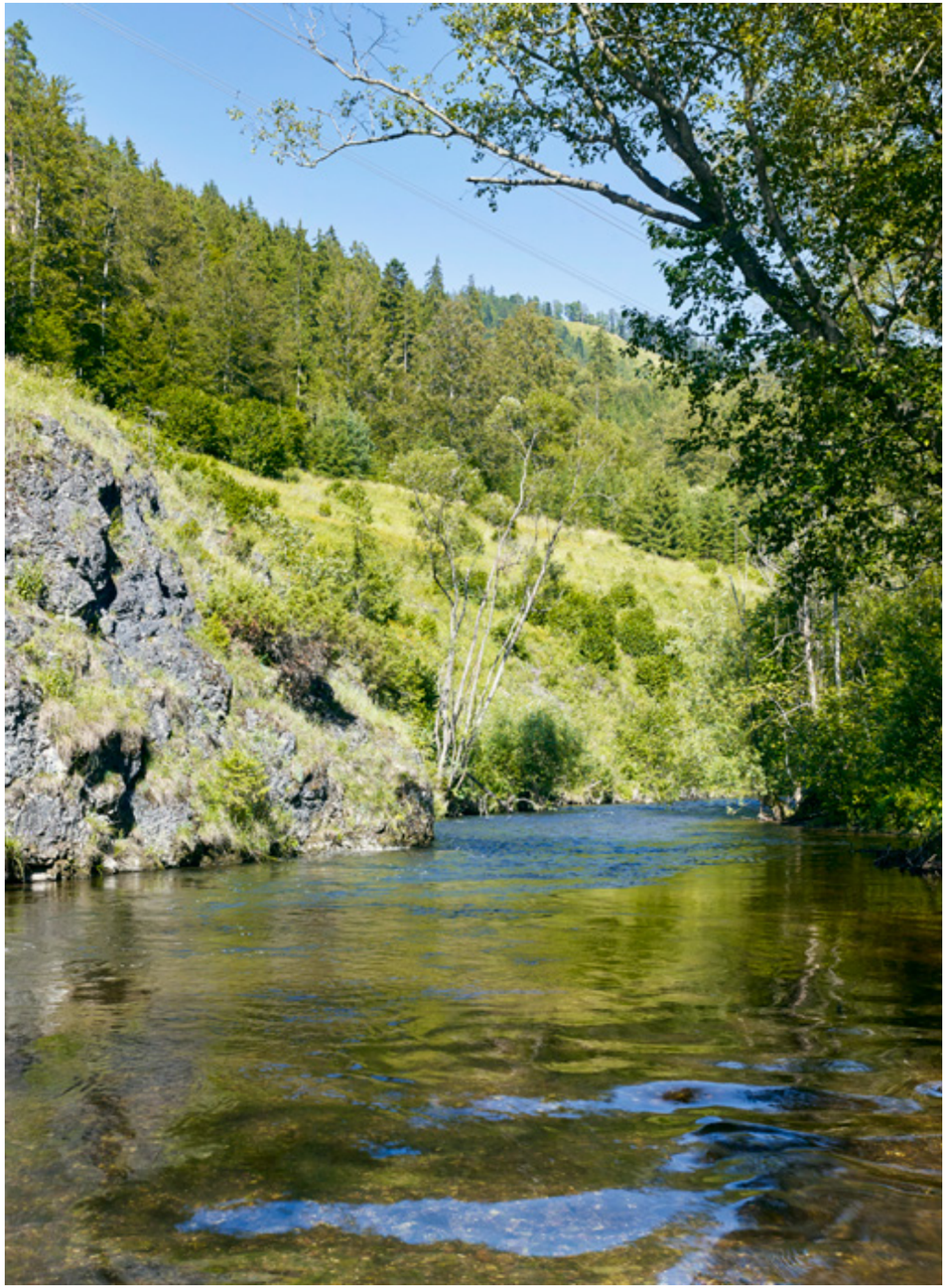
- Heat distribution where water is the main medium;
- Coal mining;
- Production of electricity.

In these areas water is the direct energy source (hydro power plants) or acts as a cooling agent. The efficient use of water is a top priority for all our operations and our aim is to always consume the minimum quantities of water required to run our production processes. For example, we strive to ensure that our use of water exerts minimum impact on natural resources when we supply our thermal power plants with cooling water. We also endeavour to provide the best protection for aquatic habitats and other ecosystems against adverse effects from supplying our mining operations with water.

We aim to reduce our water footprint through methods including the reuse and recycling of water, more intensive use of pumped water from opencast mines and collected rainwater, as well as recovering and re-using process water from operations. Our internal wastewater treatment and continuous monitoring of the process ensure that potential contamination is eliminated. We provide verifiable compliance with the statutory threshold values, enabling us to avoid negative impacts on nature and human health.

Water withdrawal from our operations increased to 2,404 million m^3 in 2017 (2017: 2,005 million m^3). Since water is overwhelmingly used for cooling in closed flow-based cooling in our plants, the trend in water discharge from our operations followed the same trend as withdrawal, increasing to 2,295 million m^3 in 2018. This year-on-year increase in water withdrawn and discharge was caused mainly by higher power production.

The vast majority of water extracted is sourced from surface water sources (sea or river) with smaller amounts from ground water sources, mainly in EPPE, and minor amounts sourced from the municipality in both EPIF and EPPE. More detailed quantitative information on our water performance is included in the section 11.2 Performance indicators.



62 View of the Čierny Váh river, under the pumped-storage hydro power plant.

A lake in sight – the Cottbuser Ostsee will be the largest pit lake in Germany Case Study

The Cottbus-Nord opencast mine restoration works are under way in order to **convert the former mine into the Cottbuser Ostsee lake** that will expand recreational opportunities in the Cottbus region and create new nature conservation areas.

From a mine to Cottbuser Ostsee lake

The Cottbus-Nord opencast mine, together with the neighboring Jänschwalde opencast mine, supplied the Jänschwalde power plant with lignite for over three decades. Preliminary preparations for opening up the opencast mine began in the mid-1970s. The first coal train entered the power plant on 8 April 1981, the last one on 23 December 2015.

Mining activities in Cottbus-Nord opencast mine ended according to plan with the depletion of its approved lignite reserves. It was the first opencast mine in the Lusatian mining district to close after 1990. With the decommissioning of mining and conveyor complexes the site entered a new phase of post-mining landscape restoration. The envisioned Cottbuser Ostsee lake will soon be a reality: only a few kilometres from the centre of Cottbus a 1,900-hectare lake is being created and will be completed by the mid-2020s. The most recent inland water body addition to the Lusatian Lakelands will be the largest lake in the Federal State of Brandenburg and Germany's largest pit lake. Besides tourism and water sports, the Cottbuser Ostsee will be valuable to the fisheries sector. The eastern banks have been reserved for nature conservation.

In 2018 the preparation work for flooding the Cottbuser Ostsee was completed. Extensive construction volumes can be seen in this impressive project.

63 Creation of Cottbuser Ostsee, the future largest lake in Brandenburg and Germany's largest pit lake, is a demonstration of our strong commitment towards rehabilitating after mining.

Parameteres of Cottbuser Ostsee

Future water level

between **61.8** and **63.5** m above sea level

Target water level

62.5 m above sea level

Final lake volume

126 million cubic metres

Shore length

26 kilometres

64 LEAG prepared the lake bed and slopes for Cottbuser Ostsee and the gradual flooding from the Spree River started in April 2019.

Removing and dismantling the large-scale equipment

2016: In order to be able to begin with the landscaping of the large-scale Cottbuser Ostsee project, the complete infrastructure of the opencast mine and all large-scale equipment were dismantled, scrapped or disassembled for resale immediately after the end of the coal mining. The dismantling of the railway facilities alone comprised 30,000 tonnes of track ballast, 18,000 sleepers, 26 points, 11 kilometres of tracks and four bridges. The overburden conveyor bridge with its bridge excavators and two bucket chain excavators formerly used in the pit were scrapped.

Lake basin created and banks secured

2016–2018: Day by day around 140 earth-moving machines were in use at the Cottbuser Ostsee lake construction site to move a total of 20 million cubic metres of earth. The soil removal ensures a two metres minimum water depth of the lake. The excavated earth masses were used to fill the former coal railway exit and to shape the future Bärenbrücker Bay.

Concurrently, the bank profiling took place in the south, west and north of the lake. In the east, the shore zones and offshore islands created with soils deposited using large-scale opencast mining equipment were stabilised by vibrocompaction measures in order to create a safe post-mining landscape. Between 2012 and 2019, a total of 46 million cubic metres of soil were compacted.

In 2017, LEAG organised an open day of the construction site on the future lake bed. Thousands of visitors seized the opportunity to inform themselves about the construction measures with guided tours that were organized.

Infrastructure ready for flooding

The water level will be in accordance with the original hydrological situation before mining north-east of Cottbus. The Cottbuser Ostsee lake is flooded with water from the Spree River which comes via the Hammergraben at the Lakoma Weir. For this purpose, a new diversion dam was built on the watercourse and an inlet structure on the lake's embankment. The two buildings are connected by an underground pipeline. A fish screen on the diversion dam meets the ecological requirements for fish protection.

Filling of the lake is steered over the flooding management system of the Lusatian Lakelands. The extraction of water from the Spree River is only carried out if there is sufficient water in the river after primarily ensuring the interests of the people living along the Spree River and the protection of flora and fauna. About 12% of the lake water will come from rising groundwater.

An outlet structure will integrate the Cottbuser Ostsee lake into the regional water network via the Schwarzer Graben ditch. The steerable structure is to be erected from 2021. A fish ladder with several basins ensures ecological continuity for aquatic life.

Good quality lake water

With rapid flooding and the high proportion of Spree River water it has been calculated that the quality of the lake water will be sufficient, needing no additional improvement measures. The pH value is estimated to be 7.5 to 8.

Communal projects

The number of ideas developed to expand the touristic infrastructure of the lake are an indicator of the great interest the people from the surrounding areas are showing. They are planning ports or water sports facilities, getting involved in the cycle path network around the lake or are already thinking about guidelines for the navigability. The first of these ideas is already becoming reality: in 2018, the city of Cottbus started the construction work of the quay wall of the future city harbour.

Oasis for nature protection

The future east banks of the Cottbuser Ostsee lake will be characterized by diverse features, islands and shallow waters. There is considerable potential for developing a wide variety of habitats and making it a suitable nature conservation area.

8.4 **Biodiversity**

> SSD continued to protect birds of prey by installing technical devices **to prevent the death of birds** on electrical lines.

Nature and biodiversity conservation

We ensure the general protection of biodiversity and sustainable development by using technical elements, preventing the death of birds on electric lines. Our commitments in the field of nature and landscape protection are related to the protection of birds living in the wild in the region of Central Slovakia. In cooperation with the regional authorities of the State Nature Conservancy of the Slovak Republic, we carried out the relocation of stork nests from support points of power lines. Together with predators they represent the most endangered group of birds in electrical line injuries.

We installed nest supports in exposed locations. On predefined risk support points of HV and VHV lines we installed 498 bracket protectors and flight deflectors. During comprehensive reconstruction projects, we replaced 293 support points with a more environmentally appropriate Antibird, which is designed to prevent the death of birds on electric lines. Our activities are still aimed at the safe operation of the distribution network, while reducing the potential death of protected bird species.

65 Prevention of the death of birds on electric lines by using spirals.

Protecting biodiversity

EPH is well aware of the importance of biodiversity and the value of ecosystems and of the environmental benefits they provide and places great importance on the responsible management of natural resources during all stages of our operations. Protecting biodiversity in the areas where we operate is a top priority for our organization and where relevant, the direct and indirect impact of our activities on local ecosystems and biodiversity is assessed with the aim of not only minimising any negative footprint but also to play an active role through engagement in different projects supporting and protecting ecosystems including endangered species. EPH pays attention to recultivation projects after end of lignite exploitation or the end of the power plant's lifetime. We consistently strive to reduce waste and are committed to protecting and restoring ecosystems.

Creating new landscapes after mining Case Study

Lignite mining claims land and simultaneously **creates new landscapes**. While the mine moves forward with its excavators and conveyor systems, recultivation has already started at the dump sites.

LEAG does not mine a single tonne of lignite in the Lusatian mining district before the targets for the restoration of the landscape after mining have been set. What the new landscape will look like is decided by several years of approval procedures with public participation. It remains typical of the region but is also enriched with many new features.

In Lusatia, about four square kilometres of land are reclaimed annually from mining. Over half of the land used is afforested with mixed forest landscapes, predominantly pine, sessile and pedunculate oak trees. In addition to the green of the forest areas, agricultural land is being created as a sustainable source of income for farmers in the region. The soil and crop yield management is carried out in cooperation with local agricultural companies and supported by scientific experts.

For the animal world, countless bushes and shrubs, nesting aids, purposefully placed boulders and stone heaps, stumps and Benjes hedges serve as shelter and starting point for the repopulation of the dumps. Biomonitoring on site documents the diversity of species development. The post-mining landscape of the Welzow-Süd opencast mine is regarded as an important bird habitat both nationally and throughout Europe. For a large number of species, it is breeding ground, food source or resting area all year round. An ornithological nature trail draws attention to the special features of the post-mining landscape and its characteristic birdlife.

Exploring restored landscape at Welzow-Süd opencast mine

The most recent landmark on the recultivated dump areas of LEAG's Welzow-Süd opencast mine is an approximately 2.5-kilometre-long elevation, built according to historical records directly in front of the Geisendorf manor house, the cultural forum of Lusatian lignite. Here, the Steinitzer and the Geisendorfer Berg rise strikingly to an absolute altitude of 150 to 165 metres, comparable to the original terrain (the so-called "Steinitzer Alps"). During the reconstruction of the Geisendorf-Steinitzer terminal moraine after mining operations the catchment area of the "Steinitzer Spring" was also restored – a unique hydraulic engineering project for Germany.

The 30-metre-high Wolkenberg was also created with dumped soils within sight of the new "Steinitzer Alps". The tradition of winegrowing in Lusatia has been reactivated again with a vineyard on the south facing slope. Red and white wines are produced, among them the Rote Riesling, which is considered a rarity in Germany. The vineyard is managed by Wolkenberg GmbH.

66 200 species of birds registered ornithologists in the post-mining area of Welzow-Süd opencast mine, including many endangered breeding birds. The hoopoe is the leading symbol of the ornithological trail.

Gut Geisendorf – The intersection of cultural and post-mining landscape

For centuries the manor house Geisendorf stood in the centre of the village of the same name. The approval of the mining plans for the Welzow-Süd opencast mine included the resettlement of the village of Geisendorf. Only the listed manor house remained in its place and has been used as a cultural forum for Lusatian lignite since 1998. In the meantime, the Welzow-Süd opencast mine has now passed by and a 600-hectare renaturated area is growing here. With the reconstruction of the Geisendorf-Steinitzer terminal moraine, a place of exploration is being created directly in front of the Geisendorf estate, where the cultural landscape will meet post-mining land.

The return of the horse chestnut tree

For several years now, LEAG has cultivated the tradition of celebrating International Tree Day on 25 April with a festive planting campaign in the post-mining landscape. In 2018, the tree of the year was the one of special importance for the opencast mine Welzow-Süd, the horse chestnut tree. With the planting of five trees in the newly established recultivation area of the Geisendorf-Steinitzer terminal moraine, a cultural-historical circle was completed: Before the opencast mine reached Geisendorf, lignite planning had already established that the horse chestnut trees there were of cultural-historical value and were to be saved. Of the eight chestnuts that belonged to the tree population of the Geisendorf estate, it was possible to successfully gather cuttings and nuts before it was claimed for mining purposes in the early 2000s. Around 5,000 horse chestnuts and 120 cuttings for propagation were saved in the generic conservation programme, more than 8,000 young trees have since been planted in the post-mining landscape, most of them between 2003 and 2009.

Ecosystem research in opencast mining

In the middle of the Welzow recultivation area, large-scale mining equipment was used to create the area for a worldwide unique experiment. Since 2005, the Brandenburg Technical University Cottbus-Senftenberg (BTU), in collaboration with researchers from other institutions in Germany and abroad, have been investigating the artificially created spring catchment area “Hühnerwasser”. This spring basin is named after a historically documented stream close to Spremberg and was left to free succession from the very beginning. Plants and animals could establish themselves uninfluenced by humans. Thus, it has been possible for scientists to accompany the development of an ecosystem from “point zero” – whereby this point of zero of the six-hectare area is no longer visible today. The Hühnerwasser continues to be of great interest to the researchers, which is why LEAG and BTU extended their usage agreement in 2018.

Energiewald Welzow

A short rotation plantation with Robinia (Pseudoacacia) for the production of biomass was established years ago in the opencast mine Welzow-Süd with regional cooperation partners. The topics of variety selection, yield capacity, practical harvesting possibilities as well as using these areas planted with Robinia for agricultural uses are recorded and evaluated on a scientific basis.

67 26,000 vines thrive on Wolkenberg in the post-mining landscape of the opencast mine Welzow-Süd. The six-hectare vineyard slope is a reminder of the former village Wolkenberg.

8.5 **Waste**

SSD is **prioritizing recovery of waste** prior to its disposal.

SSD uses recycling facilities for construction waste, ferrous and non-ferrous metals, cables, discarded equipment, including electrometers, batteries and oils.

Waste management

The principle underlying our approach to waste management can be summarized as ‘avoidance, recovery, disposal’. Through our efficiency programs we firstly endeavor to avoid generating waste in the first place. Waste that cannot be avoided is subject to recovery wherever possible. Recovery mainly concerns materials which can be reused in construction (as in the case of combustion ash; regenerated into such things as oils and batteries or recycled as in the case of some types of ash and gypsum).

Waste products that cannot be recovered are disposed of at the locations that are most suitable, depending on the type of material. Accordingly, all residual waste is disposed of in compliance with statutory regulations.

Our approach to waste management is to continuously increase over time the percentage of hazardous and non-hazardous waste sent for recycling and to minimize waste going to landfill as much as possible. Despite this, in 2017 we noticed an increase of landfill, which was mainly connected with Lynemouth biomass conversion (annual rise of by 1 thousand tonnes).

Total waste other than by-products was 284.9 thousand tonnes in 2018 which is by 15% higher than in 2017. Increase is driven by EPPE (+21%) while in EPIF we recognized decrease (-10%). The annual rise by 21% in EPPE between 2017 and 2018 was caused mainly by several factors. Increase in Italy was driven by inclusion of waste production in Biomasse Italia and Biomasse Crotone in 2018 – these assets were acquired in December 2017, thus it has no effect on total waste reported in 2017. Increase in waste production coming from Eggborough power plant’s decommissioning was balanced by the lower waste production in Lynemouth where the most crucial conversion works were finished in 2018. MIBRAG’s waste reported is connected to activities in the Profen mine area, mainly site clearance / clean-up of old contaminated sites.

Waste other than by-products from EPIF decreased in the reported period by 10% to 38.5 thousand tonnes but represented only around 14% of total waste from within EPH.

In addition to waste, we also generated 1,997.6 thousand tonnes of by-products in 2018, slightly more in comparison with the prior year. As we are frequently able to sell the by-products for further commercial use when they are collected from our facilities we report waste and by-products separately. However, in order to be transparent, we have reported our by-products and waste data together as a summary in this section with more detailed quantitative information on our waste performance in the section 11.2 Performance indicators.

In Mochovce nuclear power plant (Slovenské elektrárne), several projects are underway **to reduce radioactive waste**.

As an example, a system for onsite processing of radioactive liquids is being implemented. This ensures the volume of radioactive substances will be 95% lower. This means that a much lower amount has to be delivered to and processed by external companies which are dealing with radioactive waste and higher safety will be achieved as well.

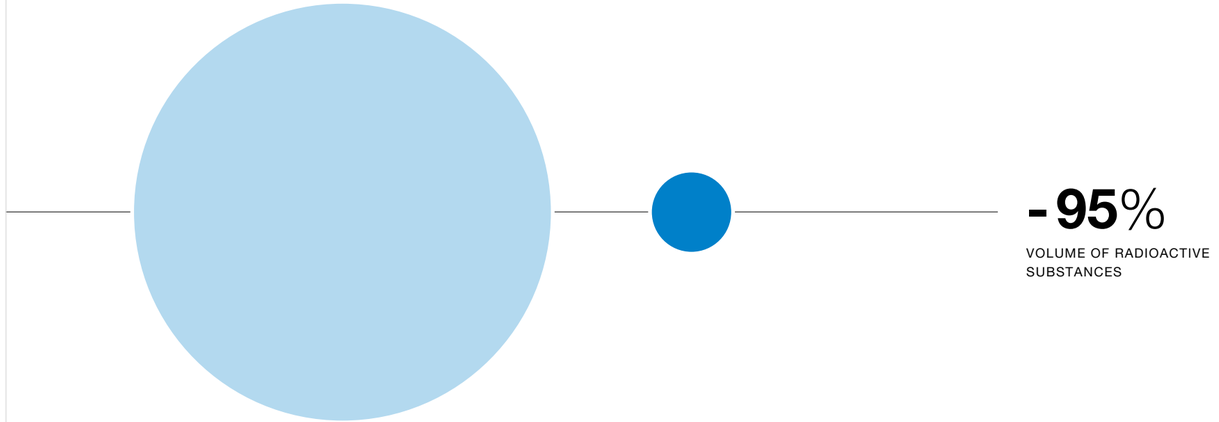
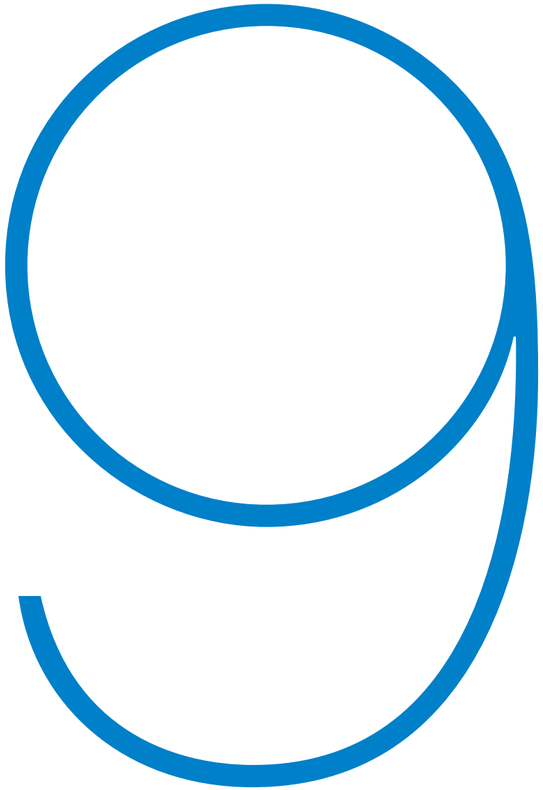


Fig. 68 Decrease in volume of radioactive substances.

Social

In 2018, more than **246 thousand hours** were dedicated and committed to training & development of the employees within EPH Group.



9.1 Health and safety system

EPH group subsidiaries provide 10,711 employment positions across Europe, of which 98% are non-executive. Safety is one of the main strategic goals incorporated into the health and safety (H&S) system. We are also focused on effective process, control and human resource management.

The H&S system is decentralized at the Company level and most of the companies are certified by OHSAS 18001 to ensure a high level of H&S. The number of certified companies increased to 67%, compared to 64% in 2017. We are aware of the importance of the occupational H&S, including work well-being.

Our management denominates eight pillars in line with OHSAS 18001 principles which are about strategy, goals, decreasing injuries and necessary changes to improve existing conditions:

TOP MANAGEMENT COMMITMENT

- MAKE DECISION WITH RESPECT TO H&S
- PROVIDE REGULAR UPDATE AND REPORTS

REMUNERATION SYSTEM

- H&S INTEGRATED INTO REMUNERATION SYSTEM

CONTROL AND RISK REDUCTION

- REGULAR INSPECTIONS RELATED TO EACH RISK ASSESSMENT
- INSPECTION INCLUDES CONTRACTORS AS WELL
- DETECT OF RISK FACTORS

FOCUS ON BEHAVIOR

- IDENTIFICATE THE IMMEDIATE AND ROOT OF UNSAFE BEHAVIOUR
- APPLY CORECTIVE MEASURE
- INCREASE RESPONSIBILITY FOR BEHAVIOUR OF THE COLLEGUES ON WORKPLACE

While the H&S results demonstrated by EPH and our subsidiaries are improving, the ultimate goal is to have all operations and sites capable of maintaining a sustainable “Zero harm” objective. In order to meet this goal, EPH will continue to support our subsidiaries in reinforcing preventive tools, in keeping attention on contractor management, elimination of unsafe behaviours, share best practices and lessons learned and continue to promote safety leadership at all organizational levels to drop number of accident to the minimum.

Employees regularly complete safety training to prevent injuries, protect themselves and the health of their colleagues. This approach ensures a decreasing rate of injuries for EPH and its subsidiaries and a year without any fatality. The injury frequency rate decreased to 3.71 in 2018 (2017: 3.83)*.

PREVENTIVE APPROACH

- REDUCE ACCIDENTS
- DETAILED ANALYSE THE PREVIOUS ACCIDENTS
- DEFINE OF CORRECTION BASED ONEXPERIENCE

EMERGENCY AND FIRE PROTECTION

- PLANS FOR EMERGENCY SITUATION
- REGULAR DRILLS AND TRAININGS
- ENHANCED FIRE PROTECTION

TRAINING AND COMMUNICATION

- H&S TRAININGS AND INTRANET COMMUNICATION
- SAFETY RULES TRAINING FOR EMPLOYEES AND CONTRACTORS
- ONLINE TRANING MATERIAL

HEALTH PROTECTION

- PROMOTION OF HEALTH AND WELL-BEING
- MEDICAL EXAMINATIONS FOR EMPLOYEES
- HEALTH WORKING CONDITION

* Injury frequency rate reported above has been calculated as total number of Registered injuries / 1 million hours worked. Registered injury – in order to be able to report standardised injury data from across all our operations, for the purpose of this Sustainability Report, all injuries that resulted in at least 3 lost working days have been reported. This is a stricter definition than many companies use for their respective national reporting.

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
403-2	**Registered injuries – Employees**					
G4-LA6	**EP Infrastructure**					
	Czech Republic	#	13*	12	1	8%
	Slovakia	#	13	15	(2)	(13%)
	Hungary	#	3	2	1	50%
	Total – EP Infrastructure	**#**	**29**	**29**	**–**	**–**
	EP Power Europe					
	Czech Republic	#	–*	–	–	
	Germany	#	27	28	(1)	(4%)
	UK	#	–	–	–	
	Italy	#	3	1	2	200%
	Total – EP Power Europe	**#**	**30**	**29**	**1**	**3%**
	Other companies within the Group					
	Czech Republic	#	5*	6	(1)	(17%)
	Poland	#	1	–	1	
	Slovakia	#	–	–	–	
	Hungary	#	–	–	–	
	Germany	#	–	–	–	
	UK	#	–	–	–	
	Italy	#	–	–	–	
	Netherlands	#	–	–	–	
	Total – other comapnies	**#**	**6**	**6**	**–**	**–**
	Total – EPH	**#**	**65**	**64**	**1**	**2%**

Note: Registered injury – in order to be 1:1048576 to report standardised injury data from across all our operations, for the purpose of this Sustainability Report, all injuries that resulted in at least 3 lost working days have been reported. This is a stricter definition than many companies use for their respective national reporting

* This data has received limited assurance from independent auditing firm EY.

Fig. 69 Table with registered injuries.

This approach ensures that EPH and its subsidiaries have **decreased the number of injuries per year without any fatality**.

Highlights from the EPH group in 2018

SPP - distribúcia a.s.

The company continues to provide all employees with health packages to strengthen their immunity and also additional workwear (clothing, footwear) protection for bad weather. According to the Collective Agreement, SPP-D employees have the opportunity to undergo above standard medical examinations.

In March 2018, a Staff Recruitment Program for 2018 to 2022 was submitted to the Management Advisory Board. The program aims to provide a sufficient number of qualified employees for job vacancies (especially for the specialist positions), to improve the employer's promotion on the labor market and to cooperate with schools.

MIBRAG

A total of 31% of positions at the 1st leadership level was held by women. Consequently, the defined minimum quota was met. However, the quota was not met at the 2nd leadership level, where the proportion of women remained almost unchanged (20%). This might be due to the fact that this leadership level has a stronger technical background.

Three employees were injured during an explosion at the Deuben dust/briquetting plant on 26 July 2018. Two of them who suffered severe burns from the dust explosion were taken to specialist hospitals by helicopter. A further employee suffered a circulatory collapse.

According to the expert, the explosion at the Deuben dust plant was caused as a result of a series of unfortunate events. The incident itself has thus been classified as a case of force majeure. MIBRAG has prepared a concept for reinstatement of the affected side of the plant taking into account the latest technical and safety standards. However, for economic reasons, the project was abandoned, and the plant will not be reinstated for the time being.

LEAG

Our continuous improvement process is aimed at constantly reducing the consumption of resources by optimizing the use of energy and materials in all processes. To this end, we subject our activities to a regular and systematic analysis.

In our activities, we make sure that interventions in nature and the landscape are limited to the unavoidable and that appropriate compensatory measures are taken. After mining, we design attractive landscapes for people, animals and plants. We work systematically to further increase the efficiency of our plants and reduce emissions.

9.2 Employment

At EPH, we are convinced that effective management of our human resources is a prerequisite for successful operations across the different businesses. At each subsidiary level, we understand the role our employees play in helping to achieve our business targets and we realize that our employees are one of our most important stakeholders. This is even more the case in today's challenging energy market environment, when attractiveness for experienced employees with particular know-how becomes a competitive advantage for any utility company. We are aware of the ever growing competition for top talent across the markets where we operate and therefore at EPH and within our subsidiaries, we place great importance on creating and maintaining an attractive working environment where all our employees can develop and strive in most appropriate roles across the organization. The new hire rate is stable at 9% (2017: 9%) but the turnover rate slightly rose.

Within the holding structure of EPH, the HR function is decentralized and the responsibility for this lies within each subsidiary company. This allows for much greater flexibility to respond to our employee needs and is effectively a necessity in order to account for the inherent differences between our various operations, whether due to location, business area, the size of the company's workforce, unionization or other reasons. Nevertheless, from its position as the main shareholder, EPH strives to promote the trust, ownership, engagement and commitment of our employees as this has a direct impact on increasing innovation, employee morale, productivity, retention and talent attraction.

At holding level, EPH support its employees in their future development also by providing number of benefits to reach their work-life balance. Among others, these include support in both education and sport areas.

In 2018, across our operations and geographies, EPH employed 10,711 (10,237 in 2017) professionals, this increase is influenced by acquisitions in 2017 (in 2017 only proportional FTEs were included in comparison with full year FTEs in 2018). From the total FTEs, 8,825 were male employees and 1,886 were female. The percentage of women in energy industry is in line with the competitors. 88% of employees had permanent contract and 90% of EPH employees are covered by various collective employment agreement schemes.

9.3 Training and development

EPH group places great importance on the development of our employees as we recognize that our employees are our top asset and are committed to their personal development. As mentioned in the previous subsection on Employment, given that EPH uses a decentralized approach in human resources, this section draws on experience, processes and activities of some of our major subsidiaries, all of which highlight the importance each of these companies place on our most precious asset – our people. EPH group keeps stable count of training hours provided to its employees.

EPH Group's consolidated number of employees is 10,711 which is in line with the previous year.

Employee data

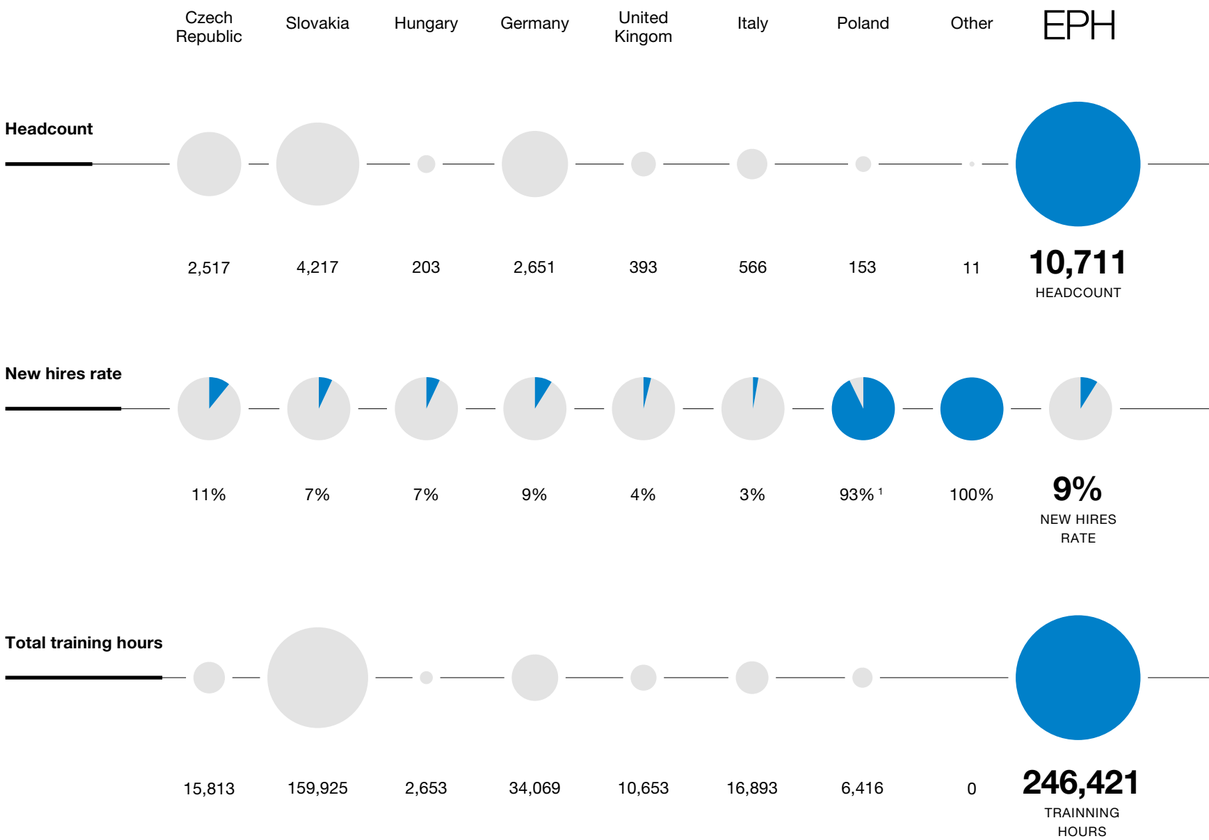


Fig. 70 Key employment statistics.

1 New hires rate was influenced by shift of employees to PG Silesia and current situation on local labour market which is under preassure due to lack of specialists and increase in wages.

EPH Foundation and donations from our subsidiaries Case Study

EPH is not only a regular and responsible taxpayer, but together with our subsidiaries we strive to take an active part in voluntary charitable projects and initiatives that go beyond the financial obligations that we have towards the state or our other stakeholders. As you can see on the graph below, EPH funded a range of activities. Majority of the amount was spent locally by our subsidiaries, and a smaller but also very important part was funded by EPH Foundation. The subsidiaries mainly supported various activities from the area of health, sport, education, culture, environment and charity. The total amount donated directly by our subsidiaries was approximately EUR 2 million. EPH Foundation funded another EUR 900 thousand.

The EPH Foundation was established at the end of 2014, which has so far participated in a number of projects such as the reconstruction of several heritage sites in Slovakia, educational and innovation activities, support of youth sport clubs in Slovakia and support of activities of civil associations in the social sector. As an example, in 2017 the Foundation helped to fund the projects in several municipalities as well as hospices within so-called foothold projects.

In total, EPH Foundation contributed more than EUR 363 thousand to grant programs in 2018. Moreover, additional EUR 537 thousand was provided to partnership programs. Division of grant programs is described on the following chart. Another EUR 522 thousand was not used in 2018 and was transferred into 2019.

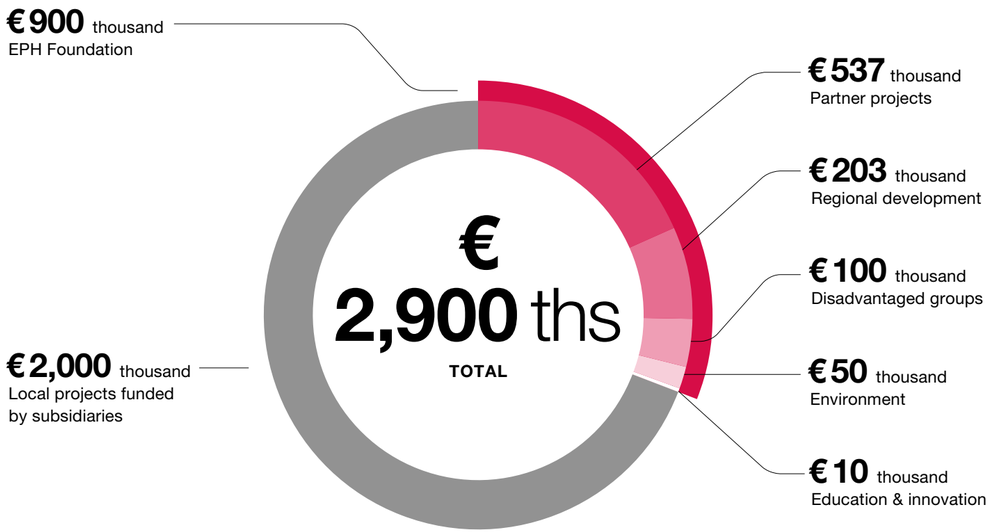


Fig. 71 Grant programs supported by EPH Foundation in 2018.
Source: Financial statements.

Our vision is based on the development and protection of spiritual, cultural and natural values, the environment, support of science, education, sports and physical education, and the protection of health, human rights and other humanitarian goals.

Nadácia EPH

Our community efforts and social aspirations led to the former creation of our own EPH Foundation. The Foundation represents an effective tool for supporting and developing civil society, and an opportunity to help people in difficult life situations, as well as a space for cooperation and partnerships in meaningful projects. We have been actively developing our activities since mid-2016.

We consider support for activities that benefit the public as an investment in developing of innovative solutions for the problems that society is facing. As the most important values we perceive the preservation of traditions, natural and cultural heritage, but at the same time we also want to reflect the needs and initiatives of regional and community development. Through our activities, we show solidarity towards disadvantaged groups and actively seek to resolve their situation. The Foundation's activities further support education, science, sports and health care.

Our vision is based on the development and protection of spiritual, cultural and natural values, the environment, support of science, education, sports and physical education and, of course, the protection of health, human rights and other humanitarian goals. Reality is challenging us to struggle with various problems. We would like to understand these problems and try to support their systematic solutions in cooperation with institutions, organizations or active individuals who have the same or similar goals.

In 2018 the Foundation supported 208 projects in six grant programs in total amount of EUR 900,308. Besides the partnering projects with other organizations of similar focus, the highest amount spent and the most projects were supported again in the program „*Municipality*" established for further development and protection of spiritual and cultural values. A program with the second highest number of projects was „*In my neighborhood*" aimed at enabling active employees to mediate support for projects and activities in their area or community and to contribute to delivering something beneficial, useful and right.

As usual, we picked three interesting projects for 2018 from different areas:

Economic Olympiad

INESS – Institute of Economic and Social Studies, in 2018 organized the first national competition in Economics and Finance for Secondary Schools – the Economic Olympiad. It is intended for students of all grades of secondary schools and higher grades of multi-year gymnasiums. The purpose of such competion is to strengthen the interest in economics among young people, to seek out talented individuals and support them in their development. In addition, the competition aims to raise the pressure to increase the share of economic education in secondary school curricula. This first year of the Olympiade was attended by 150 schools from all regions of Slovakia, and 4,200 students took part in the school round. Contestants tested their knowledge in a written test which consisted of five closed and three open questions, the best of them passed on to oral exam within the national finals, formed into TOP 10 and were awarded prizes.

72 4,200 students from 150 schools tested their knowledge in a written test, the best of them passed on to oral exam within the national finals.

Through our activities, we show solidarity towards disadvantaged groups and **actively seek to improve their situation**.

Rehabilitation for health

Asociácia pomoci postihnutým (APPA) is an independent, nonprofit organization that has provided a wide range of support for physically disabled people since 2009. APPA improves the quality of life of these fellow citizens by raising funds for the necessary aids, rehabilitation, special operations, expensive pharmaceuticals or barrier-free adjustments. Better access to information, contacts, education, sports, leisure activities, and the development of interpersonal relationships significantly improves their involvement in society.

Project „Rehabilitáciou za zdravím“ (= Rehabilitation for health) was a joint project of APPA and the EPH Foundation to financially support members of the APPA Club in financing rehabilitation and purchasing rehabilitation aids that are not covered by the health insurance fund and are financially demanding for socially disadvantaged families with a disabled member. A total of 91 applicants for a financial contribution were involved in the project and 20 of them were supported.

Hlohovec Castle

Hlohovec castle is a national cultural monument of Slovakia and the most important historical monument of the Hlohovec town. It was originally a medieval stronghold from the 13th century. The building in the shape of an irregular pentagon is the jewel of the town. Its history is connected with the noble families of the Thurzers, Forgács and Erdődes. For four decades, the Hlohovec castle was used as the premises of the Hlohovec Youth Educational Institute. After its relocation, the object was inaccessible to the public and dilapidated until 2014 when volunteers and the Hlohovec town started to work on its restoration.

Since Autumn 2018 a refurbished part of the castle has been open to visitors. Reconstruction works continue. Financial support from the Foundation was used for the complex restoration of the authentic paintings and decorative motifs of the historic room on the third floor of the castle. In the future there will be a permanent exhibition of the National History Museum, a virtual tour of the original form of the castle, a gallery with current exhibitions and a courtyard that provides space for cultural events.

Assurance

Selected KPIs are regularly audited to keep them reliable and verified.

10

Independent Practitioner's Assurance Report

To the management of Energetický a průmyslový holding, a.s.:

This report is intended solely for the management of Energetický a průmyslový holding, a.s. (hereinafter "the Company") for the purpose of reporting on Sustainability Report 2018 ("the Report") prepared by the Company for the year ended 31 December 2018.

Subject Matter Information and Applicable Criteria

The assurance engagement relates to the information marked with ("*") as set out in the Report on pages 148, 185, 192 and 200 comprising the relevant on-site operations in the Czech Republic (together "the Selected Information") which has been prepared based on the Global Reporting Initiative Sustainability Reporting Guidelines ("GRI Standards") for 2017 and that consists of: Total Energy consumption within the organisation in GJs (302-1), Total Water Withdrawal by Source in millions of m^3 (303-1), Quantity of Discharged Water in millions of m^3 (306-1) and Total Number of Work-related Injuries (403-2).

Specific Purpose

This report is intended solely for the purposes specified in the first paragraph above and for your information and must not be used for other needs or distributed to other recipients except for being disclosed in Company's Sustainability Report for the year ended 31 December 2018. The report refers exclusively to the Selected Information and must not be associated with any Company's financial statements or the Report as a whole.

To the fullest extent permitted by law, we do not assume responsibility to anyone other than the Company for this report.

Responsible Party's Responsibilities

The Company's management is responsible for the preparation, collection and presentation of the Selected Information in accordance with GRI Standards. In particular, the Company's management is responsible for internal controls being designed and implemented to prevent the Selected Information from being materially misstated.

In addition, the Company's management is responsible for ensuring that the documentation provided to the practitioner is complete and accurate. The Company's management is also responsible for maintaining the internal control system that reasonably ensures that the documentation described above is free from material misstatements, whether due to fraud or error.

Practitioner's Responsibilities

We conducted our assurance engagement in accordance with International Assurance Standards, particularly International Standard for Assurance Engagements Other than Audits or Reviews of Historical Financial Information ISAE 3000 (revised). These regulations require that we comply with ethical standards and plan and perform our assurance engagement to obtain limited assurance about the Selected Information.

We apply International Standard on Quality Control 1 (ISQC 1), and accordingly, we maintain a robust system of quality control, including policies and procedures documenting compliance with relevant ethical and professional standards and requirements in law or regulation.

We comply with the independence and other ethical requirements of the IESBA Code of Ethics for Professional Accountants, which establishes the fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The procedures selected depend on the practitioner's judgment. The procedures include, in particular, inquiry of the personnel responsible for collecting and reporting on the Selected Information and additional procedures aimed at obtaining evidence about the Selected Information.

The assurance engagement performed represents a limited assurance engagement. The nature, timing and extent of procedures performed in a limited assurance engagement is limited compared with that necessary in a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is lower.

In respect of the Selected Information mentioned above we have performed mainly the following procedures:

- Interviewed selected personnel of the Company and at selected sites to understand the current processes in place for capturing the Selected Information pertaining to the reporting period;
- Reviewed Selected Information on site covering two plants at Elektrárna Opatovice a.s. and United Energy, a.s., against evidence, on a sample basis;
- Performed off site analytical review of Selected Information pertaining to the Company's other plants in the Czech Republic and consolidation of such data;
- Re-performed, on a sample basis, calculations used to prepare the Selected Information for the reporting period;
- Assessed the disclosure and presentation of the Selected Information in the Report.

Our assurance scope excludes the conversion of different energy measures to gigajoules (GJ) which is based upon, inter alia, information and factors generated internally and/or derived by independent third parties. Our limited assurance work has not included examination of the derivation of those factors and other third party information.

We compared economic and financial data that consists of Total Sales, EBITDA, Total Equity, Total Assets and Income Tax Paid as of 31 December 2018 and for the year then ended, marked with ("*") and included in the Report on pages 77, 78, 79, and 80 with those included in the Company's consolidated financial statements as of 31 December 2018 that form part of the Company's 2018 Annual Report and found them to be in agreement after giving effect to rounding, if applicable.

Practitioner's conclusion

Based on the procedures performed and evidence obtained, we are not aware of any material amendments that need to be made to the assessment of the Selected Information for it to be in accordance with GRI Standards.

Ernst & Young Audit, s.r.o.
License No. 401

Luděk Jireček, Auditor
License No. 2164

1 November 2019
Prague, Czech Republic

A member firm of Ernst & Young Global Limited
Ernst & Young Audit, s.r.o. with its registered office at Na Florenci 2116/15, 110 00 Prague 1- Nove Mesto,
has been incorporated in the Commercial Register administered by the Municipal Court in Prague,
Section C, entry no. 88504, under Identification No. 26704153.

Appendix

11

11.1 GRI Content Index

This Report has been developed with reference to the GRI Standards. This index lists our standard and specific disclosures related to GRI categories, aspects and indicators, and refers to the pages where these issues are addressed in this report.

General standard disclosures

Strategy and analysis

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 102-14	Statement from senior decision-maker	1 Foreword	4

Organisational profile

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 102-1	Name of the organisation	1 Foreword	4
		3 EPH and its business	26
GRI 102-2	Activities, brand, products, and services	3 EPH and its business	26
GRI 102-3	Location of headquarters	3 EPH and its business	26
GRI 102-4	Location of operations	3 EPH and its business	26
GRI 102-5	Ownership and legal form	4.1 Governance	58
GRI 102-6	Markets served	3 EPH and its business	26
GRI 102-7	Scale of the organisation	11.2 Performance indicators	170
GRI 102-8	Information on employees and other workers	9.2 Employment	150
		11.2 Performance indicators	170
GRI 102-41	Collective bargaining agreements	9.2 Employment	150
		11.2 Performance indicators	170

Organisational profile (continue)

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 102-9	Supply chain	7.4 Procurement practices	102
GRI 102-10	Significant changes to the organization and its supply chain	3 EPH and its business	26
GRI 102-11	Precautionary Principle or approach	–	–
GRI 102-12	External initiatives	–	–
GRI 102-13	Membership of associations	–	–
EU1	Net installed capacity	11.2 Performance indicators	170
EU2	Net power production	11.2 Performance indicators	170
GRI 102-45	Entities included in the consolidated financial statements	2 About this Report	22
GRI 102-46	Defining report content and topic Boundaries	2 About this Report	18
		5 Stakeholders	66
		6 Priorities	70
GRI 102-47	List of material topics	6 Priorities	70
GRI 103-1	Explanation of the material topic and its Boundary	–	–
GRI 103-1	Explanation of the material topic and its Boundary	–	–
GRI 102-48	Restatement of information	11.2 Performance indicators	170
		2 About this Report	18
GRI 102-49	Changes in reporting	2 About this Report	18

Stakeholder engagement

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 102-40	List of stakeholder groups	5 Stakeholders	66
GRI 102-42	Identifying and selecting stakeholders	5 Stakeholders	66
GRI 102-43	Approaches to stakeholder engagement	5 Stakeholders	66
GRI 102-44	Key topics and concerns raised	5 Stakeholders	66

Report profile

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 102-50	Reporting period	2 About this Report	18
GRI 102-51	Date of most recent report	Imprint	218
GRI 102-52	Reporting cycle	2 About this report	18
GRI 102-53	Contact point for questions regarding the report	Imprint	218
GRI 102-54	Claims of reporting in accordance with the GRI Standards	2 About this Report	18
GRI 102-55	GRI content index	11.1 GRI Content index	162
G4-33 GRI 102-56	External assurance	10 Assurance	156

Governance

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 102-18	Governance structure	4 Governance and ethics	56

Ethics and integrity

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 102-16	Values, principles, standards and norms of behavior	4 Governance and ethics	56

Economic

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 201 Economic Performance			
GRI 201-1	Direct economic value generated and distributed		SR 2018: 74-81, or AR 2018: 50–53
GRI 201-3	Defined benefit plan obligations and other retirement plans		AR 2018: 82 (pdf)
System Efficiency			
EU11	Average generation efficiency	7.2 System efficiency	82
EU12	Transmission and distribution losse as a percentage of total energy	7.3 Access	84

Environmental

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 103 Aspect: Energy			
GRI 302-1	Energy consumption within the organisation	8.1 Climate change and energy	104
		11.2 Performance indicators	170
GRI 303 Water			
GRI 303-1	Total water withdrawal by source	11.2 Performance indicators	170
GRI 304 Biodiversity			
GRI 304-3	Habitats protected or restored	8.4 Biodiversity	137
GRI 305 Emissions			
GRI 305-1	Direct (Scope 1) (GHG) emissions	8.1 Climate change and energy	106
		11.2 Performance indicators	170
GRI 305-4	Greenhouse gas (GHG) emissions intensity	8.1 Climate change and energy	106
		11.2 Performance indicators	170
GRI 305-5	Reduction of GHG emissions	8.1 Climate change and energy	106
		11.2 Performance indicators	170
GRI 305-7	NO_x, SO_x, and other significant air emissions	8.2 Air Emissions	124
		11.2 Performance indicators	170
GRI 306 Effluents and Waste			
GRI 306-1	Water discharge by quality and destination	11.2 Performance indicators	170
GRI 306-2	Waste by type and disposal method	11.2 Performance indicators	170
GRI 307 Environmental Compliance			
GRI 307-1	Non-compliance with environmental laws and regulations.	8.1 Climate change and energy	106

Social: labor practices and decent work

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 401 Employment			
GRI 401-1	New employee hires and employee turnover	11.2 Performance indicators for new employees hires and employee turnover country region.	170
GRI 403 Occupational Health and Safety			
GRI 403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	9.1 Health and safety system	146
GRI 404 Training and Education			
GRI 404-1	Average hours of training per year per employee	11.2 Performance indicators	170
GRI 404-2	Programs for upgrading employee skills and transition assistance programs	9.3 Training and development	150

Social: society

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
GRI 205 Anti-Corruption			
GRI 205-2	Communication and training about anti-corruption tpolicies and procedures	4.2 Compliance	64
GRI 419 Socioeconomic Compliance			
GRI 419-1	Non-compliance with laws and regulations in the social and economic area	–	There have not been any significant fines or incidents of non-compliance during the reporting period.

Social: responsibility

Profile Disclosure	Description	Reported in Section	Reference page / Explanations
Access			
EU28	Power outage frequency	7.3 Access	84
EU29	Average power outage duration	7.3 Access	84

11.2 Performance indicators

Data reported for the whole year or from date of acquisition of particular plant excluding share participations. For more information please refer to the section 2 Organisational boundaries.

EPH and its business

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Electricity – Total**					
EU1	**EP Infrastructure**					
	Czech Republic	MW	1,031	868	163	19%
	Slovakia	MW	67	67	–	–
	Hungary	MW	396	396	–	–
	Total – EP Infrastructure	**MW**	**1,494**	**1,331**	**163**	**12%**
	EP Power Europe					
	Germany	MW	1,157	1,157	–	–
	UK	MW	4,637	4,625	12	–
	Italy	MW	4,284	4,399	(115)	(3%)
	Total – EP Power Europe	**MW**	**10,078**	**10,181**	**(103)**	**(1%)**
	Total – EPH	**MW**	**11,572**	**11,512**	**60**	**1%**

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Electricity – Conventional sources**					
EU1	**EP Infrastructure**					
	Czech Republic	MW	1,008	859	150	17%
	Slovakia	MW	50	50	–	–
	Hungary	MW	396	396	–	–
	Total – EP Infrastructure	**MW**	**1,454**	**1,305**	**150**	**11%**
	EP Power Europe					
	Germany	MW	1,150	1,150	–	–
	UK	MW	4,230	4,230	–	–
	Italy	MW	4,207	4,321	(115)	(3%)
	Total – EP Power Europe	**MW**	**9,587**	**9,701**	**(115)**	**(1%)**
	Total – EPH	**MW**	**11,041**	**11,006**	**35**	**0%**

Note: UK includes also Eggborough power plant (1,960 MW) which was decommissioned in 2018. This site was sold in February 2019.

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Electricity – Renewable sources**					
EU1	**EP Infrastructure**					
	Czech Republic	MW	23	9	14	155%
	Slovakia	MW	17	17	–	–
	Hungary	MW	–	–	–	–
	Total – EP Infrastructure	**MW**	**40**	**26**	**13**	**50%**
	EP Power Europe					
	Germany	MW	7	7	–	–
	UK	MW	407	395	12	3%
	Italy	MW	77	77	–	–
	Total – EP Power Europe	**MW**	**491**	**479**	**12**	**2%**
	Total – EPH	**MW**	**531**	**506**	**25**	**5%**

Note: Lynemouth biomass conversion project was in progress from 2016. Production from biomass started in 2018.
Note: We excluded 3 MW capacity of Greeninvest as these are not IFRS consolidated in both 2017 and 2018.

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Heat**					
EU1	**EP Infrastructure**					
	Czech Republic	MW	3,366	2,662	704	26%
	Slovakia	MW	–	–	–	–
	Hungary	MW	1,401	1,401	–	–
	Total– EP Infrastructure	**MW**	**4,767**	**4,063**	**704**	**17%**
	EP Power Europe					
	Germany	MW	156	156	–	–
	UK	MW	–	–	–	–
	Italy	MW	–	–	–	–
	Total – EP Power Europe	**MW**	**156**	**156**	**–**	**–**
	Total – EPH	**MW**	**4,923**	**4,219**	**704**	**17%**

Fuel

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Electricity – Total**					
EU1	**EP Infrastructure**					
	Conventional sources	MW	1,454	1,305	150	11%
	Renewable sources	MW	40	26	13	51%
	Total – EP Infrastructure	**MW**	**1,494**	**1,331**	**163**	**12%**
	EP Power Europe					
	Conventional sources	MW	9,587	9,701	(115)	(1%)
	Renewable sources	MW	491	479	12	2%
	Total – EP Power Europe	**MW**	**10,078**	**10,181**	**(103)**	**(1%)**
	Total – EPH	**MW**	**11,572**	**11,512**	**60**	**1%**

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Electricity – Conventional sources**					
EU1	**EP Infrastructure**					
	Hard coal	MW	110	110	–	–
	Lignite	MW	848	707	141	20%
	CCGT	MW	396	396	–	–
	OCGT and other NG	MW	71	71	–	–
	Oil	MW	20	21	(1)	(7%)
	Other	MW	11	–	11	100%
	Total – EP Infrastructure	**MW**	**1,454**	**1,305**	**150**	**11%**
	EP Power Europe					
	Hard coal	MW	3,249	3,290	(42)	(1%)
	Lignite	MW	460	460	–	–
	CCGT	MW	5,352	5,400	(48)	(1%)
	OCGT and other NG	MW	213	216	(3)	(1%)
	Oil	MW	300	320	(20)	(6%)
	Other	MW	13	15	(3)	(19%)
	Total – EP Power Europe	**MW**	**9,587**	**9,701**	**(116)**	**(1%)**
	Total – EPH	**MW**	**11,041**	**11,006**	**35**	**0%**

Note: Hard coal in EPPE includes also Eggborough power plant (1.960 MW) which was decommissioned in 2018. This site was sold in February 2019.
Note: Oil in EPPE is installed in Italy (EP Produzione), but is not operated. This can be seen from power production from oil.

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Electricity – Renewable sources**					
EU1	**EP Infrastructure**					
	Wind	MW	6	6	–	–
	Photovoltaic	MW	15	15	–	–
	Hydro	MW	3	3	–	–
	Biomass	MW	14	–	14	–
	Other	MW	3	3	(0)	–
	Total – EP Infrastructure	**MW**	**41**	**27**	**13**	**48%**
	EP Power Europe					
	Wind	MW	7	7	–	–
	Photovoltaic	MW	2	2	–	–
	Hydro	MW	2	2	–	–
	Biomass	MW	480	468	12	3%
	Other	MW	–	–	–	–
	Total – EP Power Europe	**MW**	**491**	**479**	**12**	**2%**
	Total – EPH	**MW**	**531**	**506**	**25**	**5%**

Note: Biomass is including Lynemouth biomass net installed capacity being 407 MW.

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU1	**Net installed capacity – Heat**					
EU1	**EP Infrastructure**					
	Hard coal	MW	242	242	–	–
	Lignite	MW	2,015	1,382	633	46%
	CCGT	MW	1,401	1,401	–	–
	OCGT and other NG	MW	804	804	–	–
	Oil	MW	234	234	–	–
	Other	MW	70	–	70	100%
	Total – EP Infrastructure	**MW**	**4,767**	**4,063**	**704**	**17%**
	EP Power Europe					
	Hard coal	MW	–	–	–	–
	Lignite	MW	156	156	–	–
	CCGT	MW	–	–	–	–
	OCGT and other NG	MW	–	–	–	–
	Oil	MW	–	–	–	–
	Total – EP Power Europe	**MW**	**156**	**156**	**–**	**–**
	Total – EPH	**MW**	**4,923**	**4,219**	**704**	**17%**

EPH and its business

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
	Net power production – Total					
	EP Infrastructure					
	Czech Republic	TWh	2.6	2.3	0.3	12%
	Slovakia	TWh	0.0	0.0	(0.0)	(7%)
	Hungary	TWh	1.2	1.3	(0.1)	(7%)
	Total – EP Infrastructure	**TWh**	**3.8**	**3.6**	**0.2**	**5%**
	EP Power Europe					
	Germany	TWh	3.2	1.0	2.2	218%
	UK	TWh	7.9	3.7	4.2	112%
	Italy	TWh	13.3	15.0	(1.7)	(11%)
	Total – EP Power Europe	**TWh**	**24.4**	**19.7**	**4.7**	**24%**
	Total – EPH	**TWh**	**28.2**	**23.3**	**4.9**	**21%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Net power production – Conventional sources**					
EU2	**EP Infrastructure**					
	Czech Republic	TWh	2.5	2.3	0.2	8%
	Slovakia	TWh	0.0	0.0	(0.0)	(71%)
	Hungary	TWh	1.2	1.3	(0.1)	(7%)
	Total – EP Infrastructure	**TWh**	**3.7**	**3.6**	**0.1**	**3%**
	EP Power Europe					
	Germany	TWh	3.2	1.0	2.2	220%
	UK	TWh	6.5	3.7	2.8	75%
	Italy	TWh	12.7	15.0	(2.3)	(15%)
	Total – EP Power Europe	**TWh**	**22.4**	**19.7**	**2.7**	**14%**
	Total – EPH	**TWh**	**26.1**	**23.3**	**2.8**	**12%**

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Net power production – Renewable sources**					
EU2	**EP Infrastructure**					
	Czech Republic	GWh	107.8	10.9	96.9	887%
	Slovakia	GWh	28.2	29.2	(1.0)	(3%)
	Hungary	GWh	–	–	–	–
	Total – EP Infrastructure	**GWh**	**136.0**	**40.1**	**95.9**	**239%**
	EP Power Europe					
	Germany	GWh	12.3	15.1	(2.8)	(19%)
	UK	GWh	1,390.7	–	1,390.7	100%
	Italy	GWh	590.2	5.6	584.5	10,437%
	Total – EP Power Europe	**GWh**	**1,993.2**	**20.7**	**1,972.4**	**9,528%**
	Total – EPH	**GWh**	**2,129.2**	**60.8**	**2,068.3**	**3,400%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Net heat production**					
EU2	**EP Infrastructure**					
	Czech Republic	TWh	2.6	2.0	0.6	30%
	Slovakia	TWh	–	–	–	–
	Hungary	TWh	1.7	1.9	(0.2)	(10%)
	Total – EP Infrastructure	**TWh**	**4.3**	**3.9**	**0.4**	**10%**
	EP Power Europe					
	Germany	TWh	0.3	0.4	(0.1)	25%
	UK	TWh	–	–	–	–
	Italy	TWh	–	–	–	–
	Total – EP Power Europe	**TWh**	**0.3**	**0.4**	**(0.0)**	**(11%)**
	Total – EPH	**TWh**	**4.6**	**4.3**	**0.4**	**9%**

EPH and its business

For the year ended 31 December 2018

Fuel

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Net power production – Total**					
EU2	**EP Infrastructure**					
	Conventional sources	TWh	3.8	3.7	0.1	3%
	Renewable sources	TWh	0.1	0.0	0.1	239%
	Total – EP Infrastructure	**TWh**	**3.9**	**3.7**	**0.2**	**5%**
	EP Power Europe					
	Conventional sources	TWh	22.4	19.7	2.7	14%
	Renewable sources	TWh	2.0	0.0	2.0	9,520%
	Total – EP Power Europe	**TWh**	**24.4**	**19.7**	**4.7**	**23%**
	Total – EPH	**TWh**	**28.3**	**23.4**	**4.9**	**21%**

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Net power production – Conventional sources**					
	EP Infrastructure					
	Hard coal	TWh	–	–	–	–
	Lignite	TWh	2.5	2.3	0.2	6%
	CCGT	TWh	1.2	1.3	(0.1)	(7%)
	OCGT and other NG	TWh	0.0	0.0	(0.0)	(71%)
	Oil	TWh	(0.0)	(0.0)	0.0	(24%)
	Other	TWh	0.0	–	0.0	100%
	Total – EP Infrastructure	**TWh**	**3.7**	**3.7**	**0.1**	**3%**
	EP Power Europe					
	Hard coal	TWh	6.3	4.9	1.4	28%
	Lignite	TWh	0.6	0.7	(0.1)	(14%)
	CCGT	TWh	15.5	13.9	1.6	11%
	OCGT and other NG	TWh	0.0	0.2	(0.2)	(99%)
	Oil	TWh	–	–	–	
	Other	TWh	0.0	0.0	0.0	49%
	Total – EP Power Europe	**TWh**	**22.4**	**19.7**	**2.7**	**14%**
	Total – EPH	**TWh**	**26.1**	**23.4**	**2.8**	**12%**

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Net power production – Renewable sources**					
EU2	**EP Infrastructure**					
	Wind	GWh	6.8	7.3	(0.5)	(7%)
	Photovoltaic	GWh	17.0	17.3	(0.3)	(2%)
	Hydro	GWh	4.6	5.4	(0.8)	(15%)
	Biomass	GWh	97.1	–	97.1	100%
	Other	GWh	10.4	10.0	0.3	3%
	Total – EP Infrastructure	**GWh**	**136.0**	**40.1**	**95.9**	**239%**
	EP Power Europe					
	Wind	GWh	12.3	15.1	(2.8)	(19%)
	Photovoltaic	GWh	3.2	1.7	1.5	89%
	Hydro	GWh	1.7	3.9	(2.3)	(57%)
	Biomass	GWh	1,976.0	–	1,976.0	100%
	Other	GWh	–	–	–	–
	Total – EP Power Europe	**GWh**	**1,993.2**	**20.7**	**1.972.4**	**9,520%**
	Total – EPH	**GWh**	**2,192.2**	**60.8**	**2,068.3**	**3,400%**

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Net heat production**					
EU2	**EP Infrastructure**					
	Hard coal	TWh	–	–	–	–
	Lignite	TWh	2.5	1.9	0.6	31%
	CCGT	TWh	1.7	1.9	(0.2)	(10%)
	OCGT and other NG	TWh	0.1	0.2	(0.1)	(50%)
	Oil	TWh	0.0	0.0	(0.0)	(48%)
	Other	TWh	0.1	–	0.1	100%
	Total – EP Infrastructure	**TWh**	**4.3**	**3.9**	**0.4**	**10%**
	EP Power Europe					
	Hard coal	TWh	–	–	–	–
	Lignite	TWh	0.3	0.3	(0.0)	(11%)
	CCGT	TWh	–	–	–	–
	OCGT and other NG	TWh	–	–	–	–
	Oil	TWh	0.0	0.0	(0.0)	(2%)
	Other	TWh	–	–	–	–
	Total – EP Power Europe	**TWh**	**0.3**	**0.4**	**(0.0)**	**(11%)**
	Total – EPH	**TWh**	**4.6**	**4.3**	**0.1**	**2%**

EPH and its business

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
EU2	**Total net energy production**					
EU2	**EP Infrastructure**					
	Czech Republic	TWh	5.2	4.4	0.9	20%
	Slovakia	TWh	0.0	0.0	(0.0)	(7%)
	Hungary	TWh	2.9	3.2	(0.2)	(8%)
	Total – EP Infrastructure	**TWh**	**8.1**	**7.6**	**0.5**	**7%**
	EP Power Europe					
	Germany	TWh	3.5	1.4	2.2	157%
	UK	TWh	7.9	3.7	4.2	113%
	Italy	TWh	13.3	15.0	(1.7)	(11%)
	Total – EP Power Europe	**TWh**	**24.7**	**20.1**	**4.6**	**23%**
	Total – EPH	**TWh**	**32.8**	**27.7**	**5.1**	**19%**

Note: Includes electric energy and heat production.

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-9	**Amount of electric energy sold**					
102-7	**EP Infrastructure**					
	Czech Republic	TWh	3.0	2.6	0.4	15%
	Slovakia	TWh	4.0	3.9	0.1	2%
	Hungary	TWh	1.3	1.3	(0.0)	(3%)
	Total – EP Infrastructure	**TWh**	**8.3**	**7.8**	**0.4**	**5%**
	EP Power Europe					
	Czech Republic	TWh	4.8	0.0	4.8	10,890%
	Germany	TWh	3.2	0.7	2.5	357%
	UK	TWh	7.9	3.5	4.4	124%
	Italy	TWh	14.0	15.5	(1.6)	(10%)
	Total – EP Power Europe	**TWh**	**29.9**	**19.8**	**10.1**	**51%**
	Total – EPH	**TWh**	**38.3**	**27.6**	**10.6**	**38%**

Note: Includes sales of generated as well as procured electric energy.

EPH and its business

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-9	**Heat supplied to district heating network**					
102-7	**EP Infrastructure**					
	Czech Republic	PJ	19.7	18.2	1.5	8%
	Slovakia	PJ	–	–	–	–
	Hungary	PJ	6.2	6.7	(0.5)	(8%)
	Total – EP Infrastructure	**PJ**	**25.9**	**24.9**	**1.0**	**4%**
	EP Power Europe					
	Germany	PJ	0.4	0.4	(0.0)	(2%)
	UK	PJ	–	–	–	–
	Italy	PJ	–	–	–	–
	Total – EP Power Europe	**PJ**	**0.4**	**0.4**	**(0.0)**	**(2%)**
	Total – EPH	**PJ**	**26.3**	**25.3**	**1.0**	**3%**

Note: Before heat losses in district heating networks.

EPH and its business

For the year ended 31 December 2018

Type

GRI / EUSS	KPI	Unit	Electricity Distribution	Electricity Supply	Gas Supply
G4-9	**Number of customer accounts – SSE**				
	SSE				
	Residential	#	663,641	555,831	13,546
	Mid-size	#	5,337	53,667	2,312
	Large(*)	#	85,128	22,637	226
	Total	**#**	**754,106**	**632,135**	**16,084**

			Gas
	Number of connection points – SPPD(**)		**Distribution**
	Residential	#	1,442,984
	Industrial	#	715
	Commercial & Institutional	#	79,189
	Total	**#**	**1,522,888**

			Heat
	Number of connection points – District heating companies		**Supply**
	Residential	#	10,934
	Industrial	#	519
	Commercial	#	2,334
	Institutional	#	1,879
	Total	**#**	**15,666**

Note: Data based on network connections, which might not necessarily reflect the number of customers served.

(*) Large customers are customers with annual consumtion greater than 500 MWh.

(**) SPPD is a distribution network operator, it does not have direct contracts with retail customers, data based on number of connections.

Environment / Climate change and energy

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN3	**Energy consumption**					
302-1	**EP Infrastructure**					
	Czech Republic	PJ	44.5 (*)	38.7 (*)	5.7	15%
	Slovakia	PJ	6.5	7.1	(0.5)	(7%)
	Hungary	PJ	12.9	14.1	(1.2)	(9%)
	Total – EP Infrastructure	**PJ**	**63.9**	**59.9**	**4.0**	**7%**
	EP Power Europe					
	Germany	PJ	35.2	14.5	20.7	143%
	UK	PJ	66.0	30.7	35.3	115%
	Italy	PJ	106.6	108.4	(1.8)	(2%)
	Total – EP Power Europe	**PJ**	**207.8**	**153.6**	**54.2**	**35%**
	EP Logistics International					
	Czech Republic	PJ	0.0 (*)	0.0	0.0	6%
	Germany	PJ	0.0	–	–	–
	Poland	PJ	0.0	–	–	–
	Total – EP Logistics International	**PJ**	**0.0**	**0.0**	**0.0**	**6%**
	Other companies within the Group					
	Czech Republic	PJ	0.1	0.1	0.0	4%
	Poland	PJ	0.0	0.0	(0.0)	(6%)
	Total – Other companies within the Group	**PJ**	**0.1**	**0.1**	**0.0**	**2%**
	Total – EPH	**PJ**	**271.8**	**213.7**	**58.2**	**27%**

(*) This data has received limited assurance from the independent auditing firm EY.

Environment / Climate change and energy

For the year ended 31 December 2018

Fuel

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN3	**Energy consumption**					
302-1	**EP Infrastructure**					
	Hard Coal	PJ	2.4	6.0	(3.6)	(60%)
	Lignite	PJ	37.7	31.5	6.2	20%
	Natural Gas	PJ	20.0	22.1	(2.1)	(9%)
	Other	PJ	3.8	0.3	3.5	1,166%
	Total – EP Infrastructure	**PJ**	**63.9**	**59.9**	**4.0**	**7%**
	EP Power Europe					
	Hard Coal	PJ	64.6	50.9	13.7	27%
	Lignite	PJ	9.6	10.6	(1.0)	(10%)
	Natural Gas	PJ	109.6	91.2	18.3	20%
	Other	PJ	24.1	0.9	23.1	2,566%
	Total – EP Power Europe	**PJ**	**207.8**	**153.6**	**54.2**	**35%**
	EP Logistics International					
	Other	PJ	0.0	0.0	0.0	6%
	Total – EP Logistics International	**PJ**	**0.0**	**0.0**	**0.0**	**6%**
	Other companies within the Group					
	Other	PJ	0.1	0.1	0.0	2%
	Total – Other companies within the Group	**PJ**	**0.1**	**0.1**	**0.0**	**2%**
	Total – EPH	**PJ**	**271.8**	**213.7**	**58.2**	**27%**

Note: Figures include fuels consumed mostly for electricity and heat generation sold to third parties. Electricity and heat figures are not netted from the figures provided.

Environment / Climate change and energy

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN15	**Direct GHG Emissions (Scope 1)**					
305-1	**EP Infrastructure**					
	Czech Republic	million tonnes CO_2 eq.	3.7	3.5	0.2	7%
	Slovakia	million tonnes CO_2 eq.	0.3	0.4	(0.0)	(7%)
	Hungary	million tonnes CO_2 eq.	0.7	0.8	(0.1)	(8%)
	Total – EP Infrastructure	**million tonnes CO_2 eq.**	**4.7**	**4.7**	**0.1**	**2%**
	EP Power Europe					
	Germany	million tonnes CO_2 eq.	3.3	1.4	1.9	135%
	UK	million tonnes CO_2 eq.	2.9	2.0	0.9	42%
	Italy	million tonnes CO_2 eq.	6.8	7.9	(1.2)	(15%)
	Total – EP Power Europe	**million tonnes CO_2 eq.**	**13.0**	**11.4**	**1.6**	**14%**
	Total – EPH	**million tonnes CO_2 eq.**	**17.7**	**16.1**	**1.6**	**10%**

Environment / Climate change and energy

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN18	**GHG Emissions intensity – Including heat component**					
	EP Infrastructure					
	Czech Republic	tonne CO_2 eq. / GWh	714	797	(84)	(10%)
	Slovakia	tonne CO_2 eq. / GWh	10	27	(17)	(63%)
	Hungary	tonne CO_2 eq. / GWh	247	250	(2)	(1%)
	Total – EP Infrastructure	**tonne CO_2 eq. / GWh**	**544**	**564**	**(21)**	**(4%)**
	EP Power Europe					
	Germany	tonne CO_2 eq. / GWh	949	1 045	(96)	(9%)
	UK	tonne CO_2 eq. / GWh	368	551	(182)	(33%)
	Italy	tonne CO_2 eq. / GWh	510	529	(19)	(4%)
	Total – EP Power Europe	**tonne CO_2 eq. / GWh**	**527**	**568**	**(40)**	**(7%)**
	Total – EPH	**tonne CO_2 eq. / GWh**	**531**	**567**	**(35)**	**(6%)**

Note: Calculation of Emissions intensity indicators excludes emissions from non-energy producing operations, namely Eustram, SPP - distribúcia and NAFTA in Slovakia and SPP Storage in Czech Republic and in respective summary indicators, in ammount of 0.4 and 0.3 mil tonne CO_2 in 2017 and 2018 respectively.

Environment / Air emissions

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN21 305-7	**Total SO_2 emissions**					
	EP Infrastructure					
	Czech Republic	thousand tonnes	7.8	7.7	0.1	2%
	Slovakia	thousand tonnes	0.0	0.0	0.0	7%
	Hungary	thousand tonnes	0.0	–	0.0	–
	Total – EP Infrastructure	**thousand tonnes**	**7.8**	**7.7**	**0.1**	**2%**
	EP Power Europe					
	Germany	thousand tonnes	2.6	1.4	1.3	92%
	UK	thousand tonnes	0.7	1.3	(0.7)	(53%)
	Italy	thousand tonnes	1.5	1.8	(0.3)	(16%)
	Total – EP Power Europe	**thousand tonnes**	**4.8**	**4.5**	**0.3**	**6%**
	Total – EPH	**thousand tonnes**	**12.6**	**12.2**	**0.4**	**4%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN21 305-7	**Total NO_x emissions**					
	EP Infrastructure					
	Czech Republic	thousand tonnes	3.8	3.4	0.3	9%
	Slovakia	thousand tonnes	0.3	0.3	(0.1)	(33%)
	Hungary	thousand tonnes	0.4	0.5	(0.0)	(7%)
	Total – EP Infrastructure	**thousand tonnes**	**4.5**	**4.2**	**0.2**	**5%**
	EP Power Europe					
	Germany	thousand tonnes	2.3	1.0	1.4	144%
	UK	thousand tonnes	2.4	1.6	0.8	50%
	Italy	thousand tonnes	3.1	3.1	0.1	3%
	Total – EP Power Europe	**thousand tonnes**	**7.8**	**5.6**	**2.3**	**40%**
	Total – EPH	**thousand tonnes**	**12.3**	**9.8**	**2.5**	**25%**

Environment / Air emissions

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN21	**Total dust emissions**					
305-7	**EP Infrastructure**					
	Czech Republic	thousand tonnes	0.2	0.3	(0.1)	(20%)
	Slovakia	thousand tonnes	0.0	0.0	0.0	115%
	Hungary	thousand tonnes	–	0.0	(0.0)	(100%)
	Total – EP Infrastructure	**thousand tonnes**	**0.2**	**0.3**	**(0.1)**	**(19%)**
	EP Power Europe					
	Germany	thousand tonnes	0.0	0.0	0.0	193%
	UK	thousand tonnes	0.1	0.2	(0.1)	(59%)
	Italy	thousand tonnes	0.1	0.1	0.0	5%
	Total – EP Power Europe	**thousand tonnes**	**0.2**	**0.3**	**(0.1)**	**(20%)**
	Total – EPH	**thousand tonnes**	**0.4**	**0.6**	**(0.2)**	**(20%)**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN21	**SO_2 emissions intensity**					
305-7	**EP Infrastructure**					
	Czech Republic	tonne/GWh	1.5	1.7	(0.3)	(17%)
	Slovakia	tonne/GWh	0.0	0.0	0.0	124%
	Hungary	tonne/GWh	0.0	–	0.0	–
	Total – EP Infrastructure	**tonne/GWh**	**1.0**	**1.0**	**(0.1)**	**(5%)**
	EP Power Europe					
	Germany	tonne/GWh	0.7	1.0	(0.3)	(30%)
	UK	tonne/GWh	0.1	0.4	(0.3)	(76%)
	Italy	tonne/GWh	0.1	0.1	(0.0)	(7%)
	Total – EP Power Europe	**tonne/GWh**	**0.2**	**0.2**	**(0.0)**	**(13%)**
	Total – EPH	**tonne/GWh**	**0.4**	**0.4**	**(0.1)**	**(25%)**

Environment / Air emissions

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN21	**NO_x emissions intensity**					
305-7	**EP Infrastructure**					
	Czech Republic	tonne/GWh	0.7	0.8	(0.1)	(9%)
	Slovakia	tonne/GWh	0.6	0.6	0.0	9%
	Hungary	tonne/GWh	0.1	0.1	0.0	0%
	Total – EP Infrastructure	**tonne/GWh**	**0.5**	**0.5**	**(0.0)**	**(1%)**
	EP Power Europe					
	Germany	tonne/GWh	0.7	0.7	(0.0)	(6%)
	UK	tonne/GWh	0.3	0.4	(0.1)	(29%)
	Italy	tonne/GWh	0.2	0.2	0.0	16%
	Total – EP Power Europe	**tonne/GWh**	**0.3**	**0.3**	**0.0**	**14%**
	Total – EPH	**tonne/GWh**	**0.4**	**0.3**	**0.0**	**7%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN21	**Dust emissions intensity**					
305-7	**EP Infrastructure**					
	Czech Republic	tonne/GWh	0.04	0.06	(0.02)	(33%)
	Slovakia	tonne/GWh	0.02	0.02	0.00	11%
	Hungary	tonne/GWh	–	0.00	(0.00)	(100%)
	Total – EP Infrastructure	**tonne/GWh**	**0.03**	**0.03**	**(0.01)**	**(26%)**
	EP Power Europe					
	Germany	tonne/GWh	0.01	0.01	0.00	13%
	UK	tonne/GWh	0.01	0.04	(0.03)	(75%)
	Italy	tonne/GWh	0.01	0.01	0.00	19%
	Total – EP Power Europe	**tonne/GWh**	**0.01**	**0.01**	**(0.01)**	**(35%)**
	Total – EPH	**tonne/GWh**	**0.01**	**0.02**	**(0.01)**	**(33%)**

Note: Calculation of Emissions intensity indicators excludes emissions from non-energy producing operations, namely eustram, SPP - distribúcia, Nafta and Pozagas in Slovakia and SPP Storage in the Czech Republic and in respective summary indicators, in ammount of 18 tonnes NO_x in CZ in 2018 (10 tonnes in 2017), 244 tonnes NO_x in SK in 2018 and 296 tonnes in 2017, 5 tonnes dust in SK in 2018 and 2 tonnes in 2017.

Environment / Water

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN8	**Quantity of water withdrawn**					
303-1	**EP Infrastructure**					
	Czech Republic	million m³	75 (*)	127	(52)	(41%)
	Slovakia	million m³	0	0	(0)	(7%)
	Hungary	million m³	10	15	(5)	(30%)
	Total – EP Infrastructure	**million m³**	**85**	**142**	**(57)**	**(39%)**
	EP Power Europe					
	Germany	million m³	100	101	(1)	(1%)
	UK	million m³	878	258	620	240%
	Italy	million m³	1.341	1.504	(163)	(11%)
	Total – EP Power Europe	**million m³**	**2,319**	**1,863**	**456**	**24%**
	Total – EPH	**million m³**	**2,404**	**2,005**	**399**	**20%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN22	**Quantity of water discharged**					
306-1	**EP Infrastructure**					
	Czech Republic	million m³	65 (*)	122	(57)	(47%)
	Slovakia	million m³	0	0	0.0	6%
	Hungary	million m³	10	14	(4)	32%
	Total – EP Infrastructure	**million m³**	**75**	**137**	**(62)**	**(45%)**
	EP Power Europe					
	Germany	million m³	3	1	2	150%
	UK	million m³	877	252	625	248%
	Italy	million m³	1,340	1.505	(164.0)	(11%)
	Total – EP Power Europe	**million m³**	**2,220**	**1,758**	**462**	**26%**
	Total – EPH	**million m³**	**2,296**	**1,895**	**400**	**21%**

(*) This data has received limited assurance from the independent auditing firm EY.

Environment / Water

For the year ended 31 December 2018

Type

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN8	**Quantity of water withdrawn**					
303-1	**EP Infrastructure**					
	Surface water	million m³	83	140	57	(41%)
	Ground water	million m³	0	0	0	5%
	Municipal water supplies or other water utilities	million m³	2	1	1	70%
	Other	million m³	1	1	(0)	20%
	Total – EP Infrastructure	**million m³**	**86**	**142**	**(56,8)**	**(40%)**
	EP Power Europe					
	Surface water	million m³	2,260	1,799	461	26%
	Ground water	million m³	58	63	(5)	(8%)
	Municipal water supplies or other water utilities	million m³	1	1	0.4	40%
	Other	million m³	0	–	0	–
	Total – EP Power Europe	**million m³**	**2,318**	**1,863**	**456**	**24%**
	Total – EPH	**million m³**	**2,404**	**2,005**	**399**	**20%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN8	**Cooling Water**					
303-1	**EP Infrastructure**					
	Cooling water – withdrawal	million m³	81	139	(58)	(42%)
	Cooling water – discharge	million m³	72	133	(61)	(46%)
	Total – EP Infrastructure – Usage	**million m³**	**9**	**6**	**3**	**57%**
	EP Power Europe					
	Cooling water – withdrawal	million m³	2,226	1,764	462	26%
	Cooling water – discharge	million m³	2,217	1,757	460	26%
	Total – EP Power Europe – Usage	**million m³**	**9**	**6**	**3**	**35%**
	Total – EPH – Usage	**million m³**	**18**	**12**	**6**	**45%**

Environment / Effluents and waste

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN23	Byproducts – Total production					
306-2	**EP Infrastructure**					
	Czech Republic	thousand tonnes	1.488.1	1.496.4	(8.3)	(1%)
	Slovakia	thousand tonnes	–	–	–	–
	Hungary	thousand tonnes	0.3	0.3	0.1	33%
	Total – EP Infrastructure	**thousand tonnes**	**1.488.4**	**1.496.6**	**(8.2)**	**(1%)**
	EP Power Europe					
	Germany	thousand tonnes	318.8	209.8	109.0	52%
	UK	thousand tonnes	54.5	70.0	(15.5)	(22%)
	Italy	thousand tonnes	135.9	143.9	(8.0)	(6%)
	Total – EP Power Europe	**thousand tonnes**	**509.2**	**423.7**	**85.5**	**20%**
	Total – EPH	**thousand tonnes**	**1.997.6**	**1.920.3**	**77.3**	**4%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN23	Waste other than byproducts – Total production					
306-2	**EP Infrastructure**					
	Czech Republic	thousand tonnes	2.6	2.4	0.2	8%
	Slovakia	thousand tonnes	35.8	40.2	(4.4)	(11%)
	Hungary	thousand tonnes	0.0	0.1	(0.0)	(41%)
	Total – EP Infrastructure	**thousand tonnes**	**38.4**	**42.7**	**(4.2)**	**(10%)**
	EP Power Europe					
	Germany	thousand tonnes	216.5	198.0	18.6	9%
	UK	thousand tonnes	3.0	4.0	(1.0)	(25%)
	Italy	thousand tonnes	26.9	2.4	24.5	1020%
	Total – EP Power Europe	**thousand tonnes**	**246.4**	**204.4**	**42.1**	**21%**
	Total – EPH	**thousand tonnes**	**284.8**	**247.1**	**37.9**	**15%**

Environment / Effluents and waste

For the year ended 31 December 2018

Type

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN23	Byproducts – Total production					
306-2	**EP Infrastructure**					
	Additised granulate	thousand tonnes	332.0	478.7	(146.6)	(31%)
	Ash	thousand tonnes	564.1	486.7	77.3	16%
	Slag	thousand tonnes	223.5	187.9	35.6	19%
	Gypsum	thousand tonnes	171.9	155.3	16.6	11%
	Additional material – hydrated lime	thousand tonnes	27.6	22.9	4.7	21%
	Additional material – water	thousand tonnes	167.7	165.2	2.5	1%
	Other own production	thousand tonnes	1.6	–	1.6	100%
	Total – EP Infrastructure	**thousand tonnes**	**1.488.4**	**1.496.6**	**(8.2)**	**(1%)**
	EP Power Europe					
	Additised granulate	thousand tonnes	–	–	–	–
	Ash	thousand tonnes	300.6	256.9	43.6	17%
	Slag	thousand tonnes	57.2	54.7	2.5	5%
	Gypsum	thousand tonnes	151.5	112.1	39.3	35%
	Additional material – hydrated lime	thousand tonnes	–	–	–	–
	Additional material – water	thousand tonnes	–	–	–	–
	Total – EP Power Europe	**thousand tonnes**	**509.2**	**423.7**	**85.5**	**20%**
	Total – EPH	**thousand tonnes**	**1.997.6**	**1.920.3**	**77.3**	**4%**

Environment / Effluents and waste

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN23	**Byproducts – Total means of disposal**					
306-2	**EP Infrastructure**					
	Sales	thousand tonnes	128.4	136.4	(8.0)	(6%)
	Storage – own stock	thousand tonnes	209.3	149.4	59.9	40%
	Storage – external	thousand tonnes	213.7	81.7	132.0	162%
	Stabilizate production	thousand tonnes	597.6	648.1	(50.5)	(8%)
	Storage – chargeable waste	thousand tonnes	339.5	481.1	(141.6)	(29%)
	Other	thousand tonnes	–	–	–	–
	Total – EP Infrastructure	**thousand tonnes**	**1,488.4**	**1,496.6**	**(8.2)**	**(1%)**
	EP Power Europe					
	Sales	thousand tonnes	263.2	164.0	99.2	61%
	Storage – own stock	thousand tonnes	37.1	27.0	10.1	37%
	Storage – external	thousand tonnes	0.6	0.6	(0.0)	(1%)
	Stabilizate production	thousand tonnes	188.7	216.3	(27.7)	(13%)
	Storage – chargeable waste	thousand tonnes	(7.2)	2.6	(9.7)	(373%)
	Other	thousand tonnes	17.3	16.6	0.8	5%
	Total – EP Power Europe	**thousand tonnes**	**499.8**	**427.1**	**72.7**	**17%**
	Total – EPH	**thousand tonnes**	**1,988.2**	**1,923.7**	**64.4**	**3%**

Environment / Effluents and waste

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN23	**Waste other than byproducts – Total production**					
306-2	**EP Infrastructure**					
	Non-hazardous waste	thousand tonnes	36.4	40.8	(4.4)	(11%)
	Hazardous waste	thousand tonnes	2.1	1.9	0.2	10%
	Total – EP Infrastructure	**thousand tonnes**	**38.5**	**42.7**	**(4.2)**	**(10%)**
	EP Power Europe					
	Non-hazardous waste	thousand tonnes	241.2	200.5	40.7	20%
	Hazardous waste	thousand tonnes	5.2	3.8	1.4	37%
	Total – EP Power Europe	**thousand tonnes**	**246.4**	**204.4**	**42.1**	**21%**
	Total – EPH	**thousand tonnes**	**284.9**	**247.1**	**37.8**	**15%**

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN23	**Waste other than by products – Non-hazardous – Disposal**					
306-2	**EP Infrastructure**					
	Recycling	thousand tonnes	14.5	6.2	8.2	133%
	Landfill	thousand tonnes	4.2	3.1	1.1	34%
	Other	thousand tonnes	17.7	31.5	(13.7)	(44%)
	Total – EP Infrastructure	**thousand tonnes**	**36.4**	**40.8**	**(4.4)**	**(11%)**
	EP Power Europe					
	Recycling	thousand tonnes	80.6	54.2	26.3	49%
	Landfill	thousand tonnes	23.1	1.5	21.5	1,433%
	Other	thousand tonnes	142.5	144.8	(2.2)	(2%)
	Total – EP Power Europe	**thousand tonnes**	**246.2**	**200.5**	**45.7**	**23%**
	Total – EPH	**thousand tonnes**	**282.6**	**241.3**	**41.2**	**17%**

Environment / Effluents and waste

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
G4-EN23	**Waste other than by products – Hazardous – Disposal**					
306-2	**EP Infrastructure**					
	Recycling	thousand tonnes	0.2	0.7	(0.6)	(85%)
	Landfill	thousand tonnes	1.4	0.5	0.9	180%
	Other	thousand tonnes	0.6	0.7	(0.2)	(28%)
	Total – EP Infrastructure	**thousand tonnes**	**2.2**	**1.9**	**0.3**	**16%**
	EP Power Europe					
	Recycling	thousand tonnes	5.0	2.1	2.9	138%
	Landfill	thousand tonnes	0.2	1.7	(1.5)	(88%)
	Other	thousand tonnes	–	–	–	–
	Total – EP Power Europe	**thousand tonnes**	**5.2**	**3.8**	**1.4**	**37%**
	Total – EPH	**thousand tonnes**	**7.3**	**5.7**	**1.6**	**28%**

Logistics

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
	Operations and sales					
302-1	Energy consumption	PJ	0.10	0.09	0.01	9%
	Diesel	PJ	0.08	0.08	(0)	(1%)
	Purchased Electricity	PJ	0.02	0.01	0.01	87%
	Other	PJ	0.00	0.00	0.00	26%
LT12	Number of road fatalities of drivers or third parties per million kilometres driven	index	7	15	(8)	(53%)
	Tonne-kilometre per year	million tkm	1,057	973	83	9%

Restatement: In 2017 the amount of 937 million tkm was reported as a result of incorrect calculation.

Social / Occupational health and safety

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
403-2	**Fatal injuries – Employees**					
G4-LA6	**EP Infrastructure**					
	Czech Republic	#	–	–	–	–
	Slovakia	#	–	1	(1)	(100%)
	Hungary	#	–	–	–	–
	Total – EP Infrastructure	**#**	**–**	**1**	**(1)**	**(100%)**
	EP Power Europe					
	Czech Republic	#	–	–	–	–
	Germany	#	–	–	–	–
	UK	#	–	–	–	–
	Italy	#	–	–	–	–
	Total – EP Power Europe	**#**	**–**	**–**	**–**	**–**
	Other companies within the Group					
	Czech Republic	#	–	–	–	–
	Poland	#	–	–	–	–
	Total – other companies	**#**	**–**	**–**	**–**	**–**
	Total – EPH	**#**	**–**	**1**	**(1)**	**(100%)**

Social / Occupational health and safety

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
403-2	**Registered injuries – Employees**					
G4-LA6	**EP Infrastructure**					
	Czech Republic	#	13 (*)	12	1	(33%)
	Slovakia	#	13	15	(2)	8%
	Hungary	#	3	2	1	50%
	Total – EP Infrastructure	**#**	**29**	**29**	**–**	**–**
	EP Power Europe					
	Czech Republic	#	–(*)	–	–	–
	Germany	#	27	28	(1)	(4%)
	UK	#	–	–	–	–
	Italy	#	3	1	2	200%
	Total – EP Power Europe	**#**	**30**	**29**	**1**	**3%**
	Other companies within the Group					
	Czech Republic	#	5 (*)	6	(1)	(17%)
	Poland	#	1	–	1	100%
	Total – other companies	**#**	**6**	6	–	–
	Total – EPH	**#**	**65**	**64**	**1**	**2%**

Note: Registered injury – in order to be able to report standardised injury data from across all our operations. for the purpose of this Sustainability Report.
All injuries that resulted in at least 3 lost working days have been reported. This is a stricter definition than many companies use for their respective national reporting.

(*) This data has received limited assurance from the independent auditing firm EY.

Social / Occupational health and safety

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
403-2	**Worked hours – Employees**					
G4-LA6	**EP Infrastructure**					
	Czech Republic	million hours	3.1	3.2	(0.1)	(4%)
	Slovakia	million hours	5.8	6.9	(1.0)	(15%)
	Hungary	million hours	0.4	0.4	(0.0)	(7%)
	Total – EP Infrastructure	**million hours**	**9.2**	**10.4**	**(1.2)**	**(11%)**
	EP Power Europe					
	Czech Republic	million hours	0.1	0.1	0.1	100%
	Germany	million hours	3.7	4.3	(0.6)	(14%)
	UK	million hours	1.5	0.7	0.7	100%
	Italy	million hours	0.9	0.5	0.4	80%
	Total – EP Power Europe	**million hours**	**6.2**	**5.5**	**0.6**	**11%**
	Other companies within the Group					
	Czech Republic	million hours	0.5	0.5	0.0	6%
	Poland	million hours	0.2	0.2	(0.0)	(2%)
	Total – other companies	**million hours**	**0.7**	**0.7**	**0.0**	**3%**
	Total – EPH	**million hours**	**16.2**	**16.7**	**(0.5)**	**(3%)**

Social / Occupational health and safety

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
403-2	**Injury Frequency Rate – Employees**					
G4-LA6	**EP Infrastructure**					
	Czech Republic	index	2.6	3.8	(1.1)	(29%)
	Slovakia	index	3.5	2.2	0.0	2%
	Hungary	index	8.3	5.1	3.1	61%
	Total – EP Infrastructure	**index**	**2.9**	**2.8**	**(0.2)**	**(7%)**
	EP Power Europe					
	Czech Republic	index	–	–	–	–
	Germany	index	7.3	6.6	0.8	12%
	UK	index	–	–	–	–
	Italy	index	3.4	2.1	1.2	57%
	Total – EP Power Europe	**index**	**4.9**	**5.2**	**(0.4)**	**(7%)**
	Other companies within the Group					
	Czech Republic	index	9.7	12.4	(2.7)	(22%)
	Poland	index	4.4	–	4.4	100%
	Total – other companies	**index**	**8.0**	**8.3**	**0.3**	**(3%)**
	Total – EPH	**index**	**3.9**	**3.8**	**(0.1)**	**(3%)**

Note: Injury frequency rate reported on per 1 million hours worked basis.

Social / Occupational health and safety

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
403-2	**Fatal injuries – Contractors**					
G4-LA6	**EP Infrastructure**					
	Czech Republic	#	–	–	–	–
	Slovakia	#	–	–	–	–
	Hungary	#	–	–	–	–
	Total – EP Infrastructure	**#**	**–**	**–**	**–**	–
	EP Power Europe					
	Czech Republic	#	–	–	–	–
	Germany	#	–	–	–	–
	UK	#	–	–	–	–
	Italy	#	–	–	–	–
	Total – EP Power Europe	**#**	**–**	**–**	**–**	–
	Other companies within the Group					
	Czech Republic	#	–	–	–	–
	Poland	#	–	–	–	–
	Total – other companies	**#**	**–**	**–**	**–**	–
	Total – EPH	**#**	**–**	**–**	**–**	–

Social / Occupational health and safety

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
403-2	**Registered injuries – Contractors**					
G4-LA6	**EP Infrastructure**					
	Czech Republic	#	–	1	(1)	(100%)
	Slovakia	#	1	–	1	100%
	Hungary	#	–	–	–	–
	Total – EP Infrastructure	**#**	**1**	**1**	**–**	**0%**
	EP Power Europe					
	Czech Republic	#	–	–	–	
	Germany	#	4	5	(1)	(20%)
	UK	#	4	8	(4)	(50%)
	Italy	#	4	1	3	217%
	Total – EP Power Europe	**#**	**12**	**15**	**(3)**	**(18%)**
	Other companies within the Group					
	Czech Republic	#	–	–	–	–
	Poland	#	–	–	–	–
	Total – other companies	**#**	**–**	**–**	**–**	–
	Total – EPH	**#**	**13**	**16**	**(3)**	**(17%)**

Note: Contractor injuries data not available for United Energy and Renewables Group, data on hours worked by contractors largerly not available, thus injury frequency rate not reported.

Social / Employment

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	Total	Male	Female
102-7	**Headcount (FTE)**				
G4-9	**EP Infrastructure**				
	Czech Republic	#	2,111	1,716	395
	Slovakia	#	4,217	3,364	853
	Hungary	#	203	168	35
	Germany	#	60	55	5
	Netherlands	#	2	1	1
	Total – EP Infrastructure	**#**	**6,593**	**5,304**	**1,288**
	EP Power Europe				
	Czech Republic	#	72	59	13
	Germany	#	2,591	2,225	366
	UK	#	393	363	30
	Italy	#	566	498	68
	Total – EP Power Europe	**#**	**3,622**	**3,144**	**478**
	Other companies within the Group				
	Czech Republic	#	334	246	89
	Poland	#	153	125	27
	Slovakia	#	4	3	1
	Germany	#	5	2	3
	Total – other companies	**#**	**496**	**376**	**120**
	Total – EPH	**#**	**10,711**	**8,825**	**1,886**

Social / Employment

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	Total	% of total
102-41	**Employees with collective bargaining agreements**			
G4-11	**EP Infrastructure**			
	Czech Republic	#	1,919	91%
	Slovakia	#	4,137	98%
	Hungary	#	204	100%
	Total – EP Infrastructure	**#**	**6,260**	**95%**
	EP Power Europe			
	Czech Republic	#	–	–
	Germany	#	2,445	94%
	UK	#	252	64%
	Italy	#	566	100%
	Total – EP Power Europe	**#**	**3,263**	**90%**
	Other companies within the Group			
	Czech Republic	#	25	7%
	Poland	#	120	79%
	Total – other companies	**#**	**145**	**29%**
	Total – EPH	**#**	**9,668**	**90%**

Social / Employment

For the year ended 31 December 2017

Management

GRI / EUSS	KPI	Unit	2018	2017	2018 - 2017	%
	Headcount					
	EP Infrastructure					
	Male	#	5,304	5,070	234	5%
	Female	#	1,288	1,253	35	3%
	Executives	#	128	118	10	8%
	Other Employees	#	6,465	6,205	260	4%
	Total – EP Infrastructure	**#**	**6,593**	**6,323**	**270**	**4%**
	EP Power Europe					
	Male	#	3,144	2,942	203	7%
	Female	#	478	475	3	1%
	Executives	#	68	81	(13)	(16%)
	Other Employees	#	3,554	3,335	219	7%
	Total – EP Power Europe	**#**	**3,622**	**3,416**	**206**	**6%**
	Other / Consolidation					
	Male	#	376	376	0	0%
	Female	#	120	122	(2)	(2%)
	Executives	#	50	30	20	66%
	Other Employees	#	446	468	(22)	(5%)
	Total – Other / Consolidation	**#**	**496**	**498**	**(2)**	**0%**
	EPH					
	Male	#	8,825	8,387	438	5%
	Female	#	1,886	1,850	37	2%
	Executives	#	246	229	17	7%
	Other Employees	#	10,465	10,008	457	5%
	Total – EPH	**#**	**10,711**	**10,237**	**474**	**5%**

Social / Employment

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	Total	Male	Female
401-1	**Number of new hires – Total**				
	EP Infrastructure				
	Czech Republic	#	212	152	60
	Slovakia	#	295	211	84
	Hungary	#	15	9	6
	Netherlands	#	2	1	1
	Total – EP Infrastructure	**#**	**524**	**373**	**151**
	EP Power Europe				
	Czech Republic	#	17	13	4
	Germany	#	240	216	24
	UK	#	14	13	1
	Italy	#	18	16	2
	Total – EP Power Europe	**#**	**289**	**258**	**31**
	Other companies within the Group				
	Czech Republic	#	55	35	20
	Poland	#	142	134	8
	Slovakia	#	3	2	1
	Germany	#	1	0	1
	Total – other companies	**#**	**201**	**171**	**30**
	Total – EPH	**#**	**1,014**	**802**	**212**

Social / Employment

For the year ended 31 December 2018

Country

GRI / EUSS	KPI	Unit	Total	Male	Female
401-1	**Number of leavers – Total**				
	EP Infrastructure				
	Czech Republic	#	333	263	70
	Slovakia	#	286	225	61
	Hungary	#	13	10	3
	Netherlands	#	1	–	1
	Total – EP Infrastructure	**#**	**633**	**498**	**135**
	EP Power Europe				
	Czech Republic	#	4	2	3
	Germany	#	182	147	35
	UK	#	217	195	22
	Italy	#	20	13	7
	Total – EP Power Europe	**#**	**423**	**357**	**67**
	Other companies within the Group				
	Czech Republic	#	67	51	15
	Poland	#	140	134	6
	Total – other companies	**#**	**207**	**185**	**21**
	Total – EPH	**#**	**1,263**	**1,040**	**223**

Social / Employment

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	Total	Male	Female
G4-LA1	**New hires rate**				
	EP Infrastructure				
	Czech Republic	%	10%	9%	15%
	Slovakia	%	7%	6%	10%
	Hungary	%	7%	5%	17%
	Netherlands	%	100%	100%	100%
	Total – EP Infrastructure	**%**	**8%**	**7%**	**12%**
	EP Power Europe				
	Czech Republic	%	24%	22%	31%
	Germany	%	9%	10%	7%
	UK	%	4%	4%	3%
	Italy	%	3%	3%	3%
	Total – EP Power Europe	**%**	**8%**	**8%**	**7%**
	Other companies within the Group				
	Czech Republic	%	17%	14%	23%
	Poland	%	93%	107%	29%
	Slovakia	%	75%	67%	100%
	Germany	%	20%	0%	33%
	Total – other companies	**%**	**41%**	**46%**	**25%**
	Total – EPH	**%**	**9%**	**9%**	**11%**

Social / Employment

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	Total	Male	Female
G4-LA1	**Employee turnover rate**				
	EP Infrastructure				
	Czech Republic	%	16%	15%	18%
	Slovakia	%	7%	7%	7%
	Hungary	%	6%	6%	9%
	Total – EP Infrastructure	**%**	**10%**	**9%**	**10%**
	EP Power Europe				
	Czech Republic	%	6%	3%	19%
	Germany	%	7%	7%	10%
	UK	%	55%	54%	73%
	Italy	%	4%	3%	10%
	Total – EP Power Europe	**%**	**12%**	**11%**	**14%**
	Other companies within the Group				
	Czech Republic	%	20%	21%	17%
	Poland	%	92%	107%	22%
	Slovakia	%	0%	0%	0%
	Germany	%	0%	0%	0%
	Total – other companies	**%**	**42%**	**49%**	**18%**
	Total – EPH	**%**	**12%**	**12%**	**12%**

Social / Training

For the year ended 31 December 2018

GRI / EUSS	KPI	Unit	Ths. Hours	Hours per Employee
G4-LA9	**Total training hours**			
	EP Infrastructure			
	Czech Republic	ths. hours	8.6	6.2
	Slovakia	ths. hours	159.9	37.9
	Hungary	ths. hours	2.7	13.1
	Total – EP Infrastructure	**ths. hours**	**171.2**	**26.0**
	EP Power Europe			
	Czech Republic	ths. hours	4.9	68.4
	Germany	ths. hours	34.1	13.1
	UK	ths. hours	10.7	27.1
	Italy	ths. hours	16.9	29.8
	Total – EP Power Europe	**ths. hours**	**66.6**	**18.4**
	Other companies within the Group			
	Czech Republic	ths. hours	2.3	6.8
	Poland	ths. hours	6.4	42.0
	Slovakia	ths. hours	–	–
	Hungary	ths. hours	–	–
	Germany	ths. hours	–	–
	UK	ths. hours	–	–
	Italy	ths. hours	–	–
	Netherlands	ths. hours	–	–
	Total – other companies	**ths. hours**	**8.7**	**17.5**
	Total – EPH	**ths. hours**	**246.5**	**23.0**

Note: Calculation of Training hours per Employee excludes employees from several companies which did not have training data readily available (total 755 employees), in the Czech Republic mainly Prazska teplarenska in the amount of 688 employees, then PT mereni (24), Slovakia: SPP Storage (9), Other: (34).

11.3 Acronyms and units

Acronyms

AA1000	Accountability Stakeholder Engagement Standards
AOT	Asset Optimization
BBS	Behaviour Based Safety
BERT	Budapesti Erőmű Zrt.
CAGR	Compound annual growth rate
CCGT	Combined cycle gas turbine
CENTREL	Association of transmission system operators in the Czech Republic, Slovakia, Poland and Hungary, set up in 1992. Now part of UCTE association.
CO_2	Carbon dioxide
COP 21	Paris Climate Conference
EBITDA	Earnings before interest, taxes, depreciation and amortization
EBO	Bohunice power plant (Slovenské elektrárne)
EMIR	European Market Infrastructure Regulation ENSREG European Nuclear Safety Regulators
EMO	Mochovce power plant (Slovenské elektrárne)
EMS	Environmental management system
ENO	Nováky power plant (Slovenské elektrárne)
EOP	Elektrárny Opatovice a.s. (group)
EPH	Parent company – Energetický a průmyslový holding, a.s.
EPIF	EP Infrastructure
EPPE	EP Power Europe
EU	European Union
EU ETS	European Union Emission Trading Scheme
EUA	European Emission Allowances
EUSS	Energy Utility Sector Supplement
eustream	eustream, a.s.
EVO	Vojany power plant (Slovenské elektrárne)
FR	"Frequency rate" = (the number of accidents / worked hours) × 10^6
GDPR	General Data Protection Regulation
GHG	Greenhouse gases are those currently required by the United Nations Framework Convention on Climate Change and the Kyoto Protocol. These GHGs are currently: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).
GRI G4	Global Reporting Initiative G4 Standards
H&S	Health and safety
HSE	Health and Safety Environment
HFCs	Hydrofluorocarbons
HSEQ	Health, Safety, Environment, and Quality
HV	High voltage
CH_4	Methane
CHP	Combined heat and power plant
IED	The Industrial Emissions Directive
IFRS	International Financial Reporting Standards
INPO	The Institute of Nuclear Power Operations
IPCC	Intergovernmental Panel on Climate Change
ISAE 3000	International Standard on Assurance Engagements (ISAE) 3000, "Assurance Engagements Other than Audits or Reviews of Historical Financial Information
ISO 14001	Environmental Certification, Environmental management system
JTSD	JTSD Braunkohlebergbau GmbH
J&T	J&T Finance Group SE
KPI	Key Performance Indicator
KYC	"Know your customer" is the process of a business, identifying and verifying the identity of its customers
LEAG	Lausitz Energie Bergbau AG and Lausitz Energie Kraftwerke AG
LV	Low voltage
M&A	Mergers and acquisitions
MIBRAG	Mitteldeutsche Braunkohlengesellschaft mbH
MiFID II	Regulation on markets in financial instruments
MIRA	Macquarie Infrastructure and Real Assets
MV	Medium voltage
N_2O	Nitrous oxide
Nafta	NAFTA a.s.
NF_3	Nitrogen trifluoride
NG	Natural gas
NGOs	Non-governmental organisations
NO_x	nitrogen oxide emissions
NPP	Nuclear power plant
O&M	Operation & Maintenance
OCGT	Open cycle gas turbine
OHSAS 18001	Occupational Health and Safety Management Systems
PFCs	Perfluorocarbons
PGA	Peak ground acceleration
PPF	PPF a.s.
PT	Pražská teplárenská, a.s.
REMIT	Regulation on Wholesale Energy Market Integrity and Transparency
RoSPA	Royal Society for the Prevention of Accidents
SAIDI	System Average Interruption Duration Index = sum of all customer interruption durations in minutes / total n° of customer served
SAIFI	System Average Interruption Frequency Index = total n° of customer interruptions / total n° of customers served
SBR	Supplemental balancing reserve
SE	Slovenské elektrárne a.s.
SF_6	Sulphur hexafluoride
SO_2	Sulphur dioxide
SO_x	Sulphur oxides
SPH	Slovak Power Holding BV
SPP-D	SPP - distribúcia, a.s.
SPP-I	SPP Infrastructure, a.s.
SSE	Stredoslovenská energetika, a.s.
SSE-D	Stredoslovenská energetika – Distribúcia, a.s. (before renaming to SSD)
SSD	Stredoslovenská distribučná, a.s.
TSO	Transmission System Operator
UCF	Unit capability factor. Top UCF quartile for pressurised water reactor is 90.00% (WANO rating 2013–2015)
UK	United Kingdom
UM	Unit of measure
WWER	Water-water energetic reactor

Units

#	number
%	percentage
CO_2-eq	carbon dioxide equivalent
CO_2-eq/GWh GJ	carbon dioxide equivalent per gigawatt-hour gigajoule
GJ	gigajoule
GW	gigawatt
GWh	gigawatt-hour
k	thousand
km	kilometer
kV	kilovolt
l/100 km	liters per 100 kilometers
m	million
m^3	cubic meter
mg/l	miligram per liter
mg/m^3	miligram per cubic meter
mil. tonnes CO_2-eq	million tonnes of carbon dioxide equivalent
MW	megawatt
MWe	megawatt electrical
MWh	megawatt hour
MWt	megawatt thermal
Nm^3	Nomal cubic meter
PJ	petajoule
tonne/GWh	tonne per gigawatt-hour
tkm	tonne-kilometre
TWh	terawatt hour

11.4 List of Case studies

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Photos
Plzeňská teplárenská (Fig. 59)
Stredoslovenská distribučná (Fig. 65)
LEAG / Andreas Franke (Fig. 67)
Archive Nadácia EPH (Fig. 72)
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Maps
Map of Europe with Countries – Single Color by FreeVectorMaps.com

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