Sustainability Report 2019

EPH

EPH **Sustainability Report** 2019

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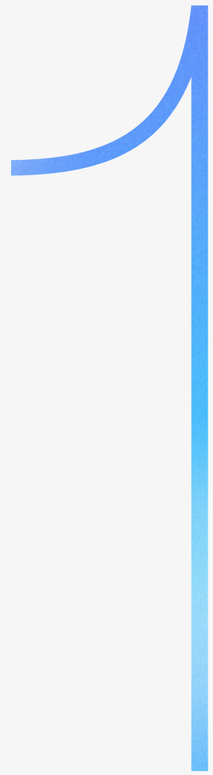


Dear Stakeholders,

It is my great pleasure to introduce you to the fifth Sustainability Report of Energetický a průmyslový holding, a.s., which covers the 2019 calendar year. EPH's mission is to provide energy infrastructure services and energy commodities, both vitally needed to our customers and businesses in Europe. 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 stringent 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 above-mentioned dimensions -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 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 but truly decommissioning the most carbon-intensive sources while investing and actively converting our plants to low-carbon or fully renewable sources.

Contrary to often oversimplified demoting of 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, society or for energy systems.

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. Over

the last 5 years, EPH invested more than EUR 1 billion into zero or low emission power plants (primarily biomass and CCGTs). We have voluntarily put into strategic reserve or even fully decommissioned several gigawatts of coal-fired capacity. Coal resources now account for only around 11% of EPH's consolidated financial results in terms of EBITDA. Compared to 2013, the measures we implemented resulted in the reduction of 18 million tonnes of CO_2-eq emissions per annum. I am proud that EPH is one of the leading players in the real decarbonization of conventional power plants.

In 2019, EPH increased its net installed power capacity by 1.7 GW: added 2.0 GW in natural gas, 0.3 GW in renewables, reduced higher-emissions capacity (coal and oil) by 0.7 GW. In particular, we finalized the acquisition of a biomass power plant Fusine that will be operated alongside with Biomasse Italia and Biomasse Crotone acquired in the past. Further, we have acquired Kilroot and Ballylumford power plants in Northern Ireland, Tynagh Energy Limited, a natural gas power plant in the Republic of Ireland, and a portfolio of both conventional and renewable power plants in France from Uniper.

As of today, EPH is already consolidating 0.8 GW of renewable resources. On top of that, within its equity participations it operates another 1.6 GW of renewables and 0.9 GW of storage capacities to support the grid in accommodating more renewables. EPH also owns 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. ►

We do not merely offload but truly decommission carbon-intensive sources, actively converting them to low-carbon or fully renewable plants.

Our efforts are built upon the following three pillars:

1. 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 massively invested in modernization of our cogeneration fleet or already-mentioned coal to biomass or gas conversions. This area includes, among other things, the recent 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.

2. 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, both already well addressed by many infrastructure and pension funds. For example, we invested in Lynemouth conversion in the UK, in biomass power generation in Italy, we acquired a biomass power station in France as a part of the former Uniper France portfolio. We also intensively work on the development of renewable power generation in the former coal mining areas. To support this, we established EP New Energies, a subsidiary specialized in renewables development targeting gigawatt-scaled potential for wind, solar and hybrid projects that we have on our land plots in Germany. We are determined to continue increasing the share of renewable and carbon-free generation in our portfolio.

3. 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. Completion of a feasibility study on the Eastring pipeline will contribute to maintaining the security of supply and support the decarbonization. We also continued works on a strategic project of the Slovak-Polish interconnector, which is on the list of critical European infrastructural projects, with expected completion in 2021.

As a key player in the Central European energy infrastructure and power generation, we are conscious of our substantial responsibility for enhancing energy security and sustainability. In 2020, we approved our new sustainability-related policies on Group level: an Environmental, Social and Governance policy framework, a Code of Conduct, specific Environmental, Operational and Responsible Procurement Policies.

We issue this Sustainability Report at challenging times affected by the coronavirus outbreak posing remarkable challenges for the society. I am glad that we had a chance to substantially participate in a large-scale humanitarian aid providing vital medical supplies to hospitals and healthcare facilities, municipalities and others in need especially in Slovakia and the Czech Republic.

EPH is taking -and will be taking- an active role in transforming the energy system. Through the 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.

To conclude, I would like to personally thank all our employees, investors and business partners, who have been supporting us in fulfilling our main business objectives, providing energies and reliable energy infrastructure at prices favourable for our customers. Our sustainability commitment aims to continuously improve in all fields of our activities to the benefit of all our stakeholders.

Sincerely,

Daniel Křetínský
chairman of the board of directors

Actively Transforming the Energy System

Vineyard Wolkenberg, recently grown on LEAG's recultivated areas with Schwarze Pumpe power plant in the background. Inaugurated in 1996/1997 the 1,600 MW lignite power plant has set new standards in terms of efficiency and environmental protection.

Taking genuine responsibility stands for seeking applicable solutions. In EPH, we are committed to both tackling global challenges and satisfying people's needs. We believe it is their sustainable fulfilment that creates a fertile ground for any structural change.

consolidated assets

€ 16.7 bn*

total energy production

37,684 GWh

employees

11,453

electricity from renewables

3,388 GWh

heat from renewables

220 GWh

(*) This data has received limited aasurance from the independent auditing firm KPMG.

Bringing Real-World **Solutions**

EPH provides reliable and affordable energy supplies vital to communities all over Europe. Coming from a continent, which is the world leader in green policies, sustainability is a natural part of our DNA. We take the initiative in transforming the energy system through active decarbonisation, investment in renewable power generation, and strengthening the security of European energy infrastructure and supplies.

We are proud that more than **70 % of our installed capacity is either zero or low carbon**. We intend to progress our strategy of continuous emission reduction, whilst meeting our financial targets and simultaneously providing flexible capacity to contribute to the security of supply in our respective markets.

As a result of our initiatives, we have **reduced EPH's emission intensity by 12%** compared to last year. In other words, for each GWh produced we saved 63 tonnes of CO_2-eq in 2019.

Newly in the Report

This Report incorporates for the first time our **alignment with the United Nations Sustainable Development Goals** and the 2030 Agenda.

Newly installed technology in Eustream KS05, Slovakia.

Leading **Decarbonisation**

We strive to seek genuine solutions. We are not interested in merely offloading obsolete power generation units. Instead, we put our effort into decommissioning carbon-intensive plants and actively converting them to low-carbon or to fully renewable ones. In the last seven years, we have cut 18 million tonnes of CO_2-eq emissions yearly. As of today, coal sources account for only 11% of EPH's consolidated financial results.

In 2019, the total provision for restoration and decommissioning was EUR 1,082 million.

Eggborough power plant

In 2019, we decommissioned 1.96 GW of hard coal-fired in Eggborough power plant. As of now, we are considering its conversion into gas-fired power plant with 2,500 MW in installed capacity.

Lynemouth project

In 2019, we completed and commenced operations at the Lynemouth project – the conversion of a hard coal power plant into a state-of-the-art carbon-neutral biomass power generation unit with net installed capacity of more than 400 MW. Lynemouth power plant stopped burning hard coal in December 2015, which alone resulted in a 2.7 million tonnes reduction in CO_2-eq annually.

Kilroot power plant

In 2019, we acquired a coal-fired power plant in Kilroot, Republic of Ireland, which we will decommission in 2024 and replace with a new, highly efficient gas generation unit. All this is in line with the coal phase out in 2025 announced by the UK government.

Czech cogeneration heating plants

Although no government deadline for coal phase out has been announced by the Czech government, our predominantly lignite-based cogeneration fleet in the Czech Republic has commenced gradual transition towards zero or low carbon technologies. Existing lignite boilers will be refurbished to enable biomass or natural gas combustion, substantially reducing our carbon footprint.

Biomass storage silos at the Lynemouth's power station site. The plant has 407 MW of net installed powering approximately 450,000 homes.

Investing in **Renewable Power Generation**

On top of operating a vast fleet of low-carbon power plants, we invest in energy storage capacities, and we continue to increase the 0.8 GW share of renewables in our portfolio. In 2019, we added almost 0.3 GW of renewable sources to our portfolio and further invested in our existing natural gas storage facilities, crucial for accommodating even more renewables into the grid.

Gazel Energie

We entered the French market through the acquisition of a diversified power generation portfolio, including biomass, wind, and solar capacity. The acquisition of Gazel Energie from Uniper increased our net installed capacity in renewables by 244 MW including 83.5 MW in wind, 10.5 MW in photovoltaics and 150 MW in biomass.

Biomass power generation in Italy

By completing the acquisition of Fusine biomass power plant, we have become a leader of biomass power generation in Italy. Fusine alongside with Biomasse Italia and Biomasse Crotone make up 77% of the acquired installed capacity in Italy, which is based on modern gas-fired CCGT low carbon technology.

EP New Energies

We work intensively on the development of renewable power generation in the former coal mining sites in Germany. In 2019, we established EP New Energies, a subsidiary specialised in renewables development recognising the gigawatts-scaled potential for wind, solar and hybrid projects that we have on our land plots.

Renewable electricity sources

EPH's installed capacity in renewable electricity sources increased from 531 MW in 2018 to 791 MW in 2019, which is an increase of 49%.

Solar power plant in Hustopeče.

Securing Reliable and Affordable **Energy Supply**

The flexibility of natural gas makes it an ideal partner for renewables while transitioning to a low-carbon future. We massively invest in better interconnections within the European natural gas market to further strengthen the infrastructure while increasing production efficiency by implementing state-of-the-art technologies. Moreover, we enhance the energy security of Central Europe by operating its most extensive, modern underground gas storage facilities, and we keep ourselves busy looking into innovative ways of storing power.

Slovak-Polish Interconnector

We continued works on a strategic project of the Slovak-Polish Interconnector, which is on the list of critical European infrastructural projects, with expected completion in 2021.

Eastring pipeline

The feasibility study on Eastring pipeline will contribute to maintaining the security of supply and support decarbonisation.

First trials of blending natural gas with hydrogen

SPPD, the gas distribution network operator in Slovakia, prepares several trials of blending hydrogen into natural gas in its distribution network. If successful, potential for storage and delivery of renewable energy through hydrogen will be substantially enhanced.

CS05 compressor station

As a part of our efforts to enhance energy security, we substantially increased gas transmission capacities from the Czech Republic to Slovakia after the extended CS05 compressor station was launched in January 2020.

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

Envisaging Future for Our Employees and Regions We Operate in

During the past more than ten years, we have been offering stable conditions for more than 11 thousand professionals. We keep their health and safety as well as their personal and career development at the forefront. We fully appreciate our mutual dependencies — as our employees rely on EPH's future sustainable development, no innovation is possible without their top talent.

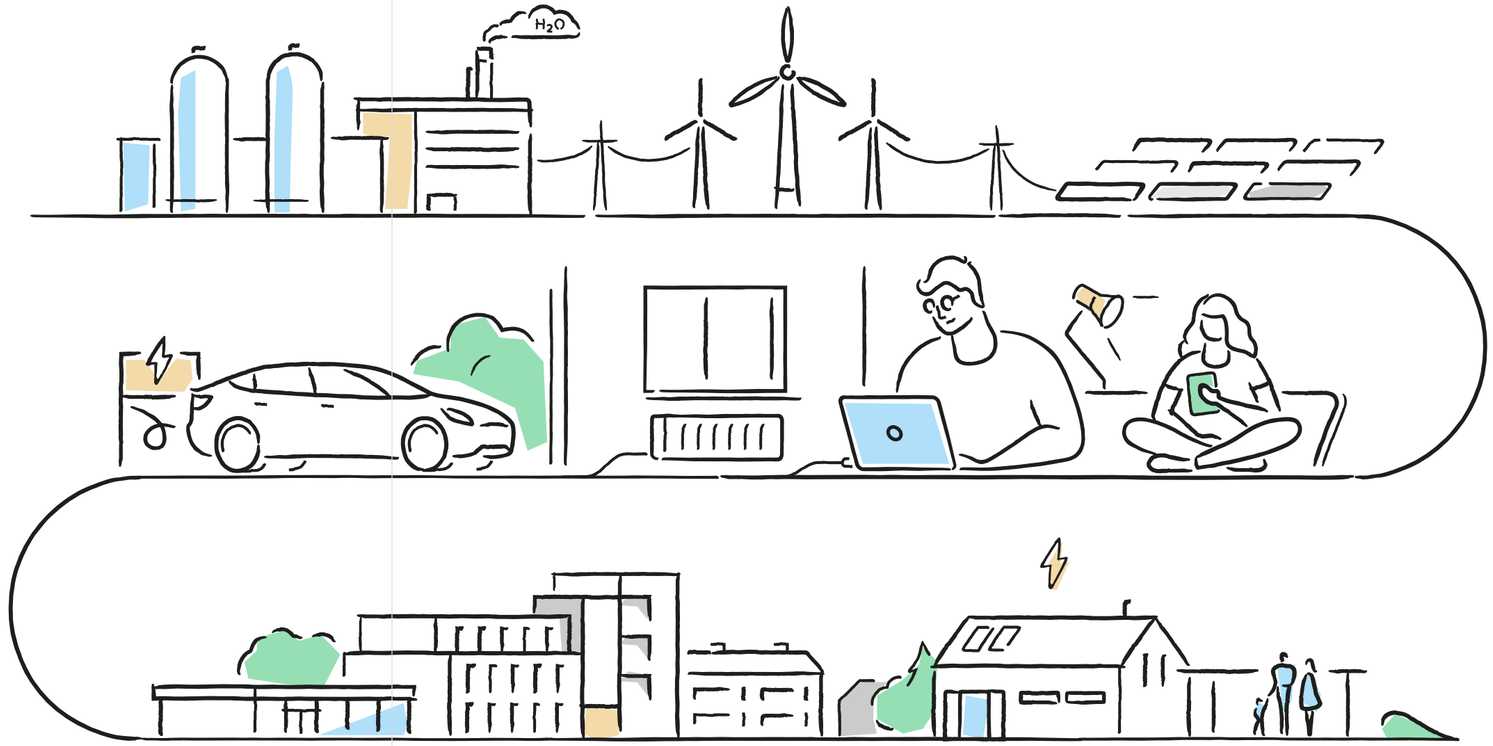
Despite the continued transformation of our portfolio towards a more flexible and climate-friendly asset base, we do our utmost to maintain a balanced approach to our decision making, reflecting not only the environmental, but equally the social and economic needs of the regions, communities, and our employees.

That is unequivocally true about EPH's operations in fossil-fuel dense regions that are still dependent on traditional energy sources. We are proud of all the local employees, as it is their hard work and commitment that contribute to satisfying peoples' everyday needs. We refuse to short-sightedly close these vital sites without having a clear plan for the workers and inhabitants alike. After all, we do believe in bringing real-world solutions. That is why our decomissioning projects are always preceded by identification of a viable alternative or close discussions with local authorities to ensure that reliable supplies and stability of distribution grid are secured by other generation sources.

2019 **Social Highlights**

- We **raise our own employees through mentoring and scholarship** initiatives. We set up our tailor-made programs to recruit young candidates, even without any specific education, and provide them with top theoretical and practical training.
- In 2019, we dedicated and committed more than **284,946 hours to training and development** of the employees within EPH Group, supporting lifelong learning.
- We are proud employers of **288 employees with various disabilities**. We strive to provide them with the best available conditions to engage in daily activities.
- Across all eleven countries in which EPH operates, we provide **permanent contracts to 10,598 (93%) employees**, various collective employment agreement schemes cover 89% of them.
- In total, during 2019 the EPH Foundation participated in and funded 775 projects, providing **overall support of EUR 1.659 million**.

Why Natural Gas?



Is a Low-emission Energy Source

In contrast to coal, electricity and heat generation from natural gas produces fewer greenhouse gases – up to 60% less CO_2 and 80% less NO_x[1]

Does not Pollute the Air

Compared to other solid fuels, natural gas emits up to 99.9% less harmful particles that damage the human respiratory tract[1]

Complements Green Energy Sources

When the wind does not blow, or it is overcast, gas-fired power plants can react quickly and cover power outages of renewable sources

Is Available for Everyone

Natural gas remains one of the most affordable sources of electricity and heat for European customers

Contributes to the Transformation of the Energy System

Natural gas reserves are predicted to meet global demand for the next decades, providing us with space and time for innovation and technological development[2]

Guarantees Energy Security

Given the expected significant drop in European gas production, a robust and flexible infrastructure supplying Russian natural gas is critical to Europe's sufficient supply

Brings New Long-term Sustainable Solutions

Renewable types of gas such as biomethane and synthetic methane, as well as storing energy by converting electricity from renewables into gas or hydrogen, open new possibilities for a responsible future

1 Source: Sustainability Report EPH 2018 p. 93
2 Source: Statistical Review of World Energy 2020, 69th edition, BP p.l.c., pages 32 and 36, downloaded on 31 July 2020 from: https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2020-full-report.pdf

Why Biomass?

Biomass is a renewable source of energy, and its combustion offers an economical alternative to fossil fuels. Biomass is widely accessible, and it can be used in cogeneration units to produce both heat and power. In comparison to other renewable sources, it is a stable source of energy since power plants can create large stocks of pellets and provide constant output to the grid.

Available Energy

Except for deserts and polar areas, biomass is growing almost everywhere, and in some urban regions, biomass is collected as waste from gardens, parks or farms. The wood processing industry also produces a large amount of biomass

Carbon Neutral

In the long-term biomass fuels release the same amount of carbon into the atmosphere as what was absorbed by plants during their growth

Cheap Fuel Source

Thanks to the wide availability and form of occurrence, biomass technology is much cheaper

Stable Renewable Source

In comparison to other renewables, biomass is a stable source of energy since power plants can create large stocks of pellets and provide constant output to the grid

Our **business**

Natural Gas for Europe

Given the decreasing domestic production coupled with a steady increase in demand, eustream corridor plays a critical role in supplying the west, centre and south of the continent with natural gas. Since the coal and nuclear sources are gradually being phased out, meeting the basic needs of a developed society without natural gas becomes virtually impossible.

We ensure a safe and reliable flow of natural gas into Europe.

customers served

Millions

natural gas corridor length

2,332 km

gas transmitted

69 billion m^3

Powering Communities

Essential physiological needs are non-negotiable foundations of any thriving society. We generate energy and provide households and institutions with reliable gas, electricity and heat deliveries while minimising our environmental impact through using predominantly low-carbon sources, active decarbonisation, efficient cogeneration and by significantly enlarging our renewable generation fleet every year after year.

We generate power and provide access to high-quality, affordable gas, electricity and heat.

customers served

2.7 million

electricity produced

33.4 TWh

heat supplied

23 PJ

electricity distributed

6.2 TWh

natural gas distributed

52 TWh

Securing **Supplies**

In today’s climate of both social and political changes, having failsafe mechanisms in place is more important than ever before. We enhance the energy security of Central Europe by operating its most extensive, modern underground gas storage facilities. On top of that, we are on the lookout for innovative ways to store energy itself, e.g. in lithium-ion batteries, to further support the system integration of renewable sources.

We keep our supplies secure and available thanks to our storage sites.

security of supply for

Millions of customers

gas storage facilities

6 underground sites

overall storage capacity

61 TWh

Connecting
Business Partners

When it comes to transporting goods and material, we bet on rail transport, which is known to release the least amount of GHGs, as well as being the most fuel-efficient freight type. We offer premium services and complex logistics solutions, including professional railway employees training.

We choose the most environment-friendly type of transport for our logistics needs.

Cultivating
Our Setting

By thoughtfully transforming and developing the properties that the Group owns throughout Europe, we aim at enriching the region, local people and the environment. In this way, we give back function and meaning not only to places which have so far served industrial activities but also to newly acquired localities and real estate accross Europe.

We find the untapped potential of our sites, buildings and technological facilities.

Key Performance Indicators

Business

37,683 GWh
Total energy production

69 bcm
Gas transmission

4.8 bcm
Gas distribution

5.7 bcm
Gas storage capacity

Financial

€ 2,051 mil*
EBITDA

€ 8,583 mil*
Sales

70 %
Group cash conversion ratio

€ 16.7 mld*
Consolidated assets

Environmental

13,302 MWe
Installed capacity in electricity

12 %
Reduction in emission intensity (vs. 2018)

3,388 GWh
of electricity from renewables

220 GWh
of heat from renewables

Employees

11,453
Total number of employees

18 %
Women out of total workforce

18 mil
Hours worked by our employees

89 %
Employees covered by collective agreements

Social

288
Workers with various disabilities

284,946
of training hours

775
Projects supported

€ 1.7 mil
Total EPH Foundation contribution

(*) This data has received limited aasurance from the independent auditing firm KPMG.

About this Report

This is the fifth Sustainability Report of Energetický a průmyslový holding, a. s., through which we aim to provide a comprehensive overview of environmental, governance and social aspects of our operations in 2019.

About this Report

This is the fifth Sustainability Report of Energetický a průmyslový holding, a.s. (“EPH”, the “EPH Group” or simply the “Group”). We focused on the most relevant updates compared to our 2018 Sustainability Report with the aim to provide a balanced overview of our performance and activities concerning the economic, social and environmental aspects of our operations.

Moreover, every year we are further developing this Report to include more information that is relevant. 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 responsible business conduct, we feel that providing relevant information to our stakeholders is a natural next step in the development of our relatively young Group.

Our Group has grown on the back of acquisitions of various entities in different countries, inheriting their own reporting standards and internal policies. Unification of internal policies, standards and processes related to sustainability across the Group is a very challenging goal, requiring a substantial amount of work, which we carry out step by step. We recognize there is still a decent room for improvement in terms of quantity and quality of published data, but we do our best to meet the expectations of our stakeholders with our fifth Report and we commit to keep raising the bar in the upcoming years.

In terms of the reporting period, the operational information (e.g. electricity produced) presented in this Report relates to our operations during the whole 2019 calendar year (same as the fiscal year), with comparative data from the previous reporting period, where available.

Both financial and operational information (e.g. EBITDA or net power production), is reported for the acquired subsidiaries following the IFRS consolidated financial statements logic, e.g. for a company acquired on 30 June financial performance is presented for the period from 1 July to 31 December.

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

The Principles of our Report

Our sustainability reports are following reporting guidelines by Global Reporting Initiative (“GRI”). This Report has been developed to follow selected GRI Standards[3]: Core option.

The Report has been developed with **GRI’s materiality, stakeholder inclusiveness, sustainability context, and completeness principles in mind**. Further details 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 section 4 Materiality Analysis.

Principles for Report Content and Quality

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

3 GRI Standards 2016 edition

Principle	EPH approach
Stakeholder inclusiveness	Mapping of stakeholders at local and global level
	Assessment of their relevance and selection of stakeholders with whom to engage
	Analysis of stakeholder concerns and expectations
Sustainability context	Analysis of sustainability framework at global, European and country level
	Study of trends in the utility and energy sector and benchmarking with peers and competitors
	Definition of future risks and challenges at local and global level
Materiality	Materiality matrix definition
	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

Table 1 Principles for report content.

Principles	EPH approach
Balance	Assessment of strengths and weaknesses in relation to 2019 results and future goals
Comparability	Presentation of 2015–2019 trends for environmental and economic indicators, and 2016–2019 trends for social indicators. Comments on changes in report scope and restatements
Accuracy	Establishment of internal analysis focused on quantitative measurements for all material aspects identified
Timeliness	Sustainability report 2019 issued over the course of 2020
Clarity	Consultations with local units interacting with stakeholders in order to define the most appropriate amount and presentation of data
Reliability	Continued engagement of external assurance provider

Table 2 Principles for report quality.

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 set 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 and further described in section 3 EPH and its business.

Further details on our stakeholder analysis and engagement are provided in section 4 Materiality Analysis covering stakeholders and priorities. This Report is focused on those areas that were deemed most material to our business and our stakeholder groups. These areas, or aspects, are explained in the different sections of this Report with further detailed data shown in Appendix.

It is important to note that two of our large operations in which we do not exercise control, namely Lausitz Energie Verwaltungs (“LEAG”) and Slovenské elektrárne (“SE”), are not included in consolidated 2017-2019 figures. However, EPH recognizes their importance to our stakeholders and readers and we decided to include a section on their operations and their sustainability initiatives in this Report.

Assurance

As every year, 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 of selected facilities located in the Czech Republic, Slovakia, Hungary and the UK, were assured in accordance with ISRS 4400 Engagements to perform agreed-upon procedures regarding non-financial information by an independent auditor. The assurance statement is found in the Assurance section of this Report.

Organisational Boundaries

The list presented below includes all of the entities within the EPH portfolio deemed material for the purpose of this report. Ownership share is presented on the subholding level, not on the EPH level, where it would be further affected by the fact that EPH owns 69% of EPIF.

EPH Core	Subholding	Country	Ownership Share	Financial Control	Operational Control
Gas Storage					
NAFTA a.s.	EPIF	SK	69.0%	Yes	Yes
NAFTA Speicher GmbH & Co. KG	EPIF	DE	69.0%	Yes	Yes
POZAGAS a. s.	EPIF	SK	62.0%	Yes	Yes
SPP Storage, s.r.o.	EPIF	SK	49.0%	Yes	Yes
Gas transmission					
eustream, a.s.	EPIF	SK	49.0%	Yes	Yes
Gas and Power Distribution					
EP Energy Trading, a.s.	EPIF	CZ	100.0%	Yes	Yes
SPP - distribúcia, a.s.	EPIF	SK	49.0%	Yes	Yes
Stredoslovenská energetika a.s.	EPIF	SK	49.0%	Yes	Yes
Heat Infra					
Budapesti Erőmű Zrt ("BERT")	EPIF	HU	95.6%	Yes	Yes
Elektrárny Opatovice, a.s.	EPIF	CZ	100.0%	Yes	Yes
Plzeňská teplárenská a.s.	EPIF	CZ	35.0%	Yes	Yes
Pražská teplárenská a.s.	EPIF	CZ	100.0%	Yes	Yes
United Energy, a.s.	EPIF	CZ	100.0%	Yes	Yes
Renewables					
Alternative Energy, s.r.o.	EPIF	SK	90.0%	Yes	Yes
ARISUN, s.r.o.	EPIF	SK	100.0%	Yes	Yes
POWERSUN a.s.	EPIF	CZ	100.0%	Yes	Yes
Triskata, s.r.o.	EPIF	SK	100.0%	Yes	Yes
VTE Pchery, s.r.o.	EPIF	CZ	64.0%*	Yes	Yes
Biomasse Crotone SpA[4]	EPPE	IT	51.0%	Yes	Yes
Biomasse Italia SpA[4]	EPPE	IT	51.0%	Yes	Yes
Fusine Energia S.r.l.[4]	EPPE	IT	51.0%	Yes	Yes
Lynemouth Power Limited	EPPE	UK	100.0%	Yes	Yes

EPH Core	Subholding	Country	Ownership Share	Financial Control	Operational Control
Generation and Mining					
Eggborough Power Ltd	EPPE	UK	100.0%	Yes	Yes
EP Ballylumford Limited	EPPE	UK	100.0%	Yes	Yes
EP Commodities, a.s.	EPPE	CZ	100.0%	Yes	Yes
EP France S.A.S.	EPPE	FR	100.0%	Yes	Yes
EP Kilroot Limited	EPPE	UK	100.0%	Yes	Yes
EP Langage Limited	EPPE	UK	100.0%	Yes	Yes
EP Produzione S.p.A.	EPPE	IT	100.0%	Yes	Yes
EP SHB Limited	EPPE	UK	100.0%	Yes	Yes
Helmstedter Revier GmbH	EPPE	DE	100.0%	Yes	Yes
Kraftwerk Mehrum GmbH	EPPE	DE	100.0%	Yes	Yes
Mitteldeutsche Braunkohlengesellschaft mbH	EPPE	DE	100.0%	Yes	Yes
Tynagh Energy Limited	EPPE	IR	80.0%	Yes	Yes

Logistics Core	Subholding	Country	Ownership Share	Financial Control	Operational Control
EP Cargo a.s.	EPIF	CZ	100%	Yes	Yes
EP Sourcing a.s.	EPIF	CZ	100%	Yes	Yes
LokoTrain s.r.o.	EPLI	CZ	65.0%	Yes	Yes
LOCON Logistik & Consulting AG	EPLI	DE	100.0%	Yes	Yes
EP Cargo Deutschland GmbH	EPLI	DE	100%	Yes	Yes
EP Cargo Polska S.A.	EPLI	PL	100%	Yes	Yes
SPEDICA GROUP COMPANIES, s.r.o.	EPLI	CZ	67.3%	Yes	Yes
EOP & HOKA s.r.o.	EPH	CZ	100%	Yes	Yes

Table 3 EPH Group companies.
* Share increased to 100% in January 2020.
4 The remaining 49% is owned by LEAG.

Note: 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	Country	Ownership Share	Financial Control	Operational Control	Joint Control
Generation and Mining						
Ergosud S.p.A.	EPPE	IT	50.0%	No	No	Yes
Lausitz Energie Kraftwerke AG	EPPE	DE	50.0%	No	No	Yes
Lausitz Energie Bergbau AG	EPPE	DE	50.0%	No	No	Yes
Other						
Slovenské elektrárne, a.s.*	EPPE	SK	33.0%	No	No	Yes

Table 3 Continues EPH Group companies

* Sustainability information on share participations is reported in a separate chapter. The company Slovenské elektrárne remains, for now, legally out of the EPPE scope. Nevertheless, from the management perspective and also in this Report, these assets are included within EPPE, but its KPIs are reported separately in the section 'Share participations' as it is related to equity consolidated group.

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 2019 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 '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 control, are excluded from this Report.
- The majority of indicators is reported at the operating level of companies 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 consider these issues as an area for further improvement for our future reporting.

Restatements in 2019 Report

From the last year's report, values for certain performance indicators were adjusted due to a revision in reporting.

- Number of final households supplied was restated retrospectively for the heat infrastructure segment. The total number in 2018 was increased from 2,385,551 to 2,720,557.
- Net installed heat capacity of EOP and UE was restated retrospectively to represent heat capacity of the boilers. The reported heat capacity in 2018 was increased from 4,767 MW to 5,624 MW
- Power and heat production by sources in 2018 was restated for PLTEP. Biomass, which is co-combusted with lignite, is now reported separately within renewable sources. Net power production from biomass in 2018 was increased by 68 GWh, while production from lignite was reduced by the same amount. Net heat production from biomass in 2018 was increased by 570 TJ, while production from lignite was reduced by the same amount.
- Energy consumption: 2018: Data restated for SHB – purchased electricity was not reported in 2018, difference 30 GWh.
- Amount of training hours in 2018 was showing incomplete infomation: The correct amount of training hours in 2018 was 258 thousand. The dfference was identified in the cathegory "Other companies within the Group".
- Net power production, CO_2 emissions, energy consumption and water withdrawn / discharged reported by EP Produzione for 2015 were restated to only include the period after the company acquisition.
- Registered injuries of contractors were not reported by two of our companies by mistake in 2018, this was corrected in 2019 data submission, thus the total Registered injuries increased from 13 to 18 for 2018.
- Logistics: In 2019, one of the Czech based companies corrected reported road fatalities, by mistake there were reported other values, now corrected all years to zero.

Following performance indicators were added:

- Number of employees by country of operations;
- Number of employees by age group;
- Number of employees with a disability;
- Indirect GHG emissions (Scope 2).

EPH and its Business

EPH Group achieved EUR 8.6 billion in sales which is by EUR 1.5 billion more than in the previous year.

Case Study
History and Development of EPH

2001

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

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

1 Pražská teplárenská — Minority stake

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

2015

6 Eggborough Power Ltd — 100%

7 EP Produzione — 100%

8 Budapesti Erőmű ZRt. — 95.6%

5 SSE Stredoslovenská energetika — 49% + management control

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

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 — 51%[5]

14 BiomasseCrotone — 51%[5]

15 Pozaças — 62%

1 Pražská teplárenská — 98%

2018

1 Pražská teplárenská — 100%

16 nafta Speicher — 67.9%

17 Plzeňská teplárenská — Více než energie — 35%

2019

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

18 fusine energia — energia sostenibile — 51%

19 EP Ballylumford — 100%

20 EP Kilroot — 100%

21 GazelEnergie — 100%

22 Tynagh Energy Limited — 80%

Fig. 1 EPH growth.

(#) Growth through acquisitions

Accelerated growth via selective acquisitions

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

Formation of EPH

The core of the current EPH management team began to take shape in 2001 headed by Daniel Křetínský. Shortly after its formation, the team 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.

5 49% share of Biomasse Italia, Biomasse Crotone and Fusine was sold to LEAG in July 2019.

Geographic Presence of EPH and Key Assets

Slovakia
Total Revenues
€ 1.86 bn

EPH Companies:
eustream
SPP - distribúcia
Stredoslovenská Energetika
Nafta

United Kingdom
Total Revenues
€ 1.55 bn

EPH Companies:
Lynemouth Power
Eggborough Power
EP SHB
EP Langage
EP Ballylumford
EP Killroot

Czech Republic
Total Revenues
€ 1.17 bn

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

Italy
Total Revenues
€ 1.15 bn

EPH Companies:
EP Produzione
Fusine Energia
Biomasse Crotone
Biomasse Italia

Germany
Total Revenues
€ 0.90 bn

EPH Companies:
MIBRAG
Saale Energie
Kraftwerk Mehrum
Helmstedter Revier

Hungary
Total Revenues
€ 0.25 bn

EPH Companies:
BERT

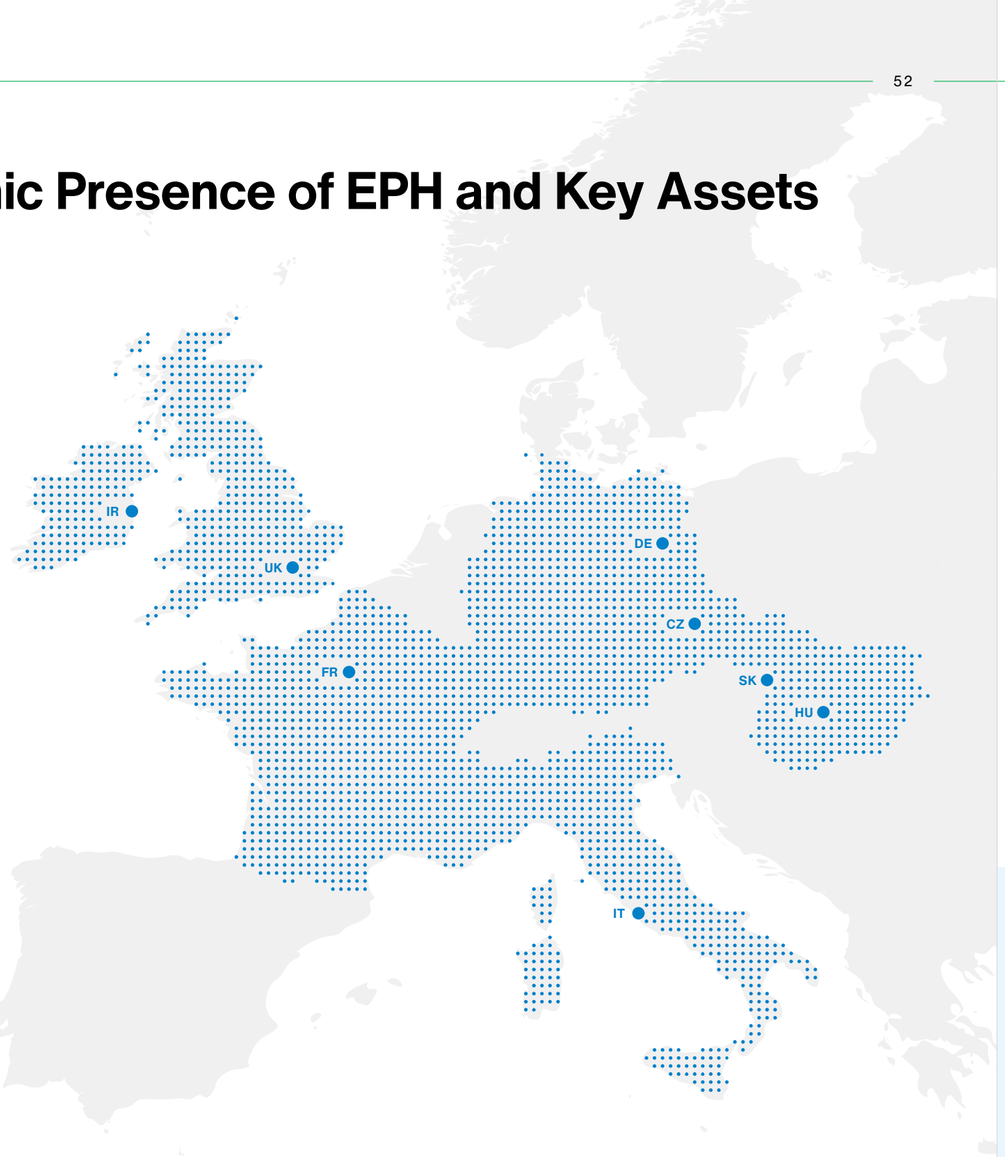
France
Total Revenues
€ 0.68 bn

EPH Companies:
Gazel Energie

Republic of Ireland
Total Revenues
€ 0.02 bn

EPH Companies:
Tynagh Energy

Other revenues
Total Revenues
€ 1.00 bn



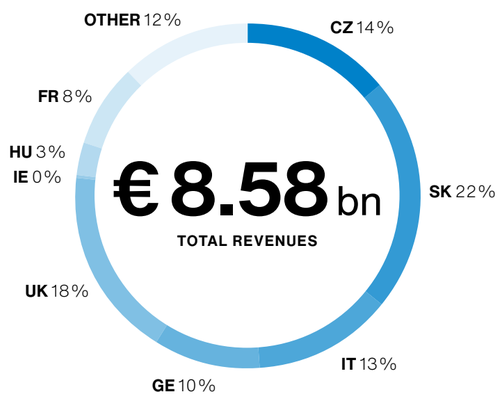


Fig. 2 Key operating entities of EPH.
Note: Fully consolidated core companies are listed here as at 2018.
SE and LEAG are not included as they are equity consolidated only.

EPH is a leading Central Europe based energy company operating mainly in the Czech Republic, Slovakia, Germany, France, Italy, United Kingdom, Republic of Ireland, 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 electricity and heat production from conventional and renewable sources, electricity and heat distribution, electricity and gas trade and their supply to final customers, coal extraction, and 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. EPH is one of the 5 largest industrial groups based in the Czech Republic in terms of EBITDA. Within Europe, in 2019, EPH Group was the seventh largest net power producer in Europe.

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

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

Financial Performance of EPH in 2019

For the year ended December 2019, EPH recorded total consolidated sales and EBITDA of EUR 8,583 million* and EUR 2,051 million*, respectively.

(*) This data has received limited aasurance from the independent auditing firm KPMG.

EBITDA of EPH Group reached EUR 2,051 million* in 2019 (EUR 1,743 million in 2018). The presented EBITDA is defined as profit from operations plus depreciation and amortisation and is further netted for eventual impact of negative goodwill. Apart from this, the EBITDA calculation does not include any further adjustments.

EBITDA of the EPIF Group[6] amounted EUR 1,618 million in 2019 (EUR 1,418 million in 2018). The 14% increase in EBITDA is largely attributable to increased volumes of transited gas which was partly driven by front-loading of volumes from 2020 to prepare for a potential Russian-Ukrainian crisis which has however not materialized as a new gas transit agreement was closed between respective parties in December 2019.

The 2019 results proved that EPH is a very stable and resilient group 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.

EBITDA of EPPE Group[7] reached EUR 441 million in 2019 (EUR 340 million in 2018). Generation and Mining segment increased by EUR 19 million, or 6%, due to resumption of capacity market in the UK improving performance of South Humber Bank and EP Langage. Further, EBITDA was positively impacted by the effect of acquisitions, which was partially offset by lower performance of JTSD Group. Renewable Energy segment increased by EUR 82 million, or 222%, primarily since Lynemouth biomass power plant was fully operational for the whole year.

6 EBITDA of the EPIF Group does not include EBITDA of holding entities. This presentation is in line with EBITDA breakdown presented in the EPH 2019 annual report.
7 EBITDA of the EPPE Group does not include EBITDA of holding entities. This presentation is in line with EBITDA breakdown presented in the EPH 2019 annual report.

Bussinec meeting in EP Commodities company.

EPH Company Structure

Key Infrastructure and Generation Companies

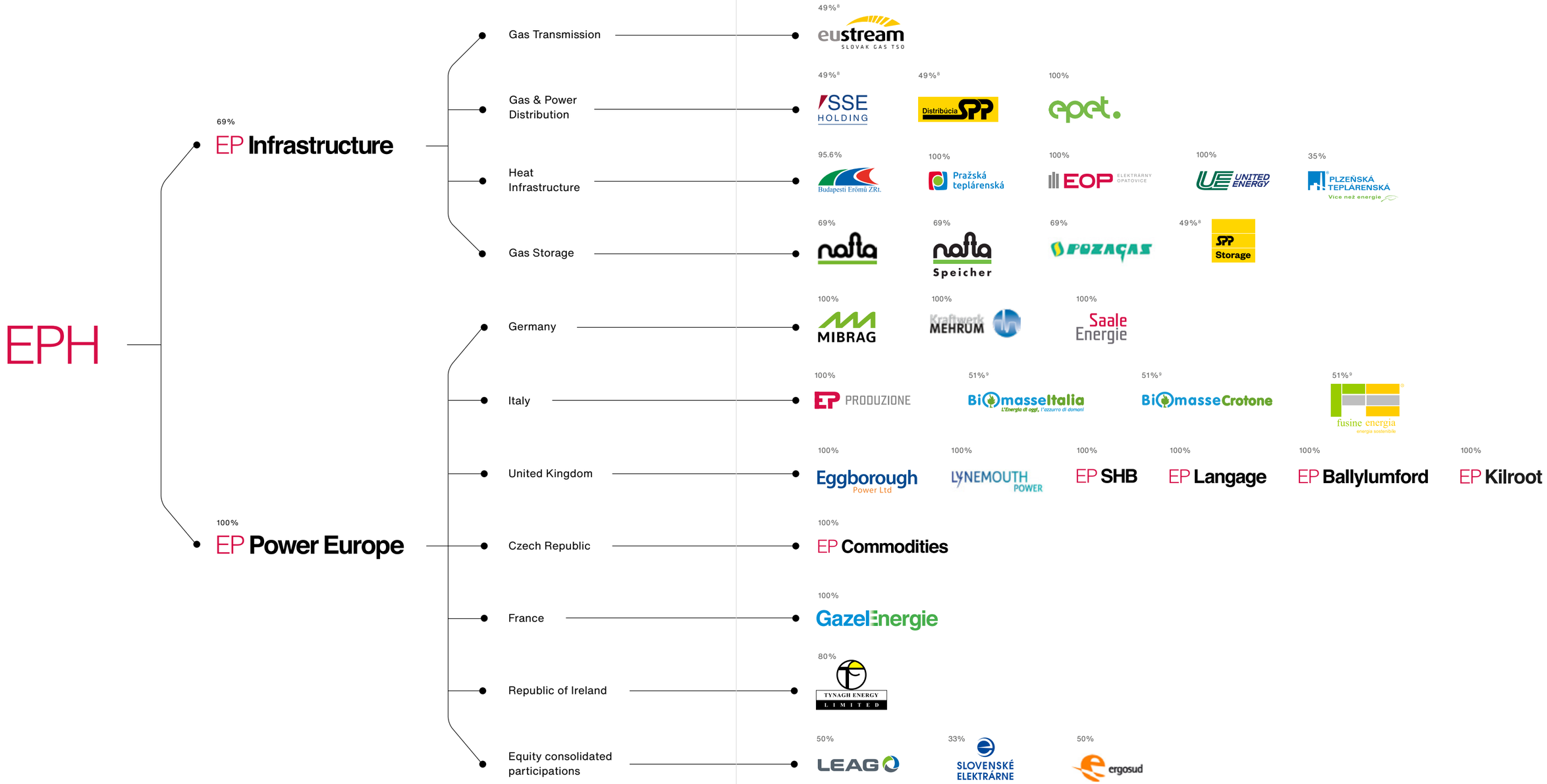


Fig. 3 EPH Company structure.

8 49% including management control.
9 49% share of Biomasse Italia, Biomasse Crotone and Fusine was sold to LEAG n July 2019.

EP Infrastructure (EPIF)[10]

Segment	EBITDA (2019)	Companies	Business profile	Asset highlight
Gas Transmission	€ 735 million	eustream SLOVAK GAS TSO	Regulated / Contracted	1 Nº 1 Largest gas transmission route in Europe
Gas & Power Distribution	€ 528 million	Distribúcia SPP; epet.; SSE HOLDING	Predominantly regulated	1 Nº 1 Gas distributor in Slovakia 2 Nº 2 Electricity distributor in Slovakia
Heat Infrastructure	€ 176 million	PLZEŇSKÁ TEPLÁRENSKÁ Více než energie; UNITED ENERGY; Pražská teplárenská; EP Sourcing; EOP ELEKTRÁRNY OPATOVICE; Budapesti Erőmű ZRt.	Predominantly regulated	1 Nº 1 Czech district heating infrastructure
Gas Storage	€ 175 million	nafta; SPP Storage; nafta Speicher; POZAGAS	Predominantly contracted	1 Nº 1 Gas storage capacity in the region of Slovakia, Czech Republic & Austria

Fig. 4 EPIF Business segments overview.

10 EBITDA of individual segments is presented in line with EBITDA breakdown in the EPH 2019 annual report.

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

EPIF is committed to further improve its governance of the sustainability areas, including implementation of new corporate policies and disclosures in 2020, which should lead to an ESG rating upgrade as well.

EPIF is a leading European energy infrastructure utility focused on gas transmission, gas and power distribution, heat generation and distribution and gas storage. With principal operations in the Slovak Republic and the Czech Republic, EP Infrastructure is a unique European entity with large and diverse infrastructure asset base. Measured by EBITDA, the EPIF Group believes to be among the five largest industrial groups based in the Czech Republic.

EP Infrastructure is built on four pillars, covering Gas Transmission, Gas and Power Distribution, Gas Storage and Heat Infrastructure. The EPIF Group operations are located in the Czech Republic, the Slovak Republic, Hungary and recently also in Germany (German assets acquired in December 2018 and fully consolidated from 2019). There were no significant acquisitions or step-acquisitions in 2019.

Approximately 89% of EPIF's EBITDA is derived from gas transmission, gas and electricity distribution and gas storage activities. A smaller part of EPIF's business (approximately 11% of 2019 EPIF's Adjusted EBITDA) is concentrated around heat infrastructure in the Czech Republic and Hungary.

The **EPIF Group activities are regulated by several environmental and energy rules** by national legislations. These include regulations governing the discharge of pollutants, handling of hazardous substances and their disposal, cleaning of contaminated sites and health and safety of employees.

In 2019, the EPIF Group continued to be very active in the area of environmental protection, which is further described in the Environmental section of the Report[11]. The companies within the EPIF Group are operated in a manner to ensure their failure-free operation and high efficiency in producing heat and electricity (while heat is a primary product), which has a direct impact on the volume of produced emissions.

11 For even more detailed information about EPIF's ESG performance, please refer to the standalone EPIF's Sustainability report 2019.
12 For full disclosure of financial results, please see Annex of this Report. In the environmental section and in the Fig. 4, we are referring to the EBITDA of segments which is EUR 1,613 million.

In 2019, EPIF reached consolidated sales of EUR 3,405 million and Adjusted EBITDA of EUR 1,618 million[12], which represents an increase of EUR 200 million (+14%) compared to last year.

Business Segment: **Gas Transmission**

The Group's Gas Transmission Business is operated through 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. The transmission network of eustream is part of the Central Corridor which is one of the largest and most important piped gas import routes into Europe.

Business Segment: **Gas Storage**

The Group's Gas Storage Business consists of NAFTA, NAFTA Speicher, Pozagas and SPP Storage, which store natural gas under long-term contracts in underground storage ("UGS") facilities located in the Czech Republic, Slovakia and Germany.

The overall storage capacity is more than 5.7 bcm[13] and includes assets in strategic regions connected to key gas routes. In addition to its traditional assets in Slovakia, EPIF operated storage facilities in South-Eastern Bavaria acquired at the end of 2018 with capacity of almost 1.8 bcm. In 2019, EPIF also continued to invest in operational security, storage technology modernisation, automation enhancement and utilisation of collected information to further optimise processes.

Business Segment: **Gas and Power Distribution**

The Group's Gas and Power Distribution Business consists of the following divisions: gas distribution, power distribution and supply. The gas distribution division comprises SPP - distribúcia, which is responsible for the distribution of natural gas. The power distribution division is represented by Stredoslovenská distribučná that distributes electricity. The supply division activities involve supplying power and natural gas to end consumers which the Group conducts through EP Energy Trading in the Czech Republic and Slovakia and through the Stredoslovenská energetika ("SSE") in Slovakia.

The annual volume of distributed natural gas in 2019 was 4.8 bcm, which is slightly above the volume distributed in 2018. In the same year, we distributed almost 6.2 TWh of electricity, which is slightly below the volume distributed in the previous year but still above the long-term average. We also kept on renovating and reconstructing our backbone network to ensure the continuity of our traditional distribution services while reflecting modern trends in electricity distribution. Total capital expenditures in this segment exceeded EUR 80 million in 2019.

Renewable Activities of EPIF

The Group also undertakes certain other activities, primarily generating electricity from renewable sources in addition to those operated by the SSE and Plzeňská teplárenská ("PLTEP"). In addition, EPIF owns and operates three solar power plants and holds a minority interest in another solar power plant and a majority interest in one wind farm in the Czech Republic. The Group also operates two solar power plants and a biogas facility in Slovakia. In the segment of heating, majority of production comes from Plzeňská teplárenská due to its biomass combustion.

13 Over 61 TWh.

EP Power Europe (EPPE)

EP Power Europe produces electricity in six European countries through its balanced portfolio of low emission, renewable and traditional sources of electrical power. Through strategic terminations of mining activities and coal-related operations as well as massive investments in low-emission alternatives, EP Power Europe actively assumes the responsibility for not only decarbonisation but also for both inhabitants and employees in the regions concerned.

EP Power Europe (EPPE) is a unique energy utility, focusing mainly on power generation from conventional and renewable sources. In addition, the company is also active in coal mining, and commodity trading. EPPE operates on eight European markets – Germany, Slovakia, Italy, Switzerland, the United Kingdom, the Republic of Ireland, the Czech Republic and France.

EPPE Group is divided into three reportable segments: Generation and Mining (including generation activities in Italy, France, Germany, the UK and Ireland and mining activities in Germany), Renewables (including activities in Germany, the UK, Italy and France) and Other.

EPPE operates a balanced portfolio of primarily natural gas, biomass and coal fueled power plants. In total, EPPE consolidates 11.8 GW of net installed power capacity in Germany, the UK, Ireland, France, and Italy (10.1 GW in 2018). The installed capacities include power plant Buschhaus (352 MW) is kept as cold reserve and shall be decommissioned in 2020. These assets generated 30.1 TWh of power (24.4 TWh in 2018).

The EPPE Group is an environmentally and socially responsible operator of its power plants. This is a result of an expansion of its fleet comprising renewable or low-emission sources and a gradual decommissioning of coal-fired power plants (e.g. Eggborough, Buschhaus).

For example, in 2018 EPPE acquired solid biomass-fired power plants Biomasse Italia and Biomasse Crotone based in Italy and invested in gas-fired power plants Langage and South Humber Bank in the UK.

This trend of decarbonisation continues well into the 2019, as EPPE continues focusing on growing share of zero or low carbon emission generation. Specifically, in 2019, EPPE increased its net installed power capacity by 1.7 GW: added 2.0 GW in natural gas, 0.3 GW in renewables, reduced oil capacity by 0.1 GW and reduced hard coal capacity by 0.4 GW (1.7 GW acquired, and 2.0 GW decommissioned). In particular, we finalized acquisition of a biomass power plant Fusine that will be operated alongside with Biomasse Italia and Biomasse Crotone. EPPE also finished the final phase of the project of converting the coal-fired power plant Lynemouth into a biomass-fired power plant.

In 2019, EPPE reached consolidated sales of EUR 4,933 million and EBITDA of EUR 441 million, which represents an increase of EUR 101 million (+30%) compared to last year.

On top of new zero or low carbon emission acquisitions, EPPE decommissioned 1.96 GW of net installed hard coal-fired capacity relating to Eggborough power plant. As a result, more than 70% of the fuel mix of the Group is represented by low or zero carbon emission sources.

Livorno Ferraris power plant was commissioned and started operations in 2008. It is a CCGT with a net installed capacity of 805 MW.

Business location	Net installed capacity / Fuel	Production	Companies	Business profile	Asset highlight
United Kingdom	4.0 GW installed capacity 2.8 GW in gas 0.5 GW in hard coal 0.4 GW in biomass 0.3 GW in destillate	11,000 GWh net power production	LYNEMOUTH POWER EP SHB EP Langage EP Kilroot EP Ballylumford	Contract for difference Security reserve	Highly efficient CCGTs with leading positions within the UK merit order Operating thermal power plants and a biomass power plant Biomass convertison of Lynemouth power plant incurred over 350 million GBP in capital expediture
Italy	4.0 GW installed capacity 3.3 GW in gas 0.6 GW in hard coal 0.1 GW in biomass	15,000 GWh net power production	EP PRODUZIONE fusine energia 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
France	2.3 GW installed capacity 1.2 GW in hard coal 0.8 GW in gas 0.2 GW in biomass 0.1 GW in wind and solar	2,400 GWh net power production	GazelEnergie	Merchant Decarbonization leader in France	Two combined cycle gas turbines, two coal power generation units, a biomass power plant and a mix of solar and wind power plants
Germany	1.2 GW installed capacity 0.7 GW in hard coal 0.5 GW in lignite	1,400 GWh net power production	MIBRAG Kraftwerk MEHRUM HELMSTEDTER REVIER	Contracted Security reserve	Buschhaus lignite power plant in stand by mode since 2016 MIBRAG operating a wind farm with capacity of 7 MW
Ireland	0.4 GW installed capacity 0.4 GW in gas	300 GWh net power production	TYNAGH ENERGY LIMITED	Contract for Difference	The only independent CCGT plant in the Irish market
Equity consolidated participations	12.4 GW installed capacity 7.8 GW in lignite 1.8 GW in nuclear 1.6 GW in hydro 1.0 GW in gas 0.2 GW in hard coal	69,200 GWh net power production	LEAG SLOVENSKÉ ELEKTRÁRNE ergosud	Merchant Ancillary services Heat co-generation	SE generated app. 70% of all energy generated in Slovakia. LEAG operates opencast mines and three large lignite power plants with installed capacity of 8 GW

Fig. 5 EPPE Business segments overview.

Source: EPH data for 2019.

Business Segment: **Heat Infra**

The Group's Heat Infra Business owns and operates three large-scale heat cogeneration[14] plants, generating both heat and power,[15] in the Czech Republic and also owns and operates, through its 100% owned subsidiary, Pražská teplárenská, the most extensive district heating system in the Czech Republic, which supplies heat to the city of Prague. The Group is the largest heat supplier in terms of heat supplied to final consumers in the Czech Republic. Moreover, in Hungary the Group owns another CHP plant, Budapesti Erömü. Total net installed capacity in this segment is 5,537 MWth.

The prices charged to our customers for heat are well below the national average for the Czech Republic, with the exception of Pražská teplárenská where the prices are little bit higher than the average but Prague is one of the wealthiest regions in the EU. Through this, we keep the prices affordable for all our customers.

In 2019, the Group supplied almost 23 PJ of heat and produced 3.8 TWh of gross electricity, confirming its position of a key heat supplier and provider of ancillary services both in the Czech Republic and Hungary with significant contribution to the transmission network's stability. The companies also commenced major modernisation investment projects leading to higher production efficiency and reduced environmental impact of its operations. Acquisition of a share in Plzeňská teplárenská at the end of 2018 marked a partial shift of our energy mix in 2019 towards fuels with a lower carbon footprint such as biomass and communal waste.

14 Combined high efficient generation of electricity and heat. Discussed in greater detail in the Environment chapter ("Our GHG emissions impact").
15 Also known as combined heat and power production ("CHP"). Please refer to the Generation assets overview section in the Environment chapter for further information.

We keep the prices affordable for all our customers.

Business Segment: **Generation and Mining**

Generation

The Generation part of the segment is primarily represented by investments in assets[16] that generate electricity in condensation mode and which are located in markets with an active capacity market (the UK, France and Italy), or where such market is expected to be implemented soon.

In **Italy**, through EP Produzione, EPPE controls facilities for thermal power generation with an installed capacity of nearly 4.0 GW. EPPE operates a hard coal power plant Fiume Santo on the Sardinia Island and four gas power plants – Livorno Ferraris, Ostiglia and Tavazzano Montanaso in the north of Italy, and Trapani in Sicilia.

Moreover, in Italy EPPE owns also 50% stake in Scandale power plant (Calabria) through Ergosud[17], a joint venture between EPH and A2A.

In **France**, EPPE through its subsidiary Gazel Energie Generation, owns two combined cycle gas turbines with a total capacity of 828 MW located near Saint-Avold, two coal power generation units with an installed capacity of 1,190 MW, one located in Provence and the second one near Saint-Avold and 150 MW biomass power plant in Provence. Gazel is also active in electricity and gas retail supply for Industrial and Commercial ("I&C") and small-to-medium-sized enterprises ("SME") customers.

In Germany, EPPE has the following activities:

- One of German assets is **MIBRAG**, which is the third largest mining company, operating cogeneration plants and a wind farm with net installed capacity of 98 MW and 7 MW respectively.
- Additionally, EPPE owns a **Kraftwerk Mehrum**, which operates a hard coal-fired power plant near Hannover with a net installed capacity of 690 MW.
- **Helmstedter Revier** operated a lignite power plant Buschhaus, which has been in security stand-by-mode since 2016 for a fixed remuneration provided by the market operator. Decomissioning of this power station is planned in 2020.

The most significant share participations include LEAG[17], in which EPPE owns half of the shares. LEAG operates lignite plants, covering nearly one tenth of the electricity consumption in Germany. LEAG is also the second largest German mining company.

Additionally, via Saale Energie, EPPE indirectly owns 42% of the lignite power plant Schkopau (Saxony-Anhalt, Germany), while Uniper Kraftwerke owns 58%. However, EPH does not exercise joint control and thus it is excluded from this Report.

In the **United Kingdom**, EPPE operates three gas-fired power plants, thermal power plants and one operational energy storage facility in Northern Ireland. Oveview of EPPE's UK assets is as follows.

- **EP Langage** is a gas-fired power station located near Plymouth, Devon with installed capacity of 905 MW. **EP South Humber Bank** is a gas-fired power station located near Stallingborough with installed capacity of 1,365 MW.
- **EP Kilroot** is a coal-fired power station located in Northern Ireland with the total capacity of 665 MW including 116 MW OCGT unit and 10 MW battery storage facility.
- **EP Ballylumford** is a power station located in Northern Ireland with a total capacity of 688 MW and operates a mix of flexible gas fired CCGT and distillate fired OCGT units.
- **Eggborough** is a phased out hard coal power plant near Selby in North Yorkshire. Currently a project of transforming the available plant site into a new gas-fired power station (CCGT) with an installed capacity of 2.5 GW is considered.

In the **Republic of Ireland**, EPPE controls Tynagh Energy that operates 384 MW CCGT power plant (dual fuel natural gas and distillate).

In the **Czech Republic**, EPPE owns EP Commodities, which specializes in trading of commodities, such as gas, power, coal or EUAs.

In **Slovakia**, EPPE focuses, through its share participation, on producing electricity from nuclear, hydro, solar and coal resources blended with biomass under the ownership of Slovenské elektrárne[17].

Mining

The Mining part of the segment is represented by companies extracting lignite from surface mines in Germany.

MIBRAG has its activities concentrated in the south of Saxony-Anhalt region, where it operates Profen open-cast mine, and in Saxony, where it operates Schleenhein open-cast mine. The produced lignite is supplied to power plants under long-term supply agreements. Two biggest customers are Lippendorf and Schkopau power plants. The company offers a wide range of services from energy generation, landscaping to civil engineering, disposal and mine engineering services.

LEAG[17], operates four Lusatian opencast mines Jänschwalde, Welzow-Süd, Nochten and Reichwalde. They produce around 60 million tonnes of lignite per year to supply the power plants Jänschwalde, Schwarze Pumpe and Boxberg as well as the refining plant Schwarze Pumpe. Briquettes, pulverized lignite and fluidized-bed lignite are processed from the raw material here. The lignite is transported using the company's own central railway network, which is 360 km long.

16 Full overview of companies is available in the annex of this report.
17 LEAG, Slovenské elektrárne and Egosud are equity consolidated, and their KPIs are thus not incorporated in the total EPH data. Their respective KPIs are available in the following chapter 'Share participations'.

Business Segment: **Renewable Energy**

Apart from the generation and mining segment, EPPE continues to be very active in the segment of renewable energy. EPPE owns and operates a portfolio of primarily biomass fired plants, wind farms and photovoltaics. Total installed capacity of EPPE's renewable energy sources stands at 751 MWe.

In the **United Kingdom**, EP UK Investments ("EPUKI") purchased Lynemouth Power, the owner and operator of a 420 MW coal-fired power station in Northumberland. Lynemouth holds a Contract for Difference for full biomass conversion and EPUKI has progressed this, including managing the construction, fuel supply and financing workstreams. The biomass conversion has incurred capital expenditure exceeding GBP 350 million and it was commissioned in autumn 2019. Lynemouth is the largest 100% biomass fired power station in the UK.

In Italy, EPPE owns three modern biomas plants.

- The biomass-fired power plant **Strongoli**, situated in the central--eastern part of Calabria. With a total capacity of 46 MW, it is among the biggest and most modern biomass-fired power plants in Europe.
- The biomass-fired power plant **Crotone** with installed capacity of 27 MW, owned and operated by Biomasse Crotone is situated in the central-eastern part of Calabria.
- Fusine Energia operates a biomass power plant in **Fusine**, province of Sondrio, with an installed capacity of 6 MW.

Renewable energy portfolio in **France** comprises six wind farms (located in northern and northwestern parts of France) with a total capacity of 84 MW and two solar parks with a total capacity of 11 MW (areas of Le Lauzet and Brigadel).

In **Germany**, MIBRAG operates a wind farm on the site of the Schleenhain mine near Groitzsch, Saxony, with a total installed capacity of 7 MW. The company strives for further development of wind power in area of surface mines owned by MIBRAG.

EP Infrastructure Highlights

EPIF operates critical energy infrastructure

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

Large diversified asset base

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

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.

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.

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.

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.

Strong financing standing supported by three investment grade ratings

Sustainable sizeable EBITDA (EUR 1.6 billion in 2019) with strong cash conversion (69% in 2019). 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 affirmed in 2019 and 2020 again. Moreover, EPIF was also rated by an ESG rating agency Sustainalytics and has obtained its inaugural ESG evaluation from S&P (first ESG evaluation awarded in the CEE region).

EP Power Europe Highlights

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

EPPE owns operations across well developed markets including Italy, the UK, Republic of Ireland, Germany and France. 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.

Balanced fuel mix

EPPE's power generation portfolio provides a balanced mix of thermal and renewables (biomass, wind, solar) power plants (e.g. modern low-carbon gas fired portfolio in Italy, biomass conversion project in the UK etc.). 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 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.

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.

Active participant in power generation market transition

Current economic situation 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.

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.

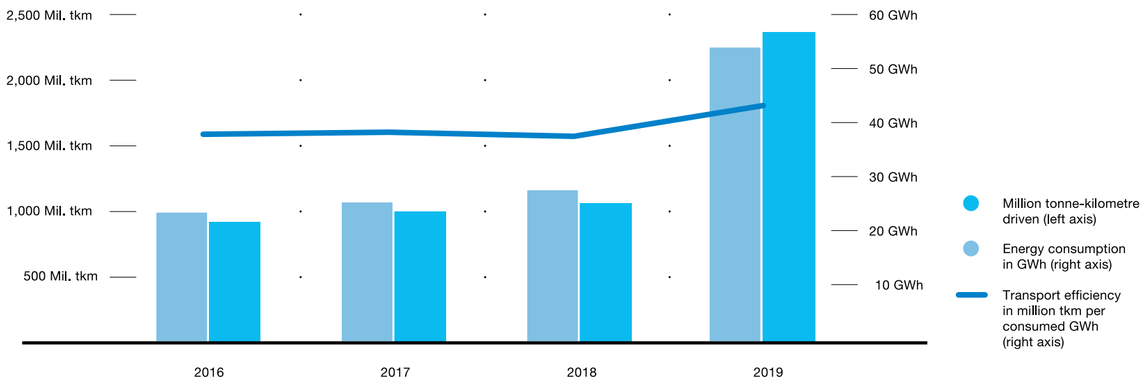
EP Logistics International (EPLI)

EP Logistics International was created around EPH's subsidiaries, which deal with logistics specializing in business partners' transport needs. The range of activities includes not only rail freight, freight forwarding, rental of railway rolling stock and intermodal operations, but also staffing and training of employees for railway work. It offers premium services and complex logistics solutions.

EP Logistics International has a strong representation in the Czech Republic, Poland and cooperates with logistics companies in Germany owned by other EPH entities such as MIBRAG and LEAG.

Since its inception, EP Logistics International has achieved steady and dynamic growth. The transformation of the company, from the very beginning to a profitable company of renowned name, employing more than 500 people and operating 60 own locomotives and more than 1,600 railway wagons and 60 silo tanks, took 8 years.

Logistics consumed 54.4 GWh in 2019, which is an increase of 95% compared to 2018 consumption of 27.9 GWh. This is mainly driven by the acquisition of Locon in 2019. Total freight volume transported increased even more in the same period from 1,057 mil. tkm to 2,363 mil. tkm. This represents an increase of 124%. Due to the fact that the volume of transport grew faster than energy consumption, transport efficiency in tkm per consumed GWh increased by 15% between 2018 and 2019.



Graph 1 Total freight volume transported during the year (tonne-kilometre per year) in EPH, corresponding energy consumption and transport efficiency.[18]

18 Comprises of EOP HOKA directly under the EPH, EP CARGO under EPIF and EPLI companies (EP Cargo Deutschland, EP Cargo Polska, LOCON Logistik & Consulting, LokoTrain and SPEDICA GROUP COMPANIES).

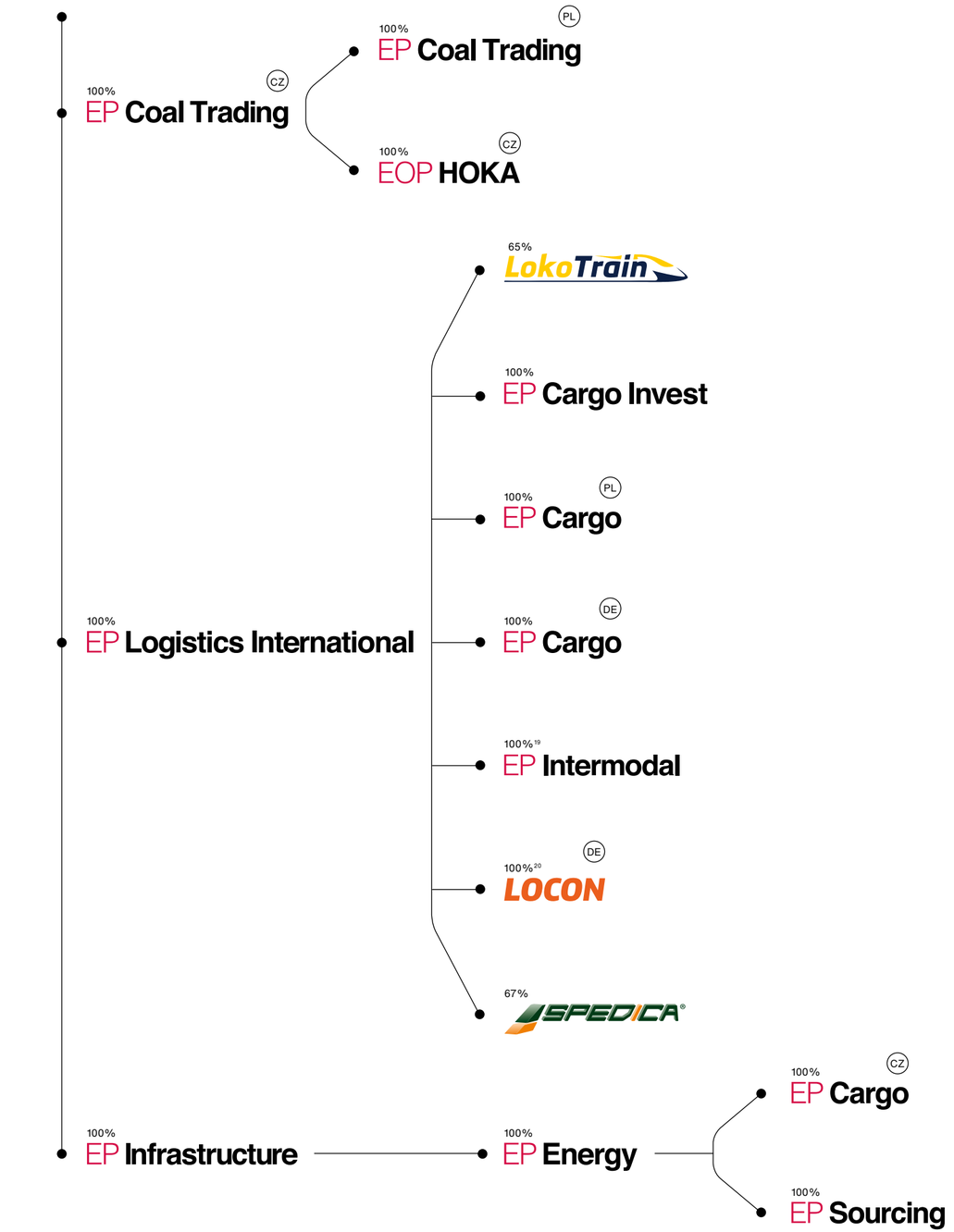


Fig. 6 Current structure of the logistics division including trading.
19 EP Intermodal acquired in April 2019.
20 LOCON Logistik & Consulting AG acquired in July 2019.

Case Study

Detailed Look on EPH's 2019 Acquisition: LOCON Logistik & Consulting AG

Locon Logistik & Consulting AG is a German railway company specialized in transporting goods, materials and containers as well as railway construction. LOCON was founded in 2002 as a rail transport company with a focus on logistics, container transport and consulting. To date, it is one of the most dynamic privately owned German rail transport companies. The focus is on container and bulk transports in Germany with the aim of going international in future and operating corridors across Europe, in particular from western and northern European ports via the connection of the EP Cargo-sister companies in Poland and the Czech Republic down to East and Southeast Europe.

The company's three founding members and sole shareholders sold 100% of their shares to EP Logistic International in 2019. Background to the transaction was the wish of EPLI to operate freight transport and logistics in Germany using its own license, which was previously only carried out in Germany by EP Cargo GmbH via a subcontractor.

LOCON specializes in B2B logistics and employs 150 people, the company generated a turnover of EUR 54 million in 2019.

Share Participations

Slovenské elektrárne

Shareholder Structure

EPH completed the first phase of the acquisition of Slovenské elektrárne, the largest power generator in the Slovak Republic, on 28 July 2016. Slovenské elektrárne ("SE") had two shareholders as of 31 December 2019, with the majority shareholder being Slovak Power Holding BV ("SPH"), owning a 66.0000000523% share in the company's registered capital. 50% of the registered capital was owned by EP Slovakia B.V. (a subsidiary of the EPH Group) and the remaining 50% was owned by Enel Produzione S.p.A. (a subsidiary of the Enel Group). The company's minority shareholder was the Slovak Republic, with a 33.9999999477% share in the registered capital, represented by the Ministry of Economy of the Slovak Republic.

The Enel Group is a leading multinational energy company and a prominent integrated player in the global electricity and gas markets. The Enel Group is present in 33 countries across five continents, operating more than 89 GW of installed capacity and having an electricity and gas transmission grid of 2.2 million kilometres. With 73 million end customers, Enel has the largest customer base compared to other European competitors and is one of the leaders in the European energy market in terms of installed capacity and EBITDA.

Portfolio of Slovenské elektrárne

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 plays a key role in the region given its stakes in the power generation and supply in the Czech Republic and power generation, power and gas distribution and supply in Slovakia.

As of 2019, Slovenské elektrárne 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 generated over 17.1 TWh, which accounted for approximately 70% of the electricity generation in Slovakia in 2019.

In 2019, SE and its subsidiaries recorded EBITDA of EUR 342 million, compared to EUR 293 million in 2018.

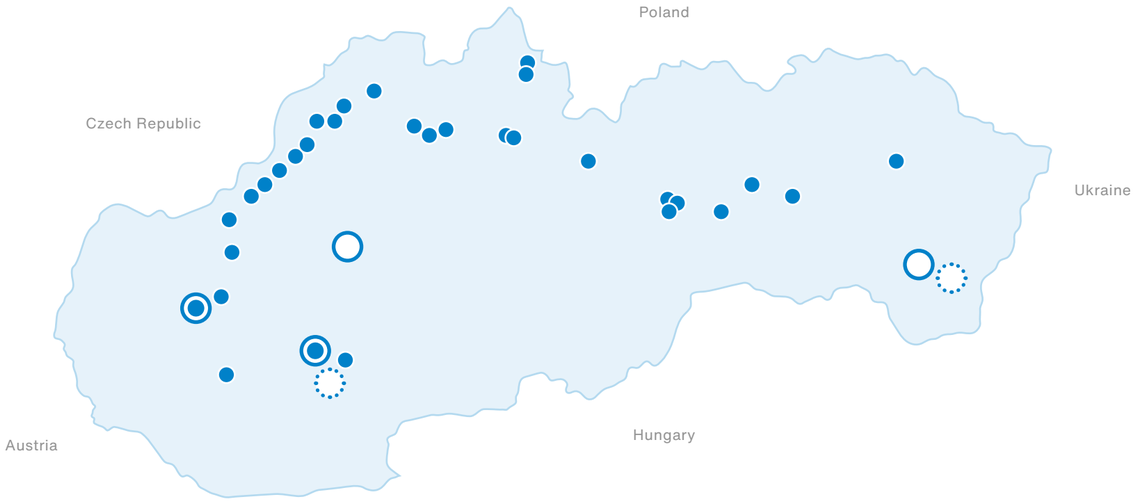
The SE remains fully committed to sustaining its investment plan for the upcoming years 2020–2024, focusing on the completion of Units 3 and 4 of the Mochovce Nuclear Power Plant. Total investments in 2019 amounted to EUR 563 million (not including capitalised interest); for the purpose of comparison, in 2018 the figure was EUR 431 million. The vast majority of the investments was directed at the construction of Units 3 and 4 in Mochovce.

Role of the assets in the Slovak energy market

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 2019, SE supplied over 92.5% 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 crucial for the transitional period in the upcoming years (the end of domestic lignite combustion in Slovakia is expected in 2023).

Moreover, SE continues to fully utilise and maximise its capability to operate power plants, exploring potential opportunities as well as providing innovative services to its end customers.

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



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. 7 Portfolio of Slovenské Elektrárne.

GHG emissions in 2019 related to net electricity supply fell by 18% to a historically low level due to a balanced energy mix with a high share of nuclear and hydro power generation and lower supply from fossil fuel-fired thermal power plants.

Sustainability initiatives

Air protection

New projects and initiatives were launched in 2019 at conventional power plants, aimed at improving their efficiency and environmental sustainability. CO_2-eq emissions intensity from Slovenské elektrárne operations in 2019 decreased to 103 tonnes of CO_2-eq per 1 GWh from 128 tonnes of CO_2-eq per 1 GWh in 2018.

Operations in thermal power plants, which are virtually the only assets among the SE's sources to emit pollutants, met in 2019 air protection requirements in accordance with the Industrial Emissions Directive and related national legislation.

The high efficiency of emission abatement equipment ($deSO_x$, $deNO_x$ – SNCR and electrostatic precipitators) in combination with the deployment of alternative sources has had a positive effect on the year-on-year reduction of emissions of all basic pollutants (particulate pollutants, SO_2, NO_x and CO), and hence on compliance with the set emission limits.

Through replacing fossil fuels with wood chips – biomass in fluidised-bed boilers at the Vojany power plant in the volume of 20,956 tonnes, a greenhouse gas saving reached 24,546 tonnes of CO_2-eq. The equivalent savings of around 2,200 tonnes of CO_2-eq, compared to the same quantity of electricity produced in coal-fired power plants, were achieved by making full use of the installed capacity of the photovoltaic power plants at Mochovce and Vojany.

Environmental Management System

In 2019, an ISM re-certification audit was carried out in SE, within which one of the main cornerstones of the ISM – environmental management system – was successfully upheld. In 2019, SE continued to observe the requirements under ISO 14001 standard according to the set mechanisms, which were applied also in the previous period and assessed positively by the auditors. The highly qualified personnel and project management were evaluated as strengths in the environmental protection system.

92.5% **Carbon free** electricity supply

7.5% Electricity supply with CO2 emmissions

Fig. 8 Carbon Emissions of energy supply in 2019.

Water Protection

There was a slight year-on-year increase in potable water consumption, but overall, potable water consumption shows a downward trend. The main reasons for the increase in potable water consumption are leaks on the pipelines, which are however being regularly searched for and removed. Flushing of potable water distribution lines at the MO34 (Units 3 and 4 of the Mochovce Nuclear Power Plant) construction site also contributed to the increase, which was necessary to maintain the required quality parameters for potable water.

In 2019, SE recorded a slight drop in the consumption of technological and cooling water used for the production of electricity and heat as a consequence of the lower production at Vojany power plant. Over the long term, SE maintains a steady trend in water consumption, which reflects overall savings, as well as the drive for operating at the lowest possible input costs.

Environmental Burdens

Aware of the impact of its past activities on the surrounding environment, Slovenské elektrárne has been constantly and responsibly approaching environmental protection. Over the long term, the SE has been paying attention to the issues of environmental burdens, especially at sites of the Nováky and Vojany thermal power plants.

In 2019, in the framework of the issue of environmental burdens, attention was given mostly to the following activities.

ENO temporary sludge bed – at the site, the ground environment and groundwater are contaminated with arsenic. To prevent the contaminated water from flowing into the Chalmová spa, a reaction barrier was built between the spa and the sludge bed. On the barrier, in the reaction baskets, the pollutants are collected and only the purified water continues to flow through. Back in 2016, part of the barrier was built as a pilot experiment, the results of which confirmed the effectiveness of this remediation method to be up to 96%. In 2019, a reaction barrier of 210 m in total was built between the spa and the settling pond, preventing the flow of pollutants across the entire contact area of the settling pond and the spa. In the upcoming period, the effectiveness of remediation will be monitored.

In 2019, the remediation of the environmental burden at the Zemiansky Brook site and the post-ante monitoring at the Filtration Station site were completed at the Nováky Power Plant. The approved target remediation limits were achieved for all environmental burdens.

The Water – Water Energetic Reactor

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 55% from 1999 to 2030.

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.

Fig. 9 The Water – Water Energetic Reactor.

Case Study

Mochovce Nuclear Power Plant Completion

The completion of Units 3 and 4 of the Mochovce Nuclear Power Plant is the largest private investment in Slovakia and the new units will cover up to 26% of Slovakia's electricity demand in the future. Commissioning of Unit 3 reached the final stage of non-active tests and closely approached technical readiness for the initial fuel loading. SE General Assembly approved a conditioned budget increase in 2019 of EUR 270 million to the total of EUR 5.7 billion.

The man-hours worked in 2019 were at a similar level to the year before and exceeded 10 million, reaching the total of 95.4 million from the beginning of the Project (November 2008 to December 2019). An average of 3,500 employees worked on the construction site under the leadership of a 600-member team of Slovenské elektrárne and its subsidiary SE SIS. Approximately 450 suppliers and contractors participated in the construction. More than 50% of contracts were concluded with Slovak companies or branches.

The output of the units after their trial run will be 2 × 471 MW, each unit being designed to reach 530 MW of electrical output in the future. The technology used is WWER 440/V-213 with pressurised water reactors, i.e. the reactor is moderated and cooled by water. The MO34 technology is noted for its evolutionary design with proven technology and numerous safety enhancements; inherent safety with low power density and large primary circuit thermal capacity; as well as higher availability and efficiency.

By the end of 2019, the physical progress of construction work on on Unit 3 and unit 4 had reached 99.3% and 87.1%, respectively.

Slovenské elektrárne completed hot hydrostatic testing in March. The Unit 3 primary circuit with fuel mock-ups was heated and pressurised to nominal operating parameters (260°C and 12.26 MPa) with a series of tests performed to prove reliability of the installation. The primary circuit pressure test at 19.12 MP was also successfully performed.

After the hot hydro-test, the integrated containment strength and tightness test of Unit 3 was successfully carried out. The containment tightness test result achieved was two times better than the limit set by the Nuclear Regulatory Authority of the Slovak Republic and it was the best result so far among all WWER 440 units, hence confirming the high strength and tightness of the containment.

The hydrostatic testing was immediately followed by an extended inspection, which was completed in August (except for activities strictly necessary before the fuel loading). This was the last phase of the non-active testing before the active commissioning testing of Unit 3. The extended inspection included a control check of the reactor and other primary circuit components such as internal reactor parts, pumps, pipelines and pressuriser by visual, tightness, pressure, ultrasonic and other tests to check the integrity and quality of the primary circuit components to detect any impurities or foreign material.

In August, the Nuclear Regulatory Authority of the Slovak Republic resumed administrative proceedings for the early use of Units 3 and 4 under the Building Act. Subsequently, the competent authorities and stakeholders carried out all local inspections, which were successfully concluded in November by a public hearing and inspection, including the presence of the Austrian anti-nuclear organisation Global 2000.

Also in November, a team of 17 experts from the International Atomic Energy Agency (IAEA), including the Austrian observer, came to Mochovce for a Pre-OSART Mission to assess the safety of activities against IAEA safety standards. The team observed the Unit 3 operator's commitment to pre-operational safety and identified number of the best practice areas as well as areas where further improvement could be achieved.

At the end of 2019, Unit 3 was repeatedly re-heated to the nominal parameter for performing complementary pressure tests of the primary circuit and reactor, and functional tests of ventilation and safety systems in accordance with the operating procedures to be used after nuclear fuel loading.

Works on Unit 4 continued with assembly and testing of equipment and systems, including installation and testing of all electrical panels of the instrumentation and control system, installation of fire detection and signalling systems of seismic category 1 needed for energisation, and distribution of essential service water. Installation also included roughly 250 tonnes of steel structures for seismic reinforcement structures in the conventional island.

Main figures 2019 and 2018

GRI / EUSS	KPI	Unit	2019	2018	2019 - 2018	%
Operations and sales[21]						
EU1	Net installed capacity – Electricity	MW	3,820	3,820	0.00	0%
	Hard coal	MW	198	198	0.00	0%
	Lignite	MW	216	216	0.00	0%
	Nuclear	MW	1,814	1,814	0.00	0%
	Hydro	MW	1,590	1,590	0.00	0%
	Photovoltaic	MW	2.00	2.00	0.00	0%
EU1	Net installed capacity – Heat[22]	MW	7,290	7,290	0	0%
EU2	Net power production	TWh	17.1	16.8	0.32	1.90%
EU2	Net heat production	TWh	0.65	0.63	0.02	3.52%
102-7	Amount of electric energy sold	TWh	21.00	23.00	(2.00)	(8.70%)
	Heat supplied to district heating network	PJ	2.48	2.54	(0.06)	(2.39%)
102-7	UCF coefficient (Unit capability factor)	%	92.1	90.3	1.8	-

GRI / EUSS	KPI	Unit	2019	2018	2019 - 2018	%
Environment						
302-1	Direct GHG emissions (Scope 1)	million tonnes CO_2-eq	1.83	2.23	(0.41)	(18%)
305-4	Emissions intensity – including heat component	tonnes CO_2-eq/GWh	103	128	(26)	(20%)
302-1	Energy consumption	TWh	52.22	52.50	(1)	0%
	Hard coal	TWh	1.01	2.19	(4.27)	(54%)
	Lignite	TWh	3.97	4.26	(1.07)	(7%)
	Nuclear	TWh	46.94	45.83	4	3%
	Other	TWh	0.12	0.10	0.08	21%
305-7	Total SO_2 emissions	thousand tonnes	1.39	3.14	(1.76)	(56%)
305-7	Total NO_x emissions	thousand tonnes	1.21	1.32	(0.11)	(8%)
305-7	Total dust emissions	thousand tonnes	0.03	0.05	(0.02)	(32%)
303-1	Quantity of water withdrawn	million m^3	53.22	55.12	(1.90)	(3%)
306-1	Quantity of water discharged	million m^3	14.49	16.42	(1.93)	(12%)
306-2	Byproducts – total production	million tonnes	0.73	0.86	(0.13)	(15%)
	Ash	million tonnes	0.25	0.30	(0.04)	(14%)
	Slag	million tonnes	0.03	0.05	(0.02)	(39%)
	Gypsum	million tonnes	0.11	0.13	(0.02)	(13%)
	Additional material	million tonnes	0.15	0.19	(0.03)	(17%)
	Other	million tonnes	0.18	0.19	(0.01)	(8%)
306-2	Waste other than byproducts – total production	thousand tonnes	65.07	11.59	53.47	461%
	Non-hazardous waste	thousand tonnes	64.61	11.08	53.53	483%
	Hazardous waste	thousand tonnes	0.46	0.51	(0.06)	(11%)
Social						
G4-LA6	Injury Frequency Rate – Employees	index	0.55	0.13	0.42	309%
G4-LA6	Registered injuries – Employees	#	4.00	1.00	3.00	300%
G4-9	Headcount	#	4,222	4,356	(133)	(3%)
	Male	#	3,510	3,624	(114)	(3%)
	Female	#	712	732	(19)	(3%)
	Executives	#	21.48	21.51	(0.03)	0%
G4-LA1	New hires rate	%	7	7	0.00	(4%)
	Employee turnover rate	%	9	9	0.00	(5%)
G4-LA9	Total training hours – per employee	hours per capita	59.09	76.56	(17.48)	(23%)

Table 4 Main figures 2018 and 2017.

21 For more information, please visit www.seas.sk.
22 Restatement: There was missing installed capacity in nuclear fuel, corrected 2019 as well as previous years.

Lausitz Energie Verwaltungsgesellschaft (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 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.

Both socially and economically, the lignite assets are of vital importance for the mining regions. Almost 8 thousand people work in LEAG’s opencast mines, power plants, administrative offices and service sectors. Additionally, a large number of jobs are created indirectly. Due to the connections to the wholesale, consumer and capital goods industry as well as other purchasing power effects, the Commission assumes that for every direct job in the lignite industry, there is one more indirect or induced job directly in the district and one more outside the narrower geographical boundaries[23]. The lignite industry is a reliable business partner for many suppliers and subcontractors.

Taking into account the development of the political and economic boundary conditions, LEAG decided to revise its long-term mining and power plant operation concept dating back to 2007. The new concept which fully complies with the coal phase out strategy announced by the German government, published in March 2017, foresees significant changes especially concerning the Jänschwalde site and the Nochten mine.

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.

23 Source: KWSB final report, p. 52.

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 in Germany, 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.

While in the past, lignite-fired power plants primarily provided stable baseload generation, today their flexibility is required more and more. Electricity generation from PV and wind cannot cover 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 solutions can be found for these challenges, controllable conventional power production in both directions (up-regulating as well as downregulating) is essential for stability of the grid in Germany and neighbouring countries and stability of the economic and social environment.

Given the dynamic growth of renewable energies, and their legally granted priority dispatch, the balancing tasks of conventional power plants are increasingly complex.

In Germany, lignite is currently essential to the transition to 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.

Coal phase out in Germany

Due to Germany's climate protection law from December 2019, CO_2 emissions are to be decreased by 55% by 2030 compared to 1990. By 2050, Germany aims to be largely climate neutral. The law contains annual reduction targets for the industry, building, mobility and agricultural sectors for the period up to 2030. The energy sector is expected to contribute between 61 to 62% reduction to reach the overall target of 2030. For this, a politically accelerated phase-out of coal power production plays a central role. Already in the summer of 2018, the Federal Government set up the "Commission for Growth, Structural Transformation and Employment" with representatives from various economic and societal groups to make recommendations for the phase-out with the necessary economic and social support for the German coal regions. In January 2019, the Commission presented its final report, recommending a gradual reduction and an end of coal-fired electricity generation by 2038 at the latest. At the same time, the Commission made proposals to support sustainable structural development in the regions affected.

Based on the Commission's report, the Federal Government has passed a law to end coal power production, including a phase-out plan for all LEAG power plants and compensatory payments. In January 2020, the supervisory boards of Lausitz Energie Bergbau AG and Lausitz Energie Kraftwerke AG agreed to the cornerstones of this phaseout plan, which had been finalized and confirmed by the German Federal Government and the four Prime Ministers whose Federal States have lignite mining interests. According to the bill, the exit scenario for the Lusatian mining region for the next 19 years is as follows: The 500 MW lignite power plant units Jänschwalde A-D and Boxberg N/P operated by LEAG are to be phased out between 2025 and 2029, as regards parts of Jänschwalde using further security stand-by mechanisms. The Schwarze Pumpe power plant and the two most modern units at the Boxberg power plant, units Q and R, are to follow by the end of 2038. The Lippendorf power plant in Saxony is scheduled for closure at the end of 2035. In 2026, 2029 and 2032 it will be checked whether units that are still in operation after 2030 can be decommissioned three years earlier. Compared to LEAG's previous mining concept from 2017, this leads to significant structural adjustments and serious interventions in the activities and planning procedures of LEAG. Against this backdrop the Eastern German lignite sector is once again making a large contribution to German CO_2 reduction targets. Between 1990 and 2018 the lignite power plant fleet of LEAG and its predecessor companies had already reduced CO_2 emissions by 46%. LEAG will nevertheless support this agreement by taking responsibility for its employees simultaneously.

Until these phase-out dates, German lignite will continue to contribute significantly to maintaining a secure, economically and environmentally sound energy supply. Also, for achieving long-term prospects for regional development, an active mining industry as an industrial docking point is of great importance. On this basis, LEAG is further developing its business fields with energy technologies for a secure "Energiewende[24]", such as battery storage systems like the BigBattery Lausitz, renewable energies and the potentials of hydrogen. Also, existing business fields are enhanced and opened up for third parties such as engineering, steel construction and maintenance for rail vehicles. LEAG will remain an important pillar for energy supply security and proceed to become an innovative and versatile energy company providing jobs and value to the region.

24 A German term for energy transition.

About 2,500 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.

Sustainability initiatives of LEAG

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 focus 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.

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 course of 2020.

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 authorities in Saxony and Brandenburg.

The Consortium and EPH fully endorse the long-term targets of the "Energiewende" set by the government and are committed to operating their portfolio to support these targets, gradually reducing the climate footprint.

We honour the decision of the German government to set up a security stand-by mechanism of 2.7 GW lignite power plant capacity in 2016 and placed the first of two 500-MW-blocks of Jänschwalde power plant into this mechanism on 1 October 2018. The second one followed on 1 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

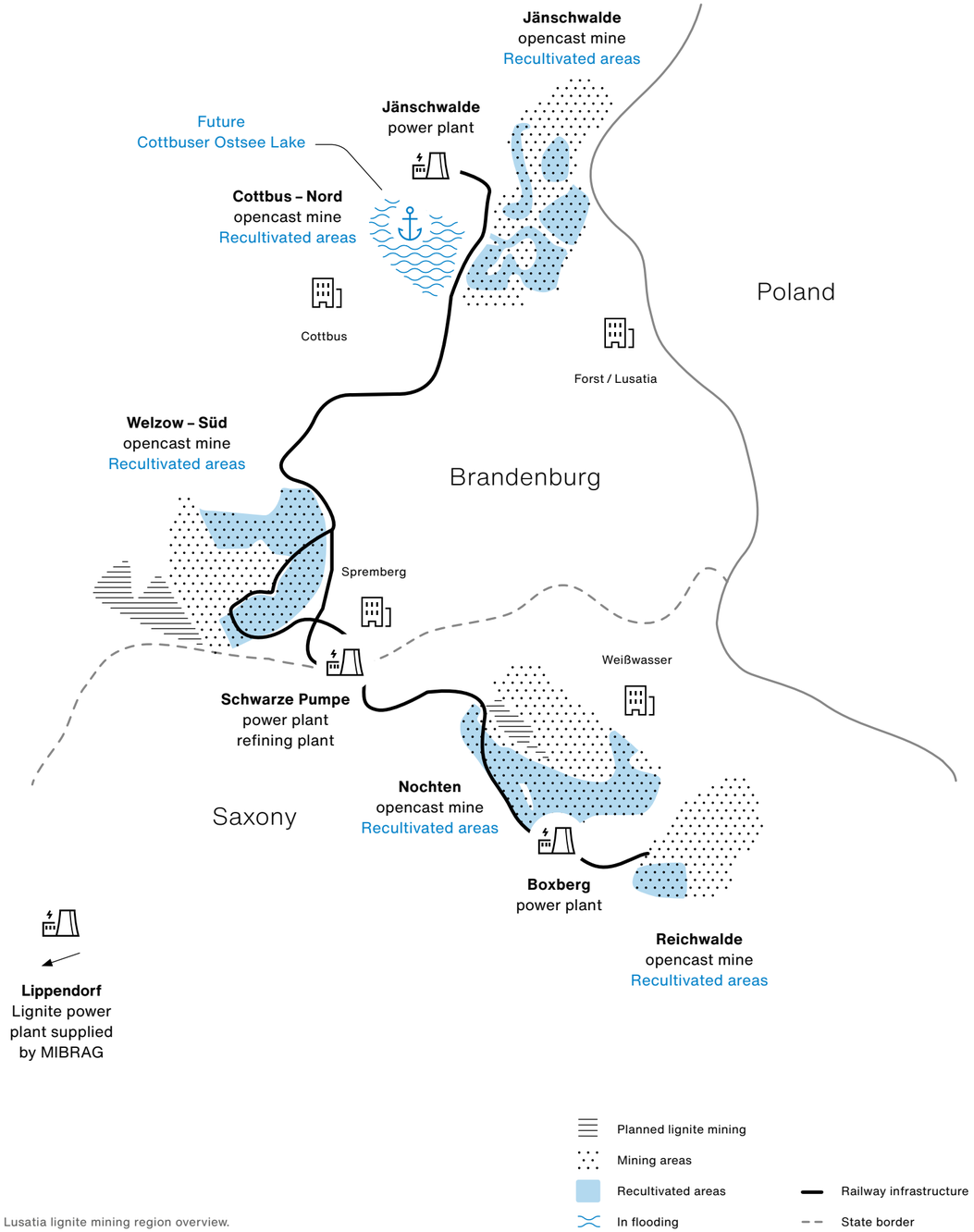


Fig. 10 Lusatia lignite mining region overview.

Case Study
LEAG's BigBattery
Lausitz Storage Project

Electricity drives our economy and forms the basis of our society. The "Energiewende" confronts the system with major challenges: Electricity from renewable sources is low-emission, but it is not continuously available.

LEAG is embarking on new paths and has built a battery storage facility with a utilization capacity of 53 MWh at the Schwarze Pumpe power plant industrial site. BigBattery Lausitz combines modern power plant infrastructure with storage technology in a completely new order of magnitude. In this constellation the project is the only one of its kind in Europe, to date. The storage facility, which is based on lithium-ion technology, will make power generation more flexible, help protect the power grid from fluctuations and thus support the system integration of renewable resources.

The BigBattery is being established next to the Schwarze Pumpe power plant. Within the area of 110 by 62 metres, 13 containers will house the lithium-ion batteries. There are also 13 converter containers, a unit transformer and medium and low voltage switchgear. In July 2019, the symbolic ground-breaking ceremony for the BigBattery was held. Commissioning and trial operation started in summer 2020.

The investment in the BigBattery Lausitz amounts to approximately EUR 25 million. The main contractor for the construction is the Czech energy company EGEM, which is cooperating with regional service providers from Lusatia. The project is funded by the Federal State of Brandenburg.

Main LEAG figures 2019 and 2018

GRI / EUSS	KPI	Unit	2019	2018	2019 - 2018	%
Operations and sales						
	Coal extraction	million tonnes	52.00	60.70	(8.70)	(14%)
EU1	Net installed capacity – Electricity	MW	7,782	7,782	0	0%
	Lignite	MW	7,595	7,595	0	0%
	OCGT and other NG	MW	184	184	0	0%
	Biomass	MW	3	3	0	0%
EU1	Net installed capacity – Heat	MW	1,802	1,802	0	0%
EU2	Net power production	TWh	49.63	55.61	(5.97)	(11%)
EU2	Net heat production	TWh	3.47	3.66	(0.20)	(5%)
102-7	Amount of electric energy sold	TWh	48.27	54.04	(5.77)	(11%)
102-7	Heat supplied to district heating network	PJ	11.34	12.05	(0.71)	(6%)
Social						
G4-LA6	Injury Frequency Rate – Employees	index	1.60	1.42	0.18	13%
G4-LA6	Registered injuries – Employees	#	20.00	18.00	2.00	11%
G4-9	Headcount	#	7,802	8,053	(251)	(3%)
	Male total	#	6,306	6,501	(195)	(3%)
	Female total	#	1,496	1,552	(56)	(4%)
	Executives	#	95.00	101.00	(6.00)	(6%)
G4-LA1	New hires rate	%	6%	7%	(1%)	/
	Employee turnover rate	%	9%	10%	(1%)	/
G4-LA9	Total training hours – per employee	hours per capita	38.21	39.99	(1.78)	(4%)

GRI / EUSS	KPI	Unit	2019	2018	2019 - 2018	%
Environment						
302-1	Direct GHG emissions (Scope 1)	million tonnes CO_2-eq	53.32	60.35	(7.03)	(12%)
305-4	Emissions intensity – including heat component	tonne CO_2-eq / GWh	1,004	1,018	-14	(1%)
302-1	Energy consumption	TWh	135.83	152.22	(16.39)	(11%)
	Lignite	TWh	132.78	149.17	(16.39)	(11%)
	Other	TWh	2.96	2.87	0.09	3%
305-7	Total SO_2 emissions	thousand tonnes	31.44	38.85	(7.41)	(19%)
305-7	Total NO_x emissions	thousand tonnes	36.02	42.85	(6.83)	(16%)
305-7	Total dust emissions	thousand tonnes	1.14	1.36	(0.22)	(16%)
303-1	Quantity of water withdrawn	million m^3	473	601	(128)	(21%)
306-1	Quantity of water discharged	million m^3	5.00	7.09	(2.09)	(29%)
306-2	Byproducts – total production	million tonnes	7.01	9.17	(2.15)	(23%)
	Ash	million tonnes	2.96	4.32	(1.36)	(32%)
	Slag	million tonnes	1.02	1.44	(0.41)	(29%)
	Gypsum	million tonnes	3.03	3.41	(0.38)	(11%)
306-2	Waste other than byproducts – total production	thousand tonnes	4,806	5,847	(1,042)	(18%)
	Non-hazardous waste	thousand tonnes	4,801	5,841	(1,040)	(18%)
	Hazardous waste	thousand tonnes	4.82	6.29	(1.46)	(23%)
	Land creation and regeneration	hectares	333	394	(394)	(100%)
	Agricultural	hectares	60	277	(277)	(100%)
	Forest	hectares	190	49.00	(49.00)	(100%)
	Other uses for nature protection	hectares	83	68.00	(68.00)	(100%)

Table 5 Main LEAG figures 2019 and 2018.

Ergosud

EPH owns a 50% stake in the Italian company Ergosud, that operates power plant Scandale. The plant belongs to the most advanced and modern electricity generation power plants, thanks to the use of the innovative combined cycle technology for combustion of natural gas. It adopts the most advanced construction technologies in order to minimize the environmental impact and maximize the thermal efficiency (which reaches 56.67%, one of the best values achievable with this type of system).

The Scandale plant has set environmental protection and the health and safety of workers as its primary objective. Adopting the most advanced technical solutions, the plant has been achieving one of the lowest emission limits in the sector, proving the combined cycle technology to be one of the most efficient ways of producing electricity. In addition, the plant is equipped with a “zero liquid discharge” system that allows to reuse all wastewater, including part of rainwater, limiting the use of water from the outside to a minimum.

The Scandale plant, prepared for cogeneration, consists of two equal, independent modules with a total capacity of 816 MW. The production of electricity reached its 5-year maximum of 2,443 GWh which is 7.4% higher then previous 2,274 GWh in 2018. The plant’s direct GHG emissions were 933,308 tonnes of CO_2-eq in 2019 compared to 868,206 in 2018 with emission intensity in electricity production reaching 382 tonnes of CO_2-eq per GWh, which is in line with 5-year average. The plant is currently dispatched by the second owner based on the concluded tolling agreement.

New Acquisitions

Fusine Energia

On 7 February 2019, the EPH Group through EP New Energy Italia (“EPNEI”), a subsidiary of NADURENE and EP Power Europe, acquired Fusine Energia (“Fusine”) from Holcim Italia Group. The acquired company operates the biomass power plant in Fusine, province of Sondrio, with an installed capacity of 6 MW. The operation is part of the strategy of the Group to develop the renewable energy business. This is the third investment in biomass energy done by EPH in Italy. In December 2017, EPNEI completed the acquisition of the biomass power plants Strongoli and Crotone (with a total capacity of 73 MW).

EP Kilroot Limited and EP Ballylumford Limited

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 (with an expectation to rebuild into a gas power station, feasibility tests have been progressing during 2020 and the assumed cease of coal operation is in 2023). 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.

EP France Group

On 9 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. The two coal-fired power plants are expected to be taken offline by 2022, in line with the latest announcements of French government regarding planned decarbonization.

The activities and assets at these sites and at Uniper France’s headquarters in Colombes near Paris were fully transferred to EPH on completion.

Locon Group

On 26 July 2019, EP Logistics International took over 100% share of LOCON Logistik & Consulting and its subsidiary companies.

The LOCON Group has been operating as a private rail carrier specializing in container rail transport in Germany for 17 years but is also active in rail construction contracts. LOCON’s fleet consists of thirty locomotives and more than 250 freight wagons, and it also operates a diesel locomotive service center and a container train dock in Brandenburg.

The acquisition of a licensed railway carrier for Germany was one of the strategic objectives of EPLI, and therefor LOCON has become one of the key elements of further development of the logistics group under the auspices of EPH.

Tynagh Energy Limited

On 29 October 2019, EP UK Investments Limited completed the acquisition of 80% of the shares of Tynagh Energy Limited from EFS Tynagh Holding Company Limited and GAMA Energy International BV, entities of GE Energy Financial Services and GAMA Holding, respectively. Mountside Partners Limited remains a 20% shareholder.

Tynagh Energy Limited is an independent power producer in the Republic of Ireland owning 384 MW. Combined Cycle Power Plant in east Co. Galway. This is the first acquisition by EPH in the Republic of Ireland and complements its existing portfolio in the United Kingdom.

All four acquisitions confirm EPH focus on low carbon (gas power plants in the Northern Ireland and Republic of 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 (see above).

EP Intermodal

On 12 April 2019, EP Logistics International acquired 100% share of EP Intermodal a.s.

EP Intermodal is a company providing customized project solutions in the field of continental combined transport that subsequently puts into practice and ensures reliable functioning of the entire process.

The main objective of the company is to analyze the current state of the European transport system and to focus on combined transport according to the partners’ requirements. The company offers independent and flexible service based on the knowledge and long-term experience in the area of development and sustainability of the intermodal transport network.

Subsequent Events

Acquisition of Humbly Grove gas storage

On 20 March 2020, EP UK Investments Limited acquired 100% shares in Humbly Grove Energy Limited and its subsidiary Humbly Grove Energy Service Limited in the United Kingdom from Petronas. Humbly Grove owns and operates underground gas storage facilities (the Humbly Grove Oil Field) near Alton, Hampshire. The business operations are to be run in cooperation with EPUKI providing a long-term storage contract, NAFTA (part of EPIF Group) acting as a technical advisor and EP Commodities.

Pandemic of coronavirus

Outbreak of new human-to-human airborne virus ("COVID-19") was declared a pandemic by the WHO on 11 March 2020. Government authorities of countries in which the Group operates introduced various restrictions including restriction on cross-border movement of people, on free movement of people and their gathering, closing of retailers except those necessary to serve basic needs (as food, pharmacy, cleaning agents and similar), closing of restaurants, museums, cinemas, theatres, sport facilities, etc. Besides the restrictions introduced by Government authorities, economies of countries will also be influenced by voluntary temporary shutdown of some factories or voluntary limitation of business operations.

The spread of COVID-19 has caused a serious situation across the whole society and global economy. The Group's management has been critically monitoring and evaluating the impacts with having implemented relevant measures. Main focus of the Group is guaranteeing health and safety of its employees, which remains the Group's top priority, and safeguarding the continuity of the essential energy security services in the countries where the Group operates.

The Group has been implementing measures to mitigate the impact on employees and on the Group's operations. The risks are monitored regularly and taken measures are adjusted accordingly, as the situation remains unclear and volatile.

Main measures implemented by management notably include:

- Implementation of extensive home office program, where employees that do not necessarily have to work from the office are asked to work from home;
- Special regime for employees working in critical areas of operation.

Furthermore, EPH Group has been securing constant internal communication from the first day of the emergency, in order to share with its employees the health and behavioral rules established by the authorities.

Based on the information currently available, despite potential short-term results' volatility caused by the pandemic, the Group's performance is not expected to be significantly impaired in the medium- to long term as the significant part of its operated assets remains regulated and/or long-term contracted.

The management cannot however preclude the possibility that any extension of the current measures, or any re-introduction or escalation of lockdowns, or a consequential adverse impact of such measures on the economic environment where the Group operates will not have an adverse effect on the Group, and its financial position and operating results, in the medium and longer term. The Group continues to monitor the situation closely and will respond to mitigate the impact of such events and circumstances as they occur.

German coal phase out

The draft law presented by the German federal government in January 2020 for the phase-out of lignite currently calls for the end of operations of the power plants Schkopau and Lippendorf, which receive lignite from MIBRAG, in 2034 respectively 2035. For the lignite strip mine Schleenhain, which supplies the Lippendorf power plant, this leads to a maximum term through the end of 2035, thereby a further three year reduction of operations as compared with the recommendations of the "Growth, Structural change and Employment" commission (KWSB) dated 26 January 2019. As a consequence of the shorter period for accumulation as well as changes in the terminal positions of the strip mines, the future use of these parameters will result in the need to record additional expenses, primarily for increase in the provision for the reclamation of the Schleenhain strip mine. The aforementioned law is also expected to lead to an increase in expenses recognized by the equity accounted investee LEAG for the same reasons.

EPPE will take over the Schkopau power plant in 2021

In February 2020, EPPE as owner of 42% stake in Schkopau power plant agreed with Uniper to acquire the remaining stake and take it over in October 2021. Completion of the transaction is still subject to the approval by the German Federal Cartel Office. Schkopau is a 900 MW lignite-fired power plant in Saxony-Anhalt, which is an important component of Central Germany's energy supply sourced primarily by lignite produced in the Profen open-cast mine belonging to MIBRAG.

Success in the capacity auction in the UK

During the first quarter of 2020, in the UK, the capacity market auction three years ahead of delivery ("T-3 auction") for the 2022/2023 delivery year and the T-4 auction for the 2023/2024 delivery year were held.

Both EP Langage and EP South Humber Bank secured capacity agreements at higher than expected clearing prices, which shall enable success operation of both power plants in the future. Further, on 7 May 2020, power plants Ballylumford, Kilroot and Tynagh succeeded also in the T-4 capacity market auction securing the extension of their contracts for the energy supplies into the transmission grid across the island of Ireland.

Lastly, the Group gained a 10-year capacity contract for Kilroot enabling the decommissioning of the current coal-fired block and replacing it with a low-emission gas-fired unit with installed capacity of more than 300 MW (decommissioning expected by the end of 2023 provided all regulatory and other conditions are met).

Sale of Pražská teplárenská and Budapesti Erőmű Zrt. to Veolia

On 7 September 2020, EP Infrastructure announced the sale of its approximately 95.62% share in Budapesti Erőmű Zrt. (BERT), 100% share in Pražská teplárenská and PT Transit to Veolia group. The transaction still needs to be approved by the competition authority and certain technical conditions need to be met.

Disposal of French CCGT assets to Total S.A.

During Q3 2020, EPPE disposed its CCGT assets in France Emile Huchet 7 & 8 in a back-to-back deal with Total S.A.

Materiality Analysis

EPH is conscious of the importance of its economic, social and environmental impact. Along with proven business results, EPH strives to respond to its key stakeholders' concerns and expectations, facing main challenges by providing the highest quality in its operations.

Our Stakeholders

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 the EPH Group, we are also actively engaged and interact with the stakeholder groups of our subsidiaries.

Across the Group, 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 Group as well as the stakeholders' perspective. In 2019, EPH updated the materiality analysis to discover if and how their expectations and concerns have changed.

Stakeholder engagement with regard to EPH's sustainability performance is regularly done through a range of channels, as summarised in the table below. Presented stakeholder analysis is performed by the EPH Group based on its local stakeholders' contributions, which play a significant role in mapping their expectations and priorities. In these challenging times (the analysis was conducted during the COVID-19 global pandemic), EPH decided not to overburden its stakeholders with robust stakeholder dialogue and to consider also additional resources instead. Therefore, in the process of stakeholder engagement, the Group also considered industry standards and sector trends. EPH continues to monitor the Sustainability reports of its competitors to assure the same high-level performance and constant improvement of its own reporting.

The analysis performed at the EPH Group level includes relevant consultations with its companies in order to analyze the key topics and concerns raised by local stakeholders.

Each stakeholder group is interested in particular sets of sustainability issues. Depending on the stakeholder's presence, relevance and relation to the Group, 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.

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 different businesses and geographies.

Stakeholder group	Description	Means of communication	Main expectations
Investors and lenders	This group is mainly represented by banks, bond holders and financial institutions, whose capital is crucial for the Group's successful development. Their interest in EPH sustainability performance is demonstrated at both the EPH level and local level depending on their involvement in financing within the Group.	• Investor relations • Annual reports • Presentations	• Transparent communication (financial and non-financial reporting) • Risk management • Environmental management
Customers	These stakeholders are very important for EPH as a whole, because their decisions determine the Group's success.	• Customer service • Satisfaction surveys • Website	• Efficient heat, gas and power distribution • Secure supply business
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 Group, which is especially valid for the contractors engaged in a centralised process (large tenders, procurement for areas such as IT, pipes, etc.)	• Technical briefing • Website • Informative training	• Procurement requirements (environmental and social aspects) • Fair and transparent procurement practices
Labour and trade unions	As 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 the local and global level. Strategies that EPH defines for its labour relations (for example employment) involve all subsidiaries and thus the interest in this issue was expressed in relation to EPH as a whole.	• Dedicated meetings	• Open dialogue and collaboration • Human resources policies • Legislative compliance
Local communities and municipalities	The origin of these stakeholders predefines the level of their interest in EPH's sustainability activities. Due to the legislation (for e.g. building permits or EIA), these stakeholders are often active in the process of local consultations and EPH actively discusses the issues with them.	• Focus groups • Opinion makers consultations	• Transparency about business activities and their impacts • Local community involvement (active participation) • Crisis risk management
Media	This stakeholder is active at both the local and global level (particularly in the Czech Republic where EPH has its headquarters).	• Press releases • Press conferences • Website	• Information transparency • Quick responses to inquiries
NGOs	The main stakeholders forming this group are environmental NGOs, therefore most attention is paid to environmental activities both at the local level (in relation to specific business – especially generation and mining) and the global level – with respect to how EPH is going to face challenges regarding emission limits and other factors relating to sustainability in the upcoming years. Nevertheless, these organisations provide valuable information about general public concerns and expectations.	• Brochure • Bulletins • Conferences	• Accountability and transparency • Safety and security of facilities • Environmental management • Reduction of emissions • Fair business practices
Competitors	Depending on their size and business area, these stakeholders are more interested in the economic performance and the environment of EPH as a whole.	• Conferences • Best practice sharing	• Compliance and anti-competitive behaviour • Fair business practices • Best practice exchange
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. Policy decisions and social change strongly influence EPH's business activities. Local entities are concerned about the performance of individual subsidiaries, while European institutions are looking at the EPH business from a transversal perspective.	• Letters to institutions • Direct meetings • Annual reports	• Access to services (continuity of supply) • Regulatory compliance • Transparency and independence
Employees	As the main internal stakeholders engaged in day-to-day business activities, employees are essential for the operations and growth of our business.	• Internal communication • Training	• Safe and stable work environment • Equal opportunity • Work-life balance • Professional development • Freedom of association

Table 6 Stakeholder dialogue.

Primary Stakeholders Groups and Priority Areas

Based on the analysis, summarized in the table above we have defined the aspects which are material for our stakeholders and decided to provide the information split into EPH performance at the 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 EPH Group and its subsidiaries, which were relevant and available, and is presented with a breakdown into various constituents.

Shareholder Group	Economic aspects		Environment		Social Aspects	
Level	Global	Local	Global	Local	Global	Local
Investors and Lenders	●	●	●	●	◑	
Customers	●		○			◑
Employees	●	●	◑		●	
Government and regulators	●	●	●	●	◑	
Suppliers and contractors	●	●	●		●	●
Competitors	●		◑		●	
Local communities and municipalities	●		●		●	●
Labour and trade unions	◑		◑		●	●
NGOs	◑	◑	●	●	○	●
Media	◑	◑	◑	◑	○	

Fig. 11 Stakeholder priorities

● High priority ○ Low priority

Engagement with Stakeholders During 2019

In 2019, there were no major media cases or any controversies related to EPH.

Sustainable Development Goals

As part of our sustainability commitment with the most relevant global initiatives, this report incorporates for the first time our alignment with the United Nations Sustainable Development Goals and the 2030 Agenda.

Following a process of identification and prioritisation, we work actively towards the timely completion of the most relevant Sustainable Development Goals.

The 2030 Agenda for Sustainable Development Goals was adopted by the United Nations in 2015 after unprecedented consultations with stakeholders all around the world. At its core, 17 Sustainable Development Goals (“SDGs”) represent a set of globally agreed targets contributing to shared peace and prosperity. As such, they also recognise that economic growth must go hand-in-hand with mitigation of climate change impacts and enhanced access to good-quality education.

EPH works tirelessly to enhance our positive impact. Working across numerous fields, we are committed to Sustainable Development Goals and strive to contribute to their timely fulfilment.

SDGs of high relevance

Ensure access to affordable, reliable, sustainable and modern energy for all

EPH is an active agent in promoting transition towards a new, more sustainable and inclusive energy model. While reducing the share of heat and electricity generation, EPH puts significant efforts into speeding up the transition to renewable energies.

Ensure sustainable consumption and production patterns

When providing services, we think long-term. EPH works constantly to promote energy efficiency and provide access to decent jobs. It is imperative for us to ensure good technical conditions of our pipelines and other parts of distribution and transmission systems. We are proud employers of numerous workers who contribute to preserving the environment by maintaining the highest level of infrastructure efficiency. In addition, we are dedicated to raise customer awareness on responsible energy consumption and energy savings.

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

As a major energy player, EPH contributes to economic growth and acts as a reliable and fair employer. Creating jobs for individuals and providing energy for families, companies and other entities critical for a well-functioning society, EPH works to promote sustainable and inclusive development. Through providing the best quality services, we work to promote socio-economic progress in communities, cities and countries.

Take urgent action to combat climate change and its impacts

In EPH, we take climate change seriously. Our commitment translates into gathering background data and pursuing a strategic approach towards mitigating its impacts and making sure we are gradually shifting towards less emission-intensive energy mix.

Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation

One of EPH's major contribution to the society is its operation of a reliable and high-quality energy infrastructure, which seeks to ensure maximum possible safety and environmental sensitivity. Equally important, EPH continues to be a key driver of innovations for sustainable industrialisation among its competitors. Its recent efforts feed into increased digitalisation of activities and services and enhanced transparency.

Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

Having ethics as our core value, EPH is committed to the ethical treatment of all its stakeholders. In cooperation with local communities, we work to protect the environment while giving voice to the disadvantaged. We set up mechanisms to protect whistleblowers to make sure that if identified, corruption will lead to serious consequences. No employees can be disadvantaged based on race, nationality, ethnicity, age, gender, sexual orientation, religious belief, political views or disabilities.

Materiality Matrix

The finalized list of material items provided the framework for compiling the content of this Report. The areas that were deemed to be the most material are shown in the materiality matrix below.

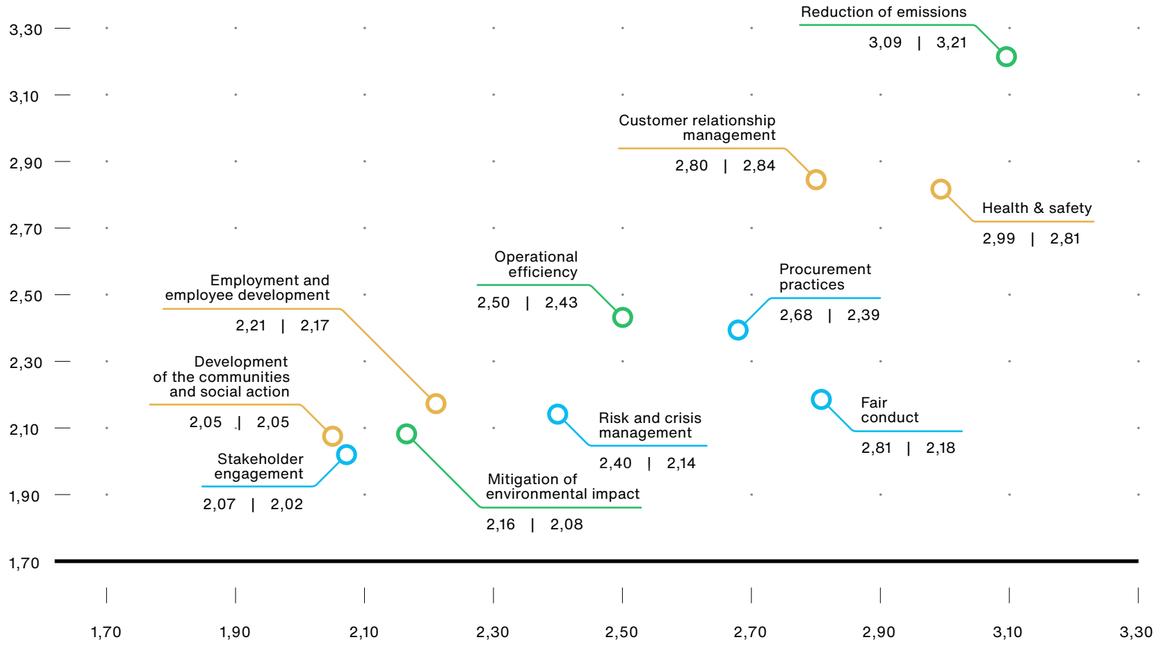


Fig. 12 Materiality matrix.

In 2019, we performed an analysis updating our Materiality Matrix considering EPH's impact on people, economy and the environment, along with the review of our stakeholders' reasonable expectations and interests.

Notes on the Materiality Matrix

The horizontal axis demonstrates the significance of EPH's economic, environmental and social impacts. EPH conducted a deep analysis of the external and internal factors at global, European and country level. EPH studied trends in the utility and energy sector and benchmarked its performance with peers and competitors.

The vertical axis represents the influence of the topics on stakeholder assessment and decision-making. EPH mapped its stakeholders and updated the assessment of their relevance. To incorporate industry and sector trends, the Group considered outcomes of its peer's stakeholder dialogues. Results of this process were analysed and stakeholders' concerns and expectations were translated into the vertical axis of the new materiality matrix.

As the result, EPH has identified eleven priorities considered material both from the perspective of significance of the Group's impacts and the influence on stakeholders' decisions. Within these eleven priorities, there are various material aspects under the GRI Standards that have formed the basis, both quantitatively and qualitatively, of this Report.

The following table links the Sustainable Development Goals ("SDGs") to the relevant indicators and disclosures in the GRI Standards and Sector Disclosures. These linkages are based on a more detailed analysis available on the SDG Compass.

ESG Areas	Material topics	Relevant SDGs	EPH contribution to the goals
EPH and its business	Economic performance	8	Generating products and services which bring real value to people's lives contributes to stable economic growth and creates ideal conditions for inclusive and decent employment.
Materiality analysis	Stakeholder engagement	16, 17	Aligning efforts with NGOs, local communities and government institutions and finding a consensus over complex issues helps to prevent conflicts and builds a strong base for inclusive societies and sustainable development.
Governance	Fair conduct	16	Enhancing the Group's ethics through preventive mechanisms, such as specialised committees and whistleblower policies, helps to promote inclusiveness and increases access to justice regardless of status, gender or age.
	Procurement practices	8, 10, 16	Maintaining rigorous standards of ethical conduct throughout the supply chain, we work to promote sustainable growth, reduce inequalities and enhance access to justice.
	Risk and crisis management	7, 11, 16	Strong mechanisms for evaluating risks and coordinating an effective response helps to enhance the resilience of business activities, communities and create a base for sustainable development.
Environment	Operational efficiency	1, 7, 9	Efficient and safe distribution and transmission help to establish resilient energy infrastructures and make energies accessible to populations in need.
	Reduction of emissions	3, 13	Increased understanding of the consequences of climate change, including its effects on health and wellbeing, serves as the primary motivator for intensified efforts in reducing harmful emissions.
	Mitigation of environmental impact	6, 12, 15	Efforts to reduce discharge of pollutants, careful disposal of hazardous material, cleaning of contaminated sites and support of biodiversity have become a core of our business operations.
Social	Employment and employee development	4, 5, 8	Employees represent a key asset of our Group. Through intensified efforts in training and development, we work to promote lifelong learning opportunities and equitable access to productive employment.
	Health & Safety	3	Health and safety are often at the core of both internal and external stakeholders' concerns. This is why we make sure that health, safety and wellbeing of our employees are given the highest priority.
	Customer relationship management	7, 12, 16	Continuously improving our interaction with customers, we strive to ensure affordable access to modern energies, uphold sustainable consumption patterns and promote inclusive societies.
	Development of communities	16, 17	Playing an active and positive role in supporting and developing communities of social action, we help to enable access to justice for previously silent communities and establish partnerships for sustainable development.

Table 7 SDGs with most relevance to the EPH operation.

Environment

In this section of the Report, EPH reports information relating to its environmental performance and impacts during the 2019 calendar year. The topics reported in this section have been driven by our materiality analysis, as described in the prior section. Given the importance of climate change and the level of interest amongst our stakeholders in this subject, we put a special focus 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 this section then focus on the other environmental topics identified as materially relevant to our organization.

Material Topics

Operational efficiency	Reduction of emissions	Mitigation of environmental impact
Distribution and transmission overview	GHG emissions: Our business and climate change	Water
Pipeline safety management	Other air pollutants	Effluents and waste
Pipeline protection and risk evaluation	Renewable energy	Biodiversity
Generation assets context		
Environmental management system		

Table 8 Material topics in the environment section.

Introduction

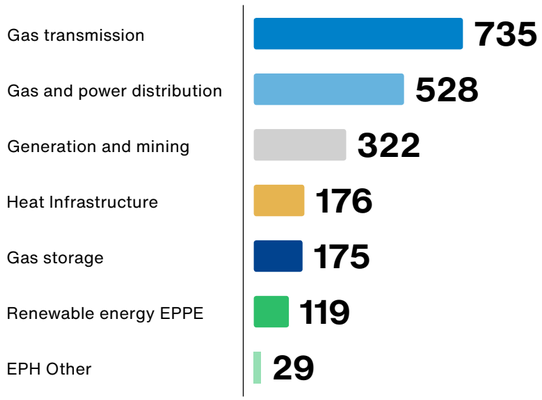
We are committed to conducting our business activities in an environmentally safe and responsible manner, aiming to decrease negative impacts on the environment.

As presented in the materiality matrix, our customers and other stakeholders have increasingly high expectations that we must meet in order to conduct business in a fair and long-term manner. EPH understands the high importance of managing environmental risks, considering that handling our resources responsibly and efficiently is the only way to set the basis for our long-term operations. Being aware that the energy industry has been historically associated with high-energy intensity, extreme carbon emissions and overall inefficiency, the following information aims to provide a comprehensive overview of the environmental impact of our operations in the most transparent way.

However, we realise that sustainability is a journey that requires continual progress and therefore, by working with our key stakeholders, we are committed to driving further development across our businesses in the upcoming periods, including but not limited to constant enhancement of our environmental performance and reduction of our GHG footprint.

Operational Efficiency

Adj. EBITDA 2019 (EUR million)

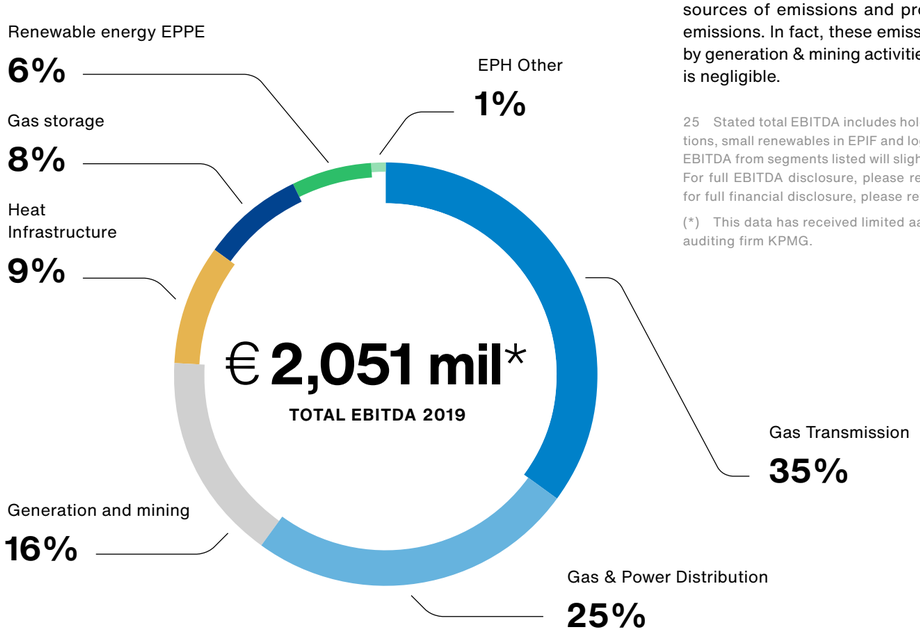


EPH Operations overview

Our business even as primarily focused on energy business shows great variance in its environmental impacts. That provides additional challenge in its environmental management and efficiency achievements. Some of the companies in the EPH have relatively small impact on the environment, resource usage or GHG emissions as they role is only to act as an intermediary and to distribute the resources for their immediate use. However, companies that are in the business of direct energy production are responsible for the biggest share of our GHG emissions. For this reason, we are disclosing the details and their environmental impact and management in all business segments.

Efficient and safe distribution and transmission help to establish resilient energy infrastructures and make energies accessible to populations in need.

Approximately **69% of EPH's EBITDA is derived from Gas Transmission, Gas and Power Distribution and Gas Storage activities**, which are minor emitters of GHG emissions. These three segments together are responsible only for 3% of our total GHG emissions. The remaining part of our business which make up the remaining 31% is connected to power and heat generation from conventional sources, generation from renewables, mining and logistics. These are the primary sources of emissions and produce about 97% of EPH's emissions. In fact, these emissions are almost purely driven by generation & mining activities while the impact of logistics is negligible.



Graph 2 EBITDA comparison of our business segments.[25]

25 Stated total EBITDA includes holding entities, inter-segment eliminations, small renewables in EPIF and logistics segment. Thus, the sum of all EBITDA from segments listed will slightly differ from consolidated EBITDA. For full EBITDA disclosure, please refer to the Annex of this report and for full financial disclosure, please refer to the EPH annual report 2019.

(*) This data has received limited aasurance from the independent auditing firm KPMG.

EPH Highlights

Our primary role

Despite being an electricity producer in Europe, based on EBITDA, we are primarily a gas transmission, gas and power distribution and gas storage company. In 2019, these activities represented 69% of our EBITDA and only about 3% of our GHG emissions.

Our continuous growth

In 2019, our business delivered a very strong growth in important indicators in both installed capacity and electricity production. From the last year, our net power production rose by nearly 5.1 TWh, which represents an 18% increase and our net installed capacity in electricity rose by 1,740 MW, which represents a 15% increase compared to last year.

Our improving efficiency

In the area of generation, we are more efficient every year. In 2019, for each GWh produced we saved 63 tonnes of CO_2-eq compared to the last year and achieved a level of 468 tonnes of CO_2-eq per 1 GWh which means a decrease of 12%.

Our solid principles

We aim to decrease our negative impact and to reduce our negative imprint on the environment, conducting our business activities in an environmentally safe and responsible manner. In 2019, we greatly decreased our air pollutants compared to 2018. Our SO_2 emissions declined by 26%, NO_x emissions were reduced by 4% and dust emissions fell by 40%.

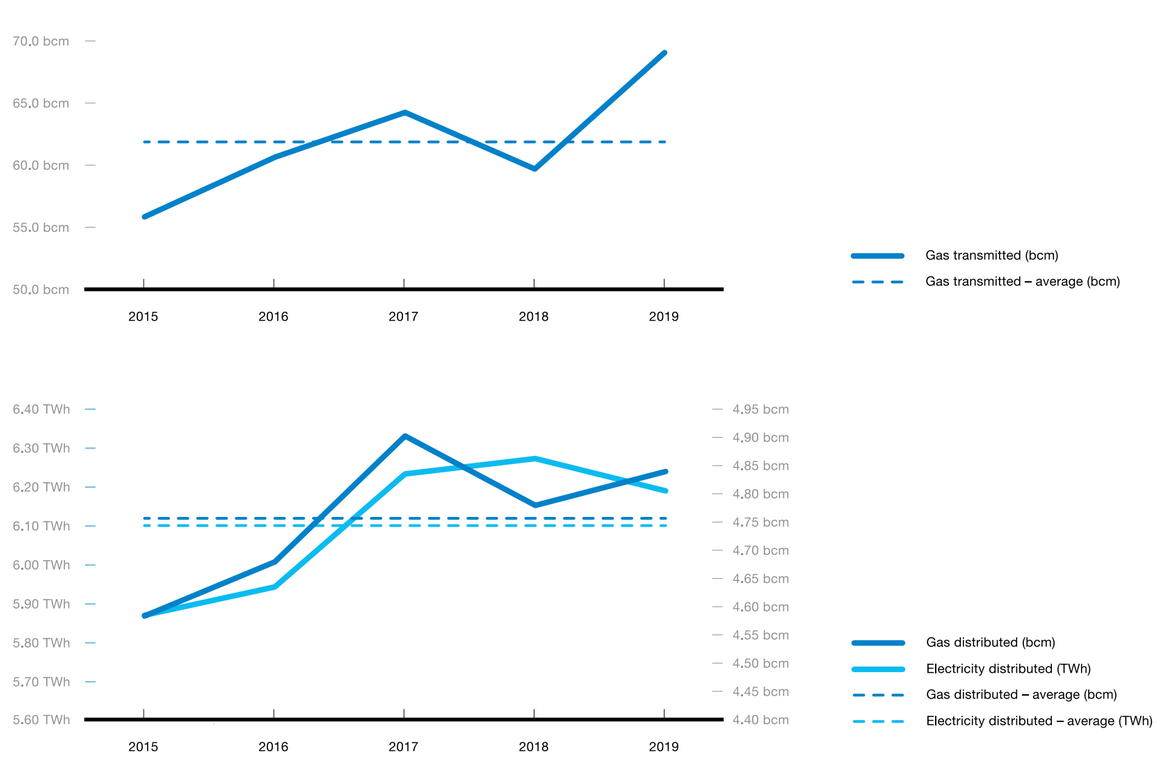
As one of our crucial responsibilities, we strive to provide affordable, high quality and reliable electricity, gas and heat supply for our customers.

Transmission, Storage and Distribution overview

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 Group. 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.

In the segments of Gas Transmission and Gas and Power Distribution total distributed volumes were relatively stable. Gas Transmission volumes increased by 16% to 69 bcm of natural gas. The same applies to gas distribution, where 4.84 bcm in 2019 is a slight increase from 4.78 bcm in 2018. Power distribution also remained at 2018 levels, with 6.19 TWh in 2019 compared to 6.27 TWh in 2018.

At the same time, we continued to increase efficiency of our operations and overhaul of our gas distribution networks to further reduce the number of leaks in the distribution network and ensure a high level of security when operating our facilities. We also kept on renovating and reconstructing our backbone electricity distribution network to ensure the continuity of our traditional distribution services while reflecting modern trends in electricity distribution.



Graph 3 EPIF's transmitted and distributed volumes in 2019.

Total capital expenditures in the Gas and Power Distribution segment exceeded EUR 80 million in 2019.

The gas 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. During the low consumption season the storage facilities are used to store natural gas supplied from abroad. 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. In addition to the compensating function, their importance also increases during emergency situations, when they play a key role in ensuring continuous deliveries and improving energy security. In Slovakia, the storage capacity operated by NAFTA represents more than half of Slovakia's annual natural gas consumption. The proximity of NAFTA's storage facilities to the pipelines transmitting Russian gas to Europe also contributes to energy security of the entire continent.

Direct GHG emissions connected to the Transmission, Storage and Distribution segments

In the segments of Gas Transmission and Gas Storage total volumes of CO_2-eq emissions were slightly higher compared to the last year. This was given by the fact that activities in these segments increased, as was already demonstrated. In the segment of gas storage, in addition to its traditional assets in Slovakia we acquired storage facilities in South-Eastern Bavaria at the end of 2018 with the capacity of almost 20 TWh[26]. For this reason, total emissions in Gas Storage segment increased in 2019 by 24.8 thousand tonnes of CO_2-eq.

Pipeline safety management

It is imperative for our core business of gas transmission and distribution to maintain our pipeline network in good technical condition. We are operating our pipelines and other parts of the transmission or distribution systems with the highest due diligence and with operational excellency. This translates to the continuous investment plans, thorough risk checks, testing and maintenance of our networks. We are monitoring and assessing risks that could possibly damage our network, from the perspective of technical risks or third-party risks.

Business segment	2015	2016	2017	2018	2019
Gas Transmission	185,780	298,922	319,110	295,817	397,546
Gas and Power Distribution	4,336	3,039	3,738	3,133	2,419
Gas Storage	33,505	40,561	36,630	36,448	61,341

Table 9 Transmission, distribution and storage GHG emissions (tonnes).

26 As Nafta Speicher was acquired at the end of 2018, only the year-end storage capacity was described in the previous report, while cumulative non-financial KPIs were not included.

Case Study
Pipeline Protection and Risk Evaluation

In EPIF, we take protection and safety operation of our pipelines very seriously. For this reason, we provide an overview of our activities in NAFTA and eustream.

NAFTA's policies

Nafta has implemented a policy and a chain of processes connected to the evaluation of integrity risks of the gas pipelines. The risk analysis sorts the parts of the pipelines per their threat level and based on that derives frequency of periodical checks. Analytical process assesses over 25 data categories per each pipeline segment. These categories include, for instance, type of isolation, soil, repairs, and types of materials used, ground resistance, local pressure or amount of ground on top of the pipe. Even low risk segments are checked on foot at least every month. High risk segments are checked every week to detect possible issues.

Eustream's policies

Eustream has a similar approach, where a set of policies exist that govern the protection, risk analysis and periodicity of the pipeline check-ins. In general, risk analyses consist of evaluating data points regarding the age of the pipe, the type of isolation, aggressivity (toxicity) of the surrounding ground or the number of repairs on a particular section.

The following policies are only related to the protection of the pipes:

Tensometric policy
This policy governs the usage and process of analysing the pressure on steel pipes.

Internal check-in
This policy governs the usage of a machine that goes internally through the pipe, so called pigging, where it can assess any possible defects inside of the pipe.

Aerial check-in
The transmission pipeline is also frequently checked by a helicopter to minimise any potential risk by third parties.

Additional policies and processes are in place that are related to the safety and security of other infrastructure parts.

Generation assets overview

Power generation assets represent younger part of EPH portfolio and majority of these are bundled under EPPE Group while heating plants are operated under EPIF. EPH Group operates with 13.3 GW of net installed capacity and it has risen by 15% compared to the 11.6 GW in 2018 (purely driven by generation & mining segment). These capacities generated a total 37.7 TWh of energy, which is 14% higher than 32.9 TWh in 2018.

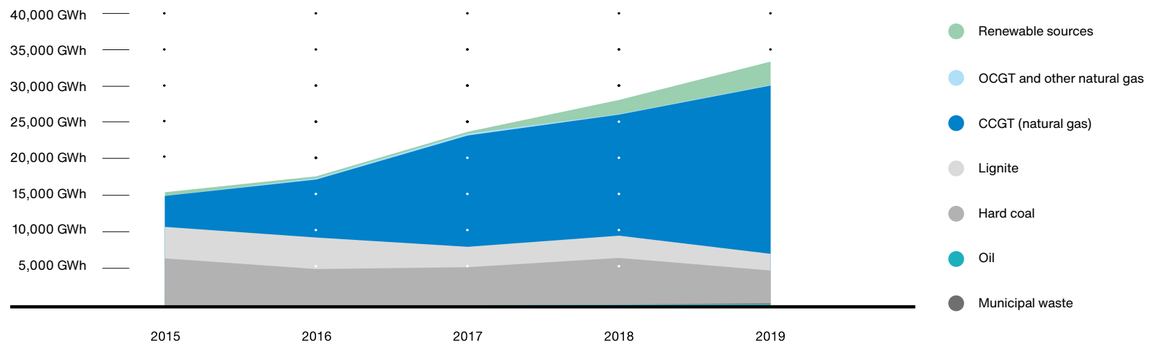
Production of electricity and heat

We are continuously growing each year as we are adding new plants to our portfolio. Mainly thanks to this our net electricity production increased by 18% from 28.3 TWh to 33.4 TWh. In the area of conventional electricity production, we are decreasing our share of production from hard coal and lignite (from 33% in 2018 to 21% in 2019) while the production from natural gas is continuously increasing and currently the majority of our total production (from 59% in 2018 to 69% in 2019).

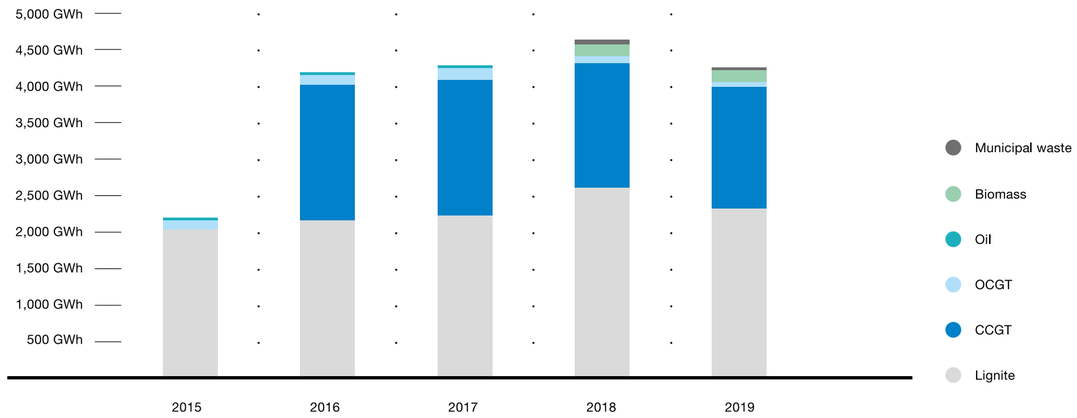
Electricity production from natural gas grew fastest in 2019, with an increase of 6.3 TWh in 2019 (total of 23 TWh in 2019), followed by a rising production from biomass by 1.1 TWh increase in 2019 (total of 3.2 TWh in 2019), which remains our main source of renewable energy. On the other hand, the production of electricity from lignite and hard coal decreased by 23% and 26% respectively in 2019, which significantly reduced the company's impact on the environment and lowered GHG footprint of the Group.

EPH's electricity generation has been steadily growing since 2016, the energy mix is more sustainable thanks to the increasing share of natural gas and biomass. As a result, the use of lignite and hard coal is decreasing.

Net power production



Net heat production



Graph 4 Net electricity and heat production.
Commentary: Electricity and heat production from the renewables is discussed in greater detail in a special section in this report (see renewable energy).

Described developments in increasing electricity production from zero or low carbon emission sources signify the commitment of EPH to spearhead the decarbonisation of the energy sector in Europe.

Energy source	2015	2016	2017	2018	2019	% in 2018	% in 2019
Renewable sources							
Wind	23.4	19.9	22.4	19.1	100.8	0.1%	0.3%
Photovoltaic	18.9	18.2	19.0	20.2	27.2	0.1%	0.1%
Hydro	9.4	9.7	9.4	6.3	8.4	0.02%	0.03%
Biomass	-	-	-	2,141.6	3,241.0	7.6%	9.7%
Biogas	17.0	10.1	10.0	10.4	10.5	0.04%	0.03%
Total RES	**68.6**	**57.9**	**60.8**	**2,197.6**	**3,387.9**	**7.8%**	**10.1%**
Conventional sources							
Hard coal	6,356.5	4,701.0	4,919.5	6,284.9	4,645.4	22.2%	13.9%
Lignite	4,481.8	4,352.8	3,008.0	3,008.8	2,313.0	10.6%	6.9%
CCGT (natural gas)	4,146.4	8,205.2	15,233.3	16,737.8	22,966.0	59.2%	68.7%
OCGT and other natural gas	99.5	130.8	231.4	18.4	50.3	0.1%	0.2%
Municipal waste and other (Conventionals)	0.0	0.0	0.0	34.0	49.5	0.1%	0.1%
Total Conventional	**15,083.9**	**17,389.0**	**23,391.9**	**26,083.7**	**30,024.2**	**92.2%**	**89.9%**
Total Electricity	**15,152.6**	**17,446.9**	**23,452.7**	**28,281.3**	**33,412.1**	**100.0%**	**100.0%**

Table 10 Net electricity production by source (GWh).

In the area of heat production, we recorded a year-on-year decrease of 8%, which is primarily connected to the mild winter. However, heat production from biomass increased by 5% in 2019. In total, lignite remains our main fuel for heat generation, but its share has slightly decreased in exchange for growth in production from natural gas.

Energy source	2015	2016	2017	2018	2019	% in 2018	% in 2019
Lignite	2,048.7	2,163.1	2,231.4	2,613.0	2,331.4	56.3%	54.6%
CCGT	-	1,864.2	1,871.2	1,720.4	1,677.0	37.1%	39.3%
OCGT	121.4	142.0	154.2	79.5	40.1	1.7%	0.9%
Oil	9.4	6.2	3.1	2.9	2.9	0.1%	0.1%
Municipal waste	-	-	-	63.3	50.0	1.4%	1.2%
Biomass	-	-	-	162.2	169.6	3.5%	4%
Total net heat production	**2,179.4**	**4,175.5**	**4,259.9**	**4,641.3**	**4,271.0**	**100%**	**100%**

Table 11 Net Heat production by source (GWh).

Installed capacity

Installed capacity has been continuously growing since 2015, as we were acquiring new companies. The total installed electrical capacity has increased by 73% since 2015 from 7.7 GWe to 13.3 GWe. In 2019 the capacity increased by 15% in comparison to the year 2018. Majority of our installed capacity in electricity is composed of sources that produce energy from natural gas, which produce far less emissions than lignite and hard coal sources. Moreover, the electricity production from natural gas has increased by additional 34% in 2019 and currently forms 61% of our total installed capacity (CCGT together with OCGT sources).

In addition, the installed capacity in natural gas will continue to increase as we expect to convert Eggborough, our large former coal power plant, into a gas-fired power station (subject to feasibility tests). The total installed capacity in heat has increased by 55% since 2015 from 3.7 GWth to 5.7 GWth[27].

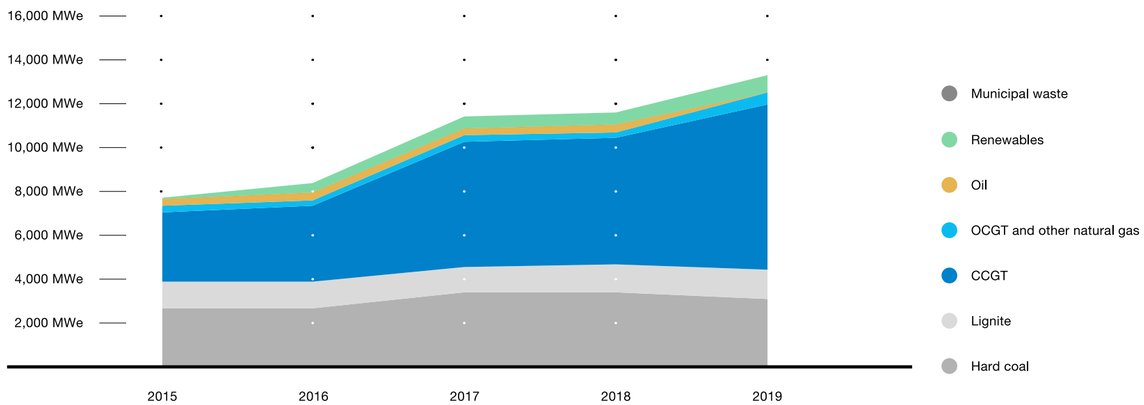
Regardless the installed capacity, production from lignite and hard coal is decreasing due to current situation on the market and general shift to more sustainable energy sources, such as natural gas and biomass. In fact, in recent years, EPPE has accelerated its search for new low or zero carbon sources, be it new acquisitions or conversion projects. For instance decommissioning and transformation of Lynemouth (lignite to biomass) or planned conversion of Eggborough (hard coal to natural gas) being a prime examples of this approach.

Significant power generation assets are also owned by equity accounted investments. Companies belonging to this category operated with 12.8 GW of net installed power capacity in 2019 (12.8 GW in 2018) and they together generated almost 70 TWh in 2019 which is a 7% decrease from 75 TWh in 2018. Major share of these capacities are represented by LEAG Group and Slovenské Elektrárne Group.[28]

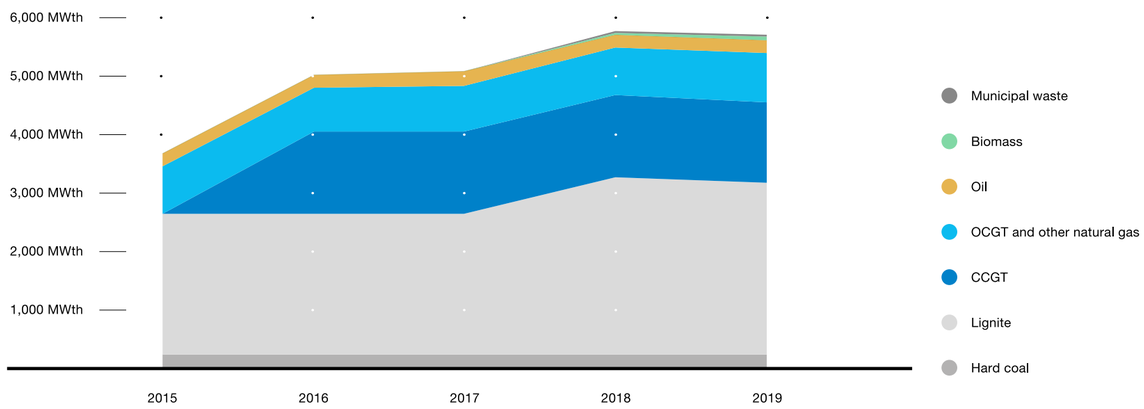
27 Power produced through co-combustion of lignite and biomass in PLTEP was additionally split into biomass and lignite (reported fully under lignite in previous SR).

28 In this section we exclude our equity holdings data from EPH consolidated data and we talk about them separately in the section EPH and its business. This is why the report does not mention nuclear power production for instance.

Installed capacity – Electricity



Installed capacity – Heat



Graph 5 Net installed capacity in Electricity and Heat.

EPH Group is growing each year and as described in the chapter "EPH and its business" in 2019, we have gained additional installed capacity through acquisitions of Fusine Energia (Italy – 6 MWe), EP Ballylumford (United Kingdom – 683 MWe), EP Killroot (United Kingdom – 665 MWe), Gazel Energie (France – 2,262 MWe) and Tynagh Energy (Ireland – 384 MWe).

Since 2019, we have new biomass, wind, natural gas and coal sources thanks to the acquisitions made by EPPE in Italy, the UK, France and Ireland. In total, our net installed capacity has increased by 1,740 MWe in 2019.

Energy source	2015	2016	2017	2018	2019	% in 2018	% in 2019
Renewable sources							
Wind	12.9	12.9	13.0	12.9	96.4	0.1%	0.7%
Photovoltaic	16.1	16.1	17.4	17.4	27.9	0.2%	0.2%
Hydro	4.1	4.1	4.1	4.1	4.6	0.0%	0.0%
Biomass	-	395.0	468.0	493.4	649.1	4.3%	4.9%
Biogas	3.0	3.0	3.0	3.0	13.0	0.0%	0.1%
Total RES	**36.2**	**431.2**	**505.5**	**530.8**	**791.0**	**4.6%**	**5.9%**
Conventional sources							
Hard coal	2,668.5	2,668.5	3,358.5	3,358.5	2,939.0	29.0%	22.1%
Lignite	1,157.0	1,157.0	1,157.0	1,297.5	1,297.5*	11.2%	9.8%
CCGT (natural gas)	3,200.0	3,478.0	5,748.0	5,748.0	7,527.2	49.7%	56.5%
OCGT and other natural gas	283.9	283.9	283.9	283.9	540.7	2.5%	4.1%
Oil	321.0	321.0	321.0	319.6	183.5	2.8%	1.4%
Municipal waste and other (Conventional)	12.6	12.6	12.6	23.1	23.1	0.2%	0.2%
Total Conventional	**7,643.0**	**7,921.0**	**10,881.0**	**11,030.6**	**12,511.0**	**95.4%**	**94.1%**
Total Electricity	**7,679.2**	**8,352.2**	**11,386.5**	**11,561.4**	**13,302.0**	**100.0%**	**100.0%**

Table 12 Net installed capacity in electricity (in GWe).

Energy source	2015	2016	2017	2018	2019	% in 2018	% in 2019
Hard Coal	242.0	242.0	242.0	242.0	242.0	4.2%	4.3%
Lignite	2,395.0	2,395.0	2,395.0	3,028.4	2,923.4	52.4%	51.4%
CCGT	-	1,400.9	1,400.9	1,400.9	1,400.9	24.2%	24.6%
OCGT	812.2	756.8	803.9	803.9	821.9	13.9%	14.4%
Oil	234.0	234.0	234.0	234.0	234.0	4.0%	4.1%
Municipal waste	-	-	-	38.6	38.6	0.7%	0.7%
Biomass	-	-	-	31.7	31.7	0.5%	0.6%
Total net heat production	**3,683.2**	**5,028.7**	**5,075.8**	**5,779.5**	**5,692.5**	**100%**	**100%**

Table 13 Net installed capacity in heat (in MWth).

* Including Buschhaus power plant (352 MW) in Germany which was transferred into security stand-by mechanism in October 2016 until September 2020 and then was finally decommissioned.

Energy consumption

The total energy consumption in 2019 showed a 12% increase compared to 2018. The reason behind this increase is 15% growth in production fuelled by our new acquisitions of natural gas, biomass and minor coal sources in Italy, in the United Kingdom, Ireland and in France through EPPE holding. In addition, we reduced the consumption of hard coal and lignite by 26% and 13% respectively.

The main fuels used in EPH in both years were natural gas, lignite and hard coal, but in the past two years there has been a surge in consumption of biomass. This is a result of new capacities primarily in Italy, France and from the conversion of Lynemouth Station in the United Kingdom. There were also other fuels used in some of our operations but in aggregate these were only minor sources and they together form less than 1% of total consumption.[29]

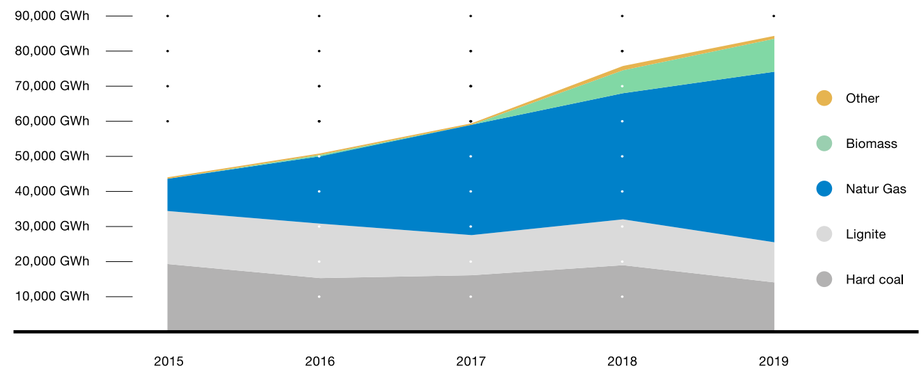
The increased consumption was mainly due to an increase in the consumption of natural gas, the consumption of which reached almost 49 TWh in 2019 and represented 58% of the total volume of energy consumed. Another primary source of energy whose consumption has increased significantly is biomass, with a 45 percent increase in consumption to the level of 10 TWh in 2019.

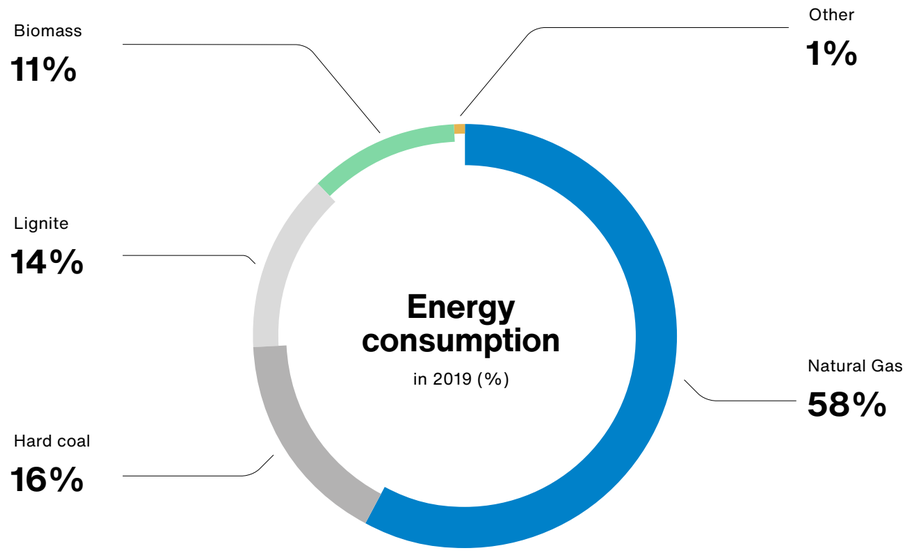
Energy consumption in GWh	2015	2016	2017	2018	2019	Change 2019 - 2018
Hard Coal	19,736.9	15,145.9	15,808.0	18,608.6	13,738.8	-26.2%
Lignite	15,367.2	15,269.4	11,700.7	13,137.5	11,371.4	-13.4%
Natural Gas	9,608.8	19,539.4	31,471.2	35,989.7	48,763.8	35.5%
Oil	298.2	183.9	80.7	134.0	92.9	-30.7%
Diesel	76.5	95.5	68.0	577.7	140.1	-75.7%
Purchased Electricity	64.4	71.9	83.9	179.5	154.0	-14.2%
Purchased Heat	2.8	7.7	12.5	11.9	12.4	4.2%
Biomass	359.5	192.9	45.1	6,644.5	9,635.9	45.0%
SAF + Municipal waste	1.0	0.5	2.4	252.6	299.2	18.4%
Other	-	0.6	0.7	0.8	1.1	37.5%
Total Energy consumption	**45,515.3**	**50,507.8**	**59,272.3**	**75,536.8**	**84,209.6**	**11.5%**

Table 14 Energy consumption in GWh.

29 Energy consumption further included: oil (0.11%), diesel (0.25%), purchased electricity (0.16%), purchased heat (0.01%) and municipal waste (0.36%).

Energy consumption in GWh





Graph 6 Energy consumption development in EPH and Energy consumption in 2019 (GWh).

EPH's production efficiency

Energy conversion efficiency

If the European climate protection targets or the goals as adopted at the Paris climate conference that came into force in April 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 one of 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. Risks of non-compliance with environmental standards or simply where prolonged operations are not economically viable are too high for the Group to bear.

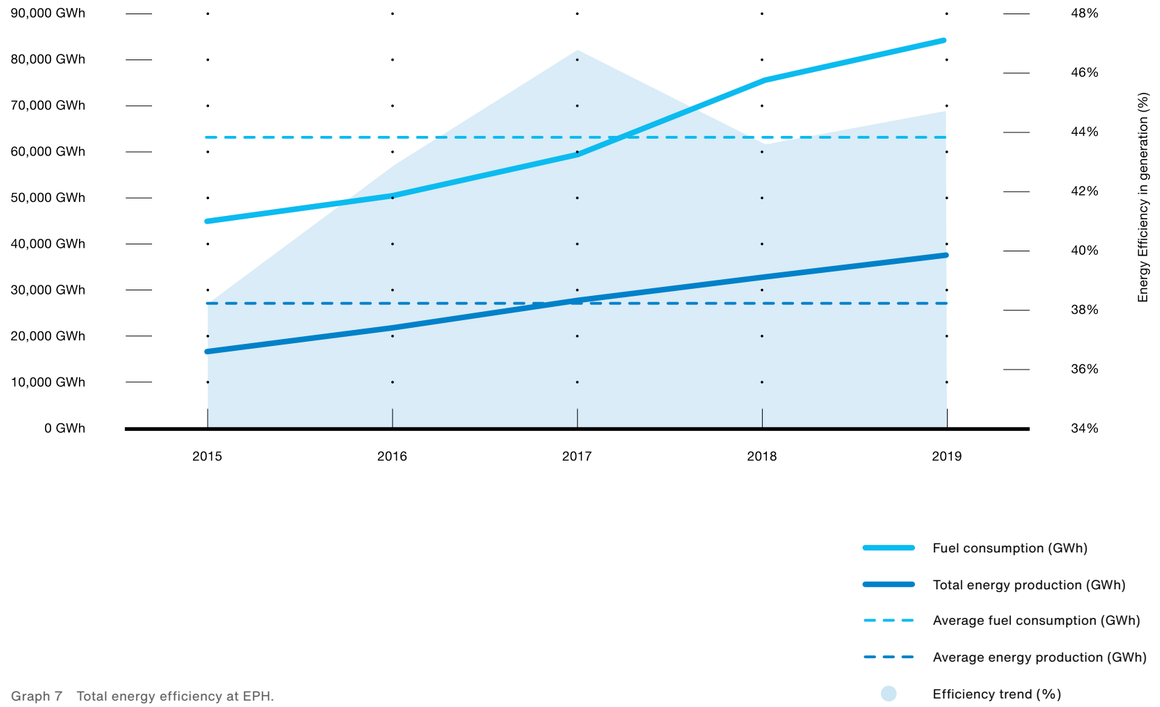
The commitment to improving energy efficiency across our operations is not only beneficial for the environment, but it also makes good sense for business. Improving efficiency allows us to decrease our combustion fuel costs, one of our main cost drivers, and reduce our GHG emissions for each unit of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

The graph of total energy efficiency shows that our energy consumption is increasing in line with increasing energy production. However, the growth in production was larger than the increase in consumption so this means that in total our efficiency in energy conversion of fuel to power and heat have increased. Total energy consumption in 2019 increased by 12% compared to 2018, but our net energy production rose by 15% and in total, our efficiency improved by 1% from 44% to 45% since 2018.

The increase in the consumption of natural gas and biomass in combination with the reduction of the consumption of hard coal and lignite led to an increase in energy efficiency to 45%, which is a significant increase compared to 2015 when the energy efficiency was at the level of 38%.

Total energy consumption between 2015 and 2019 increased by 85%, while energy production rose by 121%. As a result, our efficiency improved from 38% to 45% during the same period.

Energy efficiency



Graph 7 Total energy efficiency at EPH.

Case Study
Activities

Modernisation of the steam turbine in Elektrárny Opatovice

Elektrárny Opatovice signed a contract for a steam turbine replacement with Doosan Škoda Power in July 2019. From the heat supply point of view, the modernised back-pressure steam turbine is crucial as it represents the main source of the total heat supply from EOP.

The upgraded back-pressure steam turbine will have a capacity of 65 MWe and 135 MWth, including all accessories such as control systems, primary heat exchangers, equipment for low-pressure regeneration heating of feed water, oil system, interconnecting piping, high pressure hydraulic system and field instrumentation.

The modernisation of the steam turbine will increase the efficiency of the combined heat and power production and it will not only increase the overall capacity but also enhance the reliability of heat supplies.

Pražská teplárenská

During 2019, Pražská teplárenská initiated a project focused on the modernisation of a hot water source. The start of the greening begun in the middle of the year and involved replacement of existing gas burners with low-emission burners and adjustments of inflow of natural gas and combustion air.

EPH's generation in the context of emission intensity in tonnes of CO_2-eq per GWh generated shows continuous improvements. Emission intensity in the generation decreased by 41% from 2015 to 2019.

GHG emission intensity

To be as efficient as possible and to use natural resources economically, it is also highly important to analyse the carbon intensity of our generation assets.[30]

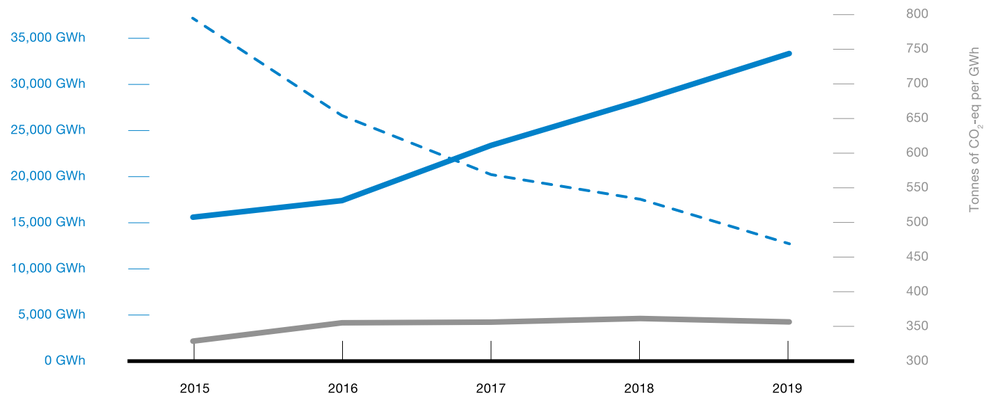
Overall electricity generation grew by more than 121% from 2015 to 2019. However, our emission intensity decreased as shown on our CO_2-eq emission levels per GWh generated. As a result, we have recorded only an 29% increase in direct greenhouse gas emissions from 2015 to 2019.

In the electricity and heat generation, EPH's emission intensity dropped by 12% from the previous level of 531 tonnes of CO2-eq per 1 GWh in 2018 with 468 tonnes of CO2-eq per 1 GWh in 2019. Thus, compared to 2018, we have reduced our emission intensity by 64 tonnes of CO2-eq per 1 GWh, which represents a significant decrease in the context of our production.

The emission intensity in the generation decreased by 41% from 796.2 to 468.1 tonnes of CO_2-eq per GWh generated in the period from 2015 to 2019. This number excludes our non-generation companies.

This shows a clear improvement and progress made by EPH, even with new acquisitions and increasing production, our total GHG emissions are increasing only slightly and our emission efficiency is increasing significantly. We have achieved this through our constant investments in modernisation, changes in generation portfolio (including coal and lignite power plants decommissioning) and conversion of highly emitting sources into more sustainable energy sources. It is important to mention that EPH also produces heat and power in cogeneration mode[31] (mainly EPIF), which increases its efficiency and therefore in turn reduces the emission intensity.

Net electricity and heat production and their carbon intensity



Graph 8 Net electricity and heat production and their carbon intensity.

30 Calculation of Emission intensity indicators excludes emissions from non-energy producing operations. Namely Eustream, SPP - distribúcia, Pozagas and NAFTA in Slovakia, SPP Storage in the Czech Republic and Nafta Speicher in Germany and in respective summary indicators in the amount of 0.5 and 0.3 mil ton of CO_2 in 2019 and 2018 respectively.

31 For further details, please refer to the GHG section.

Environmental management system and environmental compliance

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 financial penalties or other burdens that may be placed on us.

We are proud to report that during 2019, there were no major incidents or fines at any of the businesses of EPH that would result in significant impacts relevant to the environment.[32] Compliance with all licensing regulations was consistently ensured across our operations.

32 More details on fines and regulatory compliance are included in the Governance section of the Report.

Environmental management systems certifications and monitoring

EMS requirements are set up to ensure the implementation of the most rigorous procedures to protect the environment, identify risks and to ensure that the environmental performance meets the requirements of the regulation. The EPH Group is committed to maintaining its certification standards equal to the international levels in the operations, where their usage is relevant.

The main certifications that are used across the EPH group companies are ISO 14001 and ISO 9001. The particular certifications and standards depend on the scope of each business line. As an example, the trading and supply companies such as EPET, EP Sourcing or EP Commodities have no physical operations, therefore it does not require any environmental certification. Our companies are also compliant in the case of energy management systems or energy audits.

EPH Group companies	Subholding	Country	Certification standard
NAFTA	EPIF	SK	Integrated management system and EIS; ISO 14001; ISO 45001; ISO 9001
NAFTA Speicher	EPIF	DE	-
POZAGAS	EPIF	SK	Integrated management system and EIS; ISO 14001; OHSAS 18001; ISO 9001
SPP Storage	EPIF	SK	-
Gas transmission			
eustream	EPIF	SK	Integrated management system and EIS; ISO 14001; ISO 14004 ; ISO 50001; ISO 9001; OHSAS 18001; ISO: 3484-2
Gas and Power Distribution			
EP Energy Trading	EPIF	CZ	ISO 9001**
SPP - distribúcia	EPIF	SK	-
Stredoslovenská energetika	EPIF	SK	Integrated management system and EIS; ISO 14001; OHSAS 18001;
Heat Infra			
Budapesti Erõmû	EPIF	HU	ISO 9001; QMS
Elektrárny Opatovice	EPIF	CZ	Integrated management system and EIS; ISO 14001; ISO 45001
Plzeňská teplárenská	EPIF	CZ	Integrated management system and EIS; ISO 14001; ISO 9001
Pražská teplárenská	EPIF	CZ	Integrated management system; ISO 14001; OHSAS 18001
United Energy	EPIF	CZ	-
Renewables			
Alternative Energy	EPIF	SK	-
ARISUN	EPIF	SK	-*
POWERSUN	EPIF	CZ	-*
Triskata	EPIF	CZ	-*
VTE Pchery	EPIF	CZ	-*
Biomasse Crotone	EPPE	IT	ISO 9001; OHSAS 18001; ISO 14001
Biomasse Italia	EPPE	IT	ISO 9001; OHSAS 18001; ISO 14001
Fusine Energia.	EPPE	IT	OHSAS 18001
Lynemouth Power	EPPE	UK	ISO 50001; OHSAS 18001; ISO 14001

Table 15 Selected EPH Group companies and their environmental certifications.
* Complex environmental certifications are generally not standard in a standalone photovoltaic plants or wind turbines.
** Trading only companies, with no physical impact except office space.

EPH Group companies	Subholding	Country	Certification standard
Generation and Mining			
Eggborough Power	EPPE	UK	OHSAS 18001
EP Ballylumford	EPPE	UK	OHSAS 18001
EP Commodities	EPPE	CZ	-**
EP France	EPPE	FR	OHSAS 18001; ISO 50001
EP Kilroot	EPPE	UK	OHSAS 18001
EP SHB	EPPE	UK	ISO 14001
EP Langage	EPPE	UK	OHSAS 18001; ISO 14001
EP Produzione	EPPE	IT	OHSAS 18001; ISO 14001; EMAS[33]
Helmstedter Revier	EPPE	DE	-
Kraftwerk Mehrum	EPPE	DE	-
Mitteldeutsche Braunkohlengesellschaft	EPPE	DE	ISO 50001; OHSAS 18001
Tynagh Energy	EPPE	IR	ISO 14001
Logistics			
EP Cargo CZ	EPIF	CZ	
EP Sourcing**	EPIF	CZ	-**
LokoTrain	EPLI	CZ	
LOCON Logistik & Consulting	EPLI	DE	ISO 9001
EP Cargo DE	EPLI	DE	
EP Cargo PL	EPLI	PL	
SPEDICA GROUP COMPANIES	EPLI	CZ	ISO 9001; FSA[34]
EOP & HOKA	EPH	CZ	ISO 9001; FSA

Table 15 continues Selected EPH Group companies and their environmental certifications.
* Complex environmental certifications are generally not standard in a standalone photovoltaic plants or wind turbines.
** Trading only companies, with no physical impact except office space.

33 EU Eco-Management and Audit Scheme.
34 Feed Safety Assurance.

Reduction of Emissions

Increased understanding of the consequences of climate change, including its effects on health and wellbeing, serves as the primary motivator for intensified efforts in reducing harmful emissions.

Greenhouse gas emissions: Our business and climate change

EPH operates primarily in industries that are essential to the development and functioning of our society. However, these industries are historically associated with high energy intensity. Reflecting on the current energy sector, we fully understand that we will only be able to operate our installations in the future if we handle these resources carefully and efficiently now, we take special consideration on the matters of GHG emissions and other environmental impacts very seriously within our organization.

Even as the main part of EPH's portfolio resides in the low emission intensive segments of gas transmission, electricity and gas distribution and gas storage (EPIF), our other business segments of heat infra and generation and mining segments do emit comparatively more greenhouse gasses and other air emissions. Even so, in our more emission intensive segments, we are phasing out lignite in favour of natural gas and biomass where possible, as was shown in the section of 'Generation assets overview'.

Generally speaking, GHGs are those currently defined by the United Nations Framework Convention on Climate Change and the Kyoto Protocol. These GHGs are: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

Position of EPH on Climate change and decarbonization

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

EPH welcomes the climate change agreement and fully supports its goal, 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. We believe that the transition process needs to happen gradually to minimise unnecessary risks that would hinder economic development or cause other problems that could have unpredictable impacts on 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:

- Environmentally friendly sources were built only on the back of huge state subsidies, which are being substantially reduced (solar and onshore wind) and future development might slow down;
- Important investments in 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 will be a long and financially intensive process. However, EPH is prepared to take an active part in this process in our markets of operation.

Seriousness of our activities in the reduction of our environmental impact is underpinned by hard data along with a significant number of initiatives and measures that EPH and our Group companies have taken or are planning to undertake.

We recognise that we have an important role to play in helping to achieve this objective and that we can make contributions by expanding renewable energy and by reducing the specific GHG emissions from our operations.

Decarbonisation: European goals

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. The EU emissions were reduced by 23% between 1990 and the end of 2018[35]. Following on that, the ambition of the European Union is to achieve a 55% reduction in GHG emissions 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. Furthermore, some countries where we operate, such as Germany, have already made even more ambitious commitments.

35 During the writing of this report, only data for 2018 were available. Data are from the European Environmental Agency 2020.

As an emitter of GHGs, EPH intends to make a substantial contribution and support to these targets by setting tangible reduction targets with a clear strategy how to achieve them.

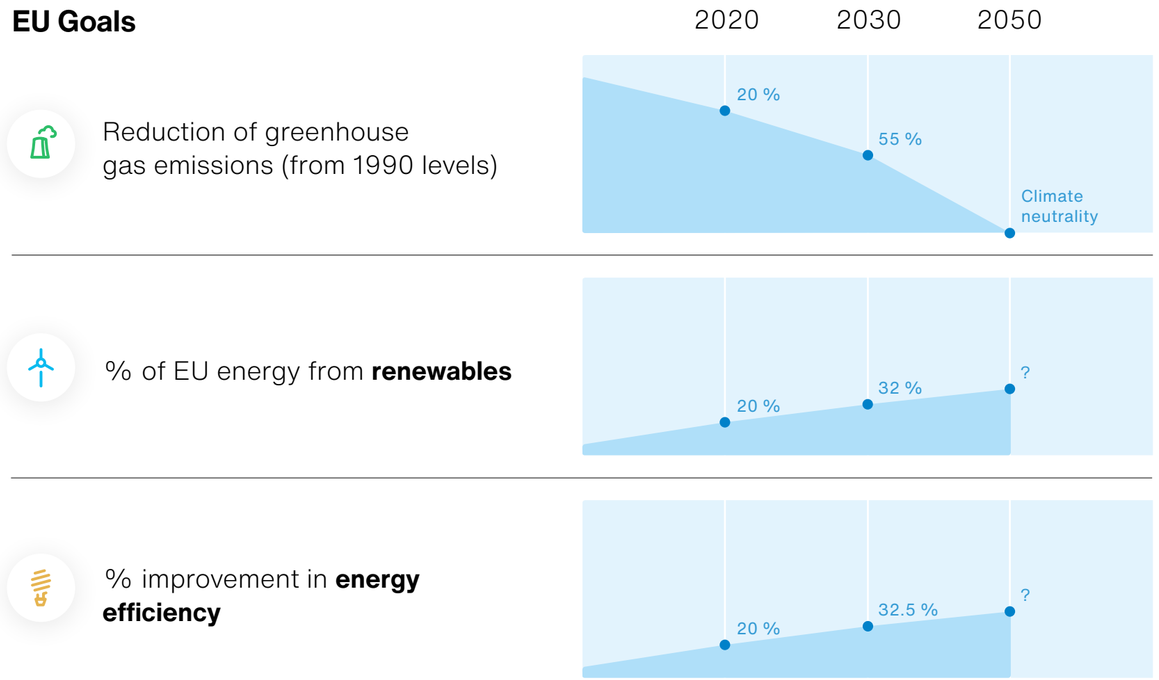


Fig. 13 EU Energy and climate goals.

Examples of EPH's key Measures and Initiatives in Sustainability

Decommissioning of the most ineffective plants

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

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.

Acquisition of new biomass plants

Acqusition of new biomass sources and transformation of old hard coal power plants into biomass combustion greatly reduces our annual production of GHG emissions. For example, in 2019 alone, we acquired 156 MW of new installed capacity through Gazel Energie (150 MW) and Fusine Energia (6 MW). Also, in 2018 we finished conversion of Lynemouth, a former hard coal, into biomass with net installed capacity of 407 MW. In 2019, Lynemouth was fully operational over the whole year.

Security stand-by mechanism

Commitment to respect the decision of the German government to place two LEAG's 500 MW units of Jänschwalde power plant in security standby mode in 2018 and 2019, respectively, saving a further 8 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 and the second one in October 2019.

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

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. Feasibility studies are currently performed to identify the most efficient refurbishment programmes to enable a gradual transition of the Czech CHP fleet away from lignite to a mix of natural gas, biomass and communal waste.

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 sources 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. In line with our commitments, we are purchasing natural gas power plants and converting our existing lignite power plant into gas fired.

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

Natural gas provides following benefits:

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.

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. 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 the next decades 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.

Biomass

Biomass is a renewable source of energy and its combustion offers economical alternative to fossil fuels. Biomass is widely accessible and it can be used in cogeneration units to produce both heat and power. In comparison to other renewable sources it is a stable source of energy since power plants can create large stocks of pellets and provide constant output to the grid.

In the past two years, we have significantly increased our energy production from biomass, mainly through acquisitions or conversions and we expect further growth in the upcoming years.[36]

Biomass provides the following benefits:

Available energy
Except for deserts and polar areas, biomass is growing almost everywhere. In some urban areas biomass is even collected as a waste from gardens, parks or farms. Large amount of biomass is also produced by wood processing industry.

Cheap fuel source
Thanks to the availability and versatility of the biomass technology, the solution is much cheaper compared to other alternatives.

Carbon Neutral
In the long-term biomass fuels release the same amount of carbon into the atmosphere as what was absorbed by plants during their growth.

Stable renewable source
In comparison to other renewable sources of energy, biomass is a stable source of energy, able to provide a constant supply to the grid.

36 More information about our installed capacity and production can be found in the chapter on renewable energy.

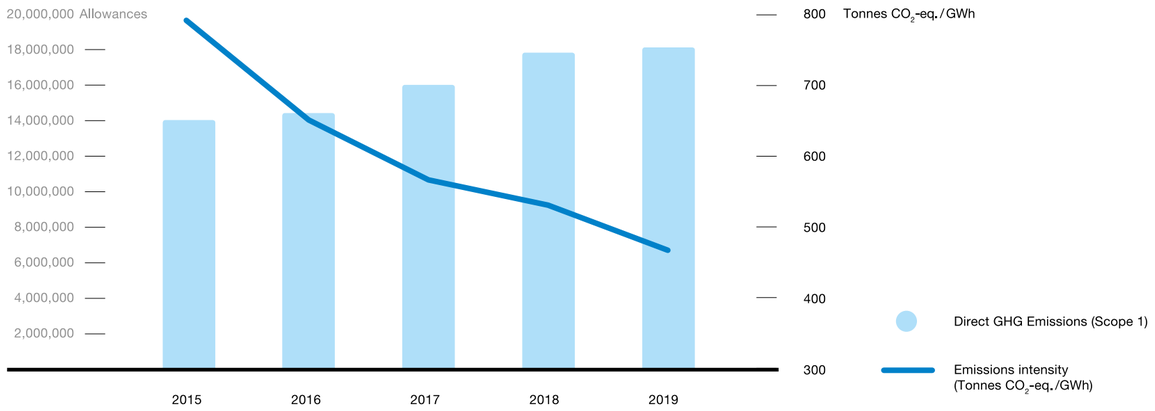
GHG emissions and emission intensity

Our operations have substantial differences in GHG emissions production and related emission intensities, which is given by their country of operation, technology and fuel used. For example, this can 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. However, the GHG intensity trend shows gradual decrease. Our Czech operations are primarily 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.

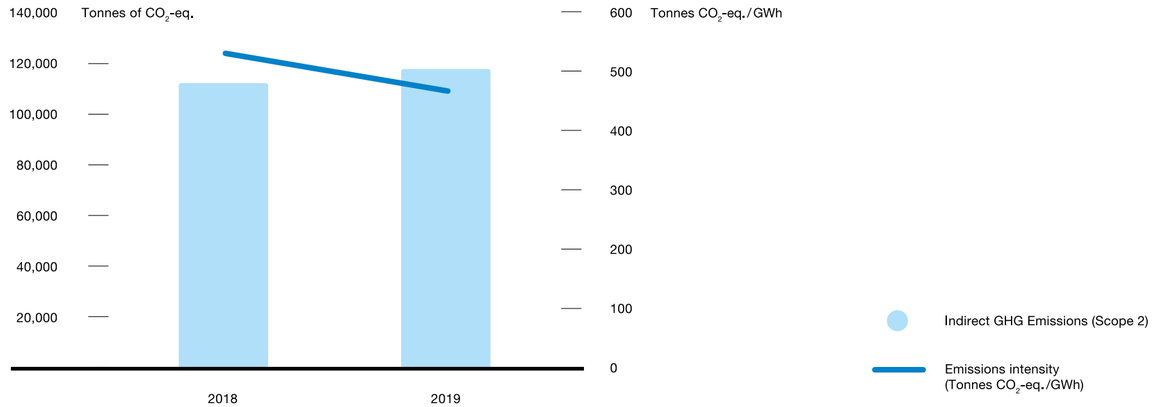
Total direct GHG emissions for EPH Group stood at 18.1 million tonnes CO_2-eq in 2019, representing a small increase by 0.26 million tonnes CO_2-eq compared to 2018. However, the GHG intensity of EPH operations decreased by approximately 12% in 2019. This significant reduction of our emission intensity underlines our ability to operate our plants efficiently even in spite of new acquisitions in 2019.

To enhance our reporting in transparency, beginning in this report for 2019, we have started disclosing scope 2 emissions of EPH. The scope 2 emissions represent the indirect impacts, meaning they are from purchased electricity and heat used for own consumption. In 2019, scope 2 emissions slightly increased, however, in a context of increasing production, emission intensity in fact decreased.

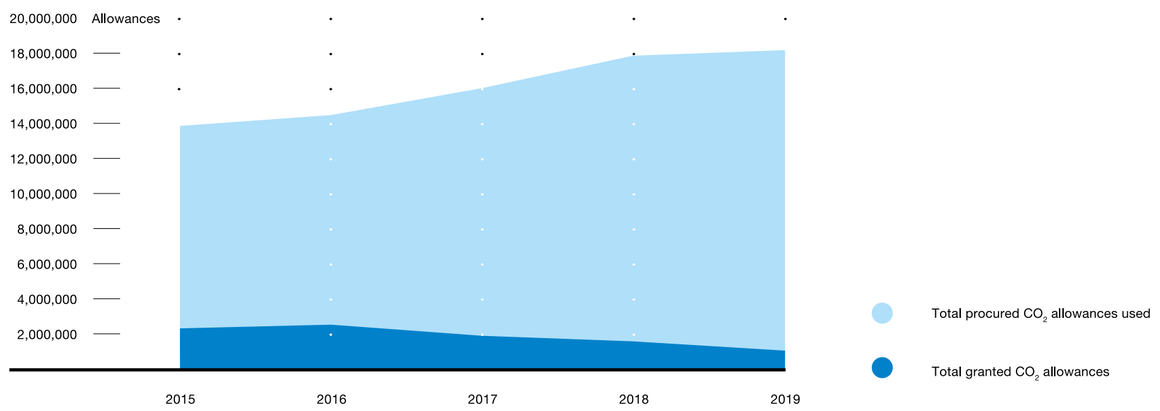
As prescribed by the European legislation, the volume of emission allowances that are allocated for free, are being reduced each year. While free emission allowances will no longer be allocated for power generation from 2020 onwards, EPIF entities will still be eligible for free allowances to generate heat. The overall goal of the European Commission is to abandon the free allocation by 2027, so companies are pressured to improve their operation, or to buy the allowances on the market. We at EPH focus on both aspects, in order to hedge against the risk.



Graph 9 EPH's Direct GHG emissions (scope 1).



Graph 10 Indirect GHG emissions (scope 2).



Graph 11 Emission allowances usage.

GHG Emissions intensity including heat component	2017	2018	2019	2019 - 2018	%
EP Infrastructure					
Czech Republic	797	714	625	(89)	(12%)
Slovakia	27	10	9	(0)	(5%)
Hungary	250	247	258	11	4%
Total – EP Infrastructure	**564**	**544**	**474**	**(70)**	**(13%)**
EP Power Europe					
France	–	–	352	352	
Germany	1,045	949	1,285	336	35%
UK	551	368	339	(30)	-8%
Ireland	–	–	392	392	
Italy	529	510	505	(5)	(1%)
Total – EP Power Europe	**568**	**527**	**466**	**(61)**	**(12%)**
Total EPH	**567**	**531**	**468**	**(63)**	**(12%)**

Table 16 GHG Emission intensity in EPIF, EPPE and EPH .

Our efforts to reduce our impact on the environment are reflected in a long-standing decrease in CO_2-eq per GWh generated.

Emission intensity in the EPH countries of operation

- GHG intensity for our operations in Germany was 1,285 tonnes of CO_2-eq per 1 GWh in 2019, which is a slight increase from 949 tonnes of CO_2-eq per 1 GWh in 2018. However, we must take into account that this high emission intensity is mainly caused by the fact that our remaining German portfolio consists of three lignite and one hard coal power stations and some small renewable sources. Nonetheless, direct GHG emissions have nearly halved (decrease of 47%) which is connected to 61% drop in energy production compared to 2018. Absolute GHG emissions will continue to decrease significantly in the upcoming years as some assets are expected to be placed in security standby mode and we assume lower utilization of the power plants.
- The situation is different for our operations in the UK where the GHG intensity is much lower and decreased by 8% from 368 tonnes CO_2-eq per 1 GWh 2018 to 339 tonnes CO_2-eq per 1 GWh in 2019. Reasons behind this reduction are the acquisition of the Ballylumford power station and decommissioning of Eggborough power plant that stopped generation from hard coal in March 2018. Lynemouth power plant started production in April 2018 but with negligible emissions and SHB and Langage gas fired plants have stable low intensity (under 400 tonnes CO_2-eq per 1 GWh each).
- GHG intensity for our operations in Hungary was 258 tonnes CO_2-eq per 1 GWh in 2019, reflecting the fact that the CHP operations are efficient and powered by natural gas.
- The GHG intensity of our operations in Italy was at 505 tonnes CO_2-eq per 1 GWh in 2019, reflecting the combination of efficient CCGTs, biomass plants and one conventional facility Fiume Santo.
- GHG intensity for our operations in Ireland was 392 tonnes CO_2-eq per 1 GWh in 2019, reflecting the fact that our Irish portfolio is formed only by one natural gas source.
- GHG intensity for our operations in the Czech Republic was 625 tonnes CO_2-eq per 1 GWh in 2019, as it includes primarily lignite plants.
- GHG intensity for our operations in France was 352 tonnes CO_2-eq per 1 GWh in 2019, because it includes a balanced portfolio of hard coal, natural gas, biomass, photovoltaics and wind power plants.
- Finally, our operations in Slovakia have the lowest GHG intensity 9 tonnes CO_2-eq per 1 GWh in 2019 due to their wide use of renewables, such as biogas generation and photovoltaics.

Segment	Category	2015	2016	2017	2018	2019	Percentages of EPH's CO_2-eq emission in 2019
Gas Transmission	Tonnes of CO_2-eq	185,780	298,922	319,110	295,817	397,546	2.20%
	Contribution to EBITDA (%)	687 41.7%	676 44.0%	664 36.2%	663 37.3%	735 35.3%	/
Gas and Power Distribution	Tonnes of CO_2-eq	4,336	3,039	3,738	3,134	2,419	0.01%
	Contribution to EBITDA (%)	426 25.9%	424 27.6%	551 30.1%	461 25.9%	528 25.3%	/
Heat Infra	Tonnes of CO_2-eq	2,631,275	3,808,156	4,293,365	4,469,483	3,612,572	19.97%
	Contribution to EBITDA (%)	139 8.4%	138 9.0%	157 8.6%	148 8.3%	176 8.4%	/
Gas Storage	Tonnes of CO_2-eq	33,505	40,561	36,630	36,448	61,341	0.34%
	Contribution to EBITDA (%)	179 10.9%	143 9.3%	144 7.9%	140 7.9%	175 8.4%	/
Renewable Energy	Tonnes of CO_2-eq	27	1,086	2,448	44,975	14,213	0.08%
	Contribution to EBITDA (%)	0 0%	-25 -1.6%	-34 -1.9%	37 2.1%	119 5.7%	/
Generation and mining	Tonnes of CO_2-eq	11,167,419	10,269,180	11,410,800	12,981,307	14,001,088	77.40%
	Contribution to EBITDA (%)	208 12.6%	164 10.7%	328 17.9%	303 17.1%	322 15.5%	/
Overall EPIF's Emission intensity	**Total tonnes of CO_2-eq**	**14,022,316**	**14,420,944**	**16,066,091**	**17,831,164**	**18,089,179**	**100%**
	Total EBITDA[37]	**1,637**	**1,520**	**1,801**	**1,743**	**2,051***	
	Emission intensity of EPH	**796.19**	**651.12**	**566.79**	**531.43**	**468.14**	

Table 17 Emission management in our segments, comparing the tonne of CO_2-eq and EBITDA.

37 Stated total EBITDA includes holding entities, inter-segment eliminations, small renewables in EPIF and logistics segment. Thus, the sum of all EBITDA from segments listed will slightly differ from consolidated EBITDA. For full EBITDA disclosure, please refer to the Annex of this report and for full financial disclosure, please refer to the EPH annual report 2019.

(*) This data has received limited aasurance from the independent auditing firm KPMG.

GHG management at EP Infrastructure

Though most of our business from a financial perspective sits within EPIF, their corresponding GHG emissions were only about 23% of the total EPH emissions. This underlines the fact that within EPIF we operate predominantly pure infrastructure assets with marginal carbon footprint and highly efficient co-generation plants.

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 (approx. 3% of total EPH 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 and distribution part of EPIF produces approximately 461 thousand tonnes CO_2-eq annualy. These GHG emissions were produced mainly by eustream via its natural gas fuelled compressor operations and amounted to 398 thousand tonnes CO_2-eq in 2019.

Total direct GHG emissions for our EPIF companies thus decreased by 15% or 0.7 million tonnes CO_2-eq from the prior year, mainly due to decreased production in the Czech Republic. Since materially, all GHG emissions arise from combustion, the trend in GHG emissions is also aligned with the trend in energy consumption data between the two years. Total energy consumption for EPIF was 16,207 GWh in 2019, decrease of 9% from 17,757 GWh in 2018.

EPIF is an environmentally responsible operator and we continue to commit significant investment in order to further decrease our GHG 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.

Total emission intensity of EPPE decreased by 42% in 2019 compared to 2015.

GHG management at EP Power Europe

Most of the GHG emissions in EPH came from our businesses within the EPPE sub-holding. Total direct GHG emissions in EPPE increased to 14.0 million tonnes CO_2-eq in 2019, which is an increase of 1.0 million tonnes CO_2-eq in 2019 or 8% compared to 2018. This rise was mainly driven by new acquisitions and partially compensated by lower power production in Germany.

From the long term perspective, the GHG emissions in 2019 were higher compared to 2015 by 2.8 million tonnes of CO_2-eq, or 26% (in 2015 GHG emissions stood at 11.2 million tonnes of CO_2-eq) but this is a relatively small increase compared to 118% rise in total net energy production. In 2015, total net energy production was 13.8 TWh, but in 2019, this number increased to 30.1 TWh. Total emission intensity of EPPE has thus decreased from 809 tonnes of CO_2-eq per GWh in 2015 to 466 tonnes of CO_2-eq per GWh in 2019. This is a decrease of 42% in 5 years.

On the other hand, in 2019, Lynemouth produced similar amount of electricity from biomass as in 2015 from hard coal, but with minimum carbon footprint in 2019 compared to 1.3 million tonnes CO_2-eq in 2015.

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

- 85% of the acquired installed capacity in Italy is based on modern gas fired CCGT low carbon technology (83%) and biomass (2%). Thanks to 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;
- The acquisition of Gazel Energie from Uniper increased our net installed capacity in renewables by 244 MW including 83.5 MW in wind, 10.5 MW in photovoltaics and 150 MW in biomass;
- In regard to Slovenské elektrarne, our equity consolidated company, 89% of the net installed capacity of the 3.8 GW acquired in Slovakia is carbon free technology.

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 a 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. We are convinced that rejecting the operation of coal sources in markets with currently 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 fulfilment 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 and strategy of local government.

Decarbonization strategy of EPH and the future outlook

As EPH is not only on lookout for new zero or low carbon generation assets, we also focus on the improvements, decommissioning or transformation of current projects and power plants. We have set a concrete timeline of GHG reduction in EPH, by analyzing future acquisitions and reflecting on investments in our portfolio. We will focus mainly on EPPE in this section, as most GHG emissions of EPH are related to the EPPE, because EPIF consists of primarily infrastructure assets.

The change in emissions is influenced by the following

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

- 2015: acquisition of Eggborough, a coal power plant and EP Produzione, a gas plant caused an increase in emissions;
- 2016: Buschhaus power plant transferred to security standby mode (no production and a drop in emissions) with final decommissioning in 2020;
- 2017: acquisition of two gas and one coal plant and smaller biomass stations, mainly the coal plant could increase emissions in the following years (in case there is some production);
- 2018: Eggborough power plant was decommissioned; Lynemouth power plant started production after a coal-to-biomass conversion, which caused an improvement in emissions;
- 2019: acquisition of the French portfolio (namely coal and gas) have the largest impact on the emissions we consolidate; minor impact of the UK (Northern Ireland) acquisitions, Irish (Republic of Ireland) acquisitions (both coal and gas) and acquisition in Italy (biomass).

Main effects in the near future

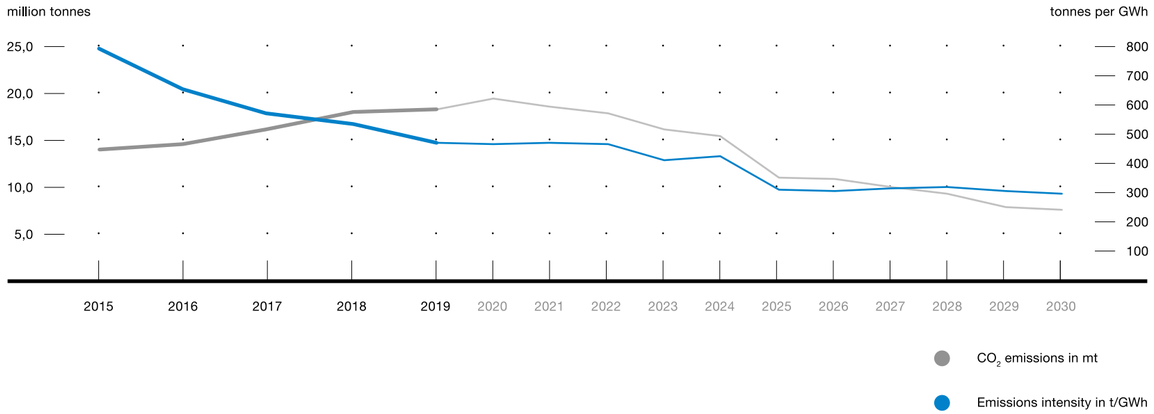
- 2021: expected decommissioning of Mehrum, a Germany hard coal power plant which was producing only negligible amount of electricity in 2019;
- 2022: we expect that our French hard coal assets (1.2 GW) shall be decommissioned in line with the public announcements of the French government with respect to national decarbonization plans;
- 2023: Having secured a 10-year capacity market contract for a new open cycle gas turbine (OCGT) at Kilroot, the Group is currently assessing the replacement of its UK hard-coal operations with OCGT technology. Assuming this is feasible from both a regulatory and an economic perspective, it is expected that hard-coal operations (0.5 GW) will cease by the end of 2023;
- 2023: Our Italian gas fleet to be supported by newly built 800 MW capacity;
- 2025: Italian government plans to close all hard coal-fired power plants by 2025. As such, EPPE assumes that if feasible from the stability network and regulatory perspective its 0.6 GW hard coal-fired plant in Sardinia have been refurbished to another source of fuel by then

The above-mentioned planned steps should lead to null installed coal capacity from 2025 in EPPE in all countries except for Germany where the timeline of plant closures is set by the government coal exit plan.

In EPIF, there will be also significant changes in emissions after the contemplated conversion plans are realized. Between 2020 and 2025 the installed capacity in lignite and hard coal is planned to be halved (from 1 GW to 0.5 GW) and further reduced to 0.2 GW in 2030. We plan to replace the coal-fired units with a balanced portfolio of gas and biomass units and waste incineration plants and continue to supply heat and power to our customers.

In the following graph we present historical data for the period 2015 to 2019 and forecast data for 2020 to 2030. Projections of CO_2 emissions and emission intensity are only indicative and are based solely on management estimates in respect of closures and refurbishments of individual plants. This forward-looking information is subject to future management decisions, market development as well as numerous risks and uncertainties. The projections also do not include emissions from potential future acquisition targets or acquisition of controlling stakes in equity participations. Emissions from new development / conversion projects are only included where there is a sufficient level of certainty that these projects will be realized (e.g. where the power plant constitutes an indispensable local source of electricity such as Fiume Santo plant in Sardinia).

This forecast is based on the currently available information and assumptions and they of course might be changed in the upcoming years as the situation on the energy market is developing significantly.



Graph 12 CO_2 emissions and emissions intensity projections.[38]

38 Data for 2015 to 2019 are historical, data for 2020 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.

Selected GHG reduction activities and initiatives in EPIF

We are improving our energy efficiency and in turn emission intensity by placing a strong focus on heat and electricity cogeneration supported by the EU in particular through our EPIF operations in the Czech Republic and Hungary. The heat produced by some of these units is effectively a byproduct of electricity generation. EPIF owns four lignite fired heating plants in the Czech Republic as well as three gas-fired plants in Budapest, Hungary. All of the units are co-generation sources, meaning that they produce heat and electricity simultaneously allowing for much higher overall efficiency (70–85%) compared even to the most efficient gas fired units (50–60%), which is also one of the reasons why cogeneration is widely supported by EU legislation.

Selected GHG reduction activities and initiatives in EPPE

United Kingdom

On 12 June 2019, we acquired 100% stake in two large power stations. EP Kilroot Limited is mainly a coal-fired power station located in Northern Ireland with the total capacity of 665 MW including 141 MW OCGT unit and 10 MW battery storage facility. However, both coal units in the Kilroot plant are expected to be decommissioned at the latest in September 2024 in line with the UK's deadline for the coal phase-out. At the same time, the Kilroot brownfield site represents an opportunity for EPH to develop new OCGT generation capacity and additional battery storage as both projects follow UK's plan to decarbonise the power sector and strive for net zero by 2050. If carried out, then the hard coal technology shall be decommissioned even sooner (2023).

Efficiency	25 – 40 %	50 – 60 %	75 – 85 %
	Typical steam condensing plants	**The most efficient gas fired plants (CCGT)**	**Cogeneration (EPIF Fleet)**
Carbon footprint	882 – 1,404 kg CO_2 per MWh produced	342 – 414 kg CO_2 per MWh produced	414 – 504 kg CO_2 per MWh produced

Graph 13 Overview of EPIF's and EPPE generation efficiency.

In 2018 we decommissioned Eggborough power plant which played a crucial role in securing the electricity supply in the UK market, with its extremely tight reserve margins. At the beginning of 2017, Eggborough entered a capacity agreement with National Grid. 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. And finally, we are considering a conversion of Eggborough into gas-fired power plant with potential 2,500 MW in installed capacity.

In line with our strategy to build a sizeable and lasting presence in the UK market and diversify into the renewables segment, we acquired Lynemouth power plant, a hard coal power plant, and converted it into biomass. Lynemouth power plant stopped burning hard coal in December 2015, which alone resulted in a 2.7 million tonnes reduction in CO_2-eq in 2016 compared to 2015. The same amount of CO_2-eq is thus saved every year thanks to the conversion. In 2019, only some 13 thousand tonnes of CO_2-eq were emitted, which corresponds to minor emission intensity of 6 tonnes of CO_2-eq per GWh.

Italy

In Italy we own and operate a fleet of four modern, efficient and active CCGT power plants (total installed capacity of 3.1 GW), as well as one OCGT power plant in Sicily (0.2 GW) and one hard coal power plant in Sardinia (0.6 GW). From the end of 2017 we added two new biomass plants to the fleet: Biomasse Crotone (27 MW) and Biomasse Italia (47 MW out of which 1 MW is photovoltaic). In 2019, we also acquired new biomass plant of Fusine with installed capacity of 5.7 MW to boost our existing biomass portfolio.

However, 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 currently hardly replaceable 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 with decommissioning potential in 2025 in line with the Italian decarbonization plan.

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 entered into the security stand-by mechanism in Q4 2016 and hence reduced GHG emissions by 2.7 million tonnes CO_2-eq annually and approximately 30–35 million tonnes CO_2-eq for its remaining technical lifetime.

Following the entry of the Buschaus plant into the security stand-by mechanism, we 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 or diesel).

We also 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. However, in 2019 the power plant produced only 0.8 TWh of electricity and 0.7 million tonnes of CO_2-eq due to the current market situation (as production from less emission-internsive sources is preferred).

EPH's position in Germany is also influenced by our acquisition of a 50% non-controlling 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.

France

In July 2019 we successfully completed a transaction in which we acquired Uniper's activities in France. The generation portfolio is well diversified with a total capacity of 2,262 MW spread across CCGT, coal and biomass assets and solar and several wind parks.

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.

Ireland

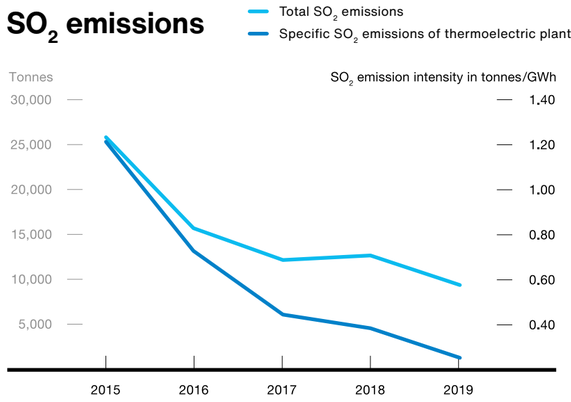
On 29 October 2019, EPUKI acquired 80% shares in Tynagh Energy Limited. Tynagh Energy is a power producer in the Republic of Ireland that owns low carbon 384 MW CCGT power plant (dual fuel natural gas and distillate) in east County Galway. The plant was commissioned in 2006 and its estimated life span is approximately 30 years. The power plant is in a unique position of being the only independent CCGT plant on the Irish market and provides a flexible daily electricity production to the wholesale electricity market.

Air emissions

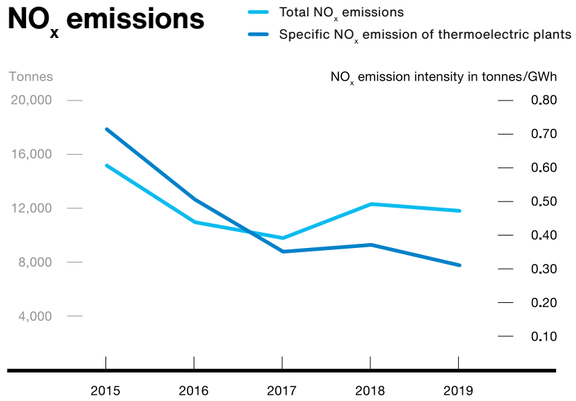
We carefully monitor not only our CO_2 emissions, but also all other important GHG emissions and dust particles. Due to the continuous improvements through modernisation and optimisation of our business processes, compared to the 2015 baseline we:

- Reduced our SO_2 emissions by 64% and improved our overall efficiency in regard to emitted tonnes per GWh by 80% compared to 2015. Compared to 2018, we reduced our SO_2 emissions by 26%.
- Reduced our total NO_x emissions by 23% and kept increasing the efficiency in the thermoelectric plants by 56% compared to 2015. Compared to 2018, we reduced our NO_x emissions by 4%.
- Reduced our dust emissions by 65% and also increased our efficiency by 80% compared to 2015. Compared to 2018, we reduced our total dust emissions by 40%.

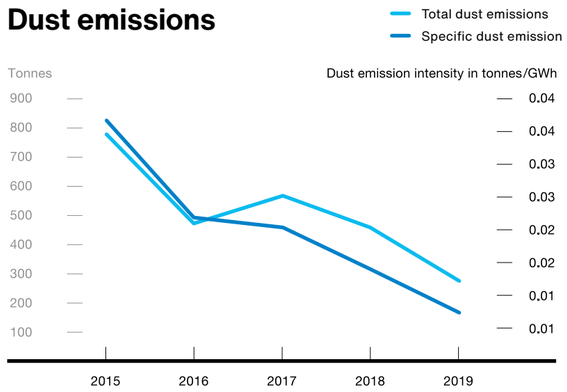
SO_2 emissions



NO_x emissions



Dust emissions



Graph 14 Relevant air emissions and EPH's improvements.

How do we manage these?

The biggest atmospheric pollutants associated with our activities are sulphur oxides (SO_2), nitrogen oxides (NO_x), and particulate matter.

Sulphur dioxide emissions (SO_2)

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 improving desulphurisation equipment and increasing the proportion of natural gas or renewable sources in our energy mix.

Nitrogen oxide emissions (NO_x)

Nitrogen oxide is mainly generated by 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 to 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.

Dust emissions

Coal-fired power plants emit dust particles, despite highly sophisticated filters. However, we managed to reduce our dust emissions by 40% compared to 2015.

Mercury emissions

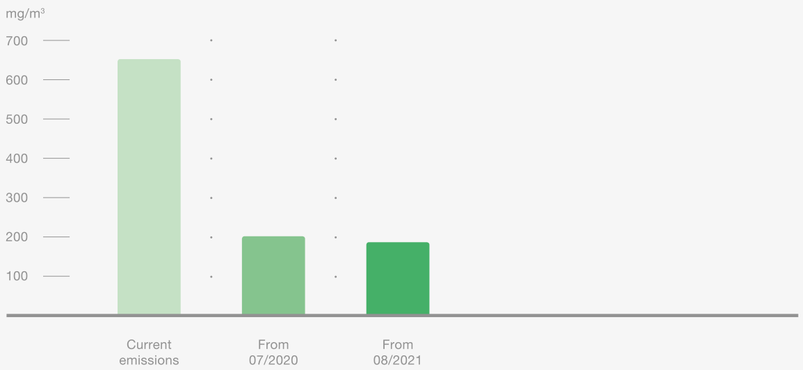
Coal-fired power plants also emit small amounts of mercury. New European legislation has set limits for the first time on mercury emissions from large coal-fired power plants throughout Europe. Therefore, we are developing relevant technical measures to reduce our mercury emissions.

In 2019, we reduced our SO_2 emissions by 26%, NO_x emissions by 4% and dust emissions by 40% compared to last year.

Case Study
Activities of Plzeňská teplárenská in Air Protection

DeNO$_x$ of boiler K3

The main goal of this investment is to meet the upcoming legislative requirements for air protection in the years 2020 and 2021, which set up new emission limits for NO_x:



The new technology will allow to run the boiler with an NO_x concentration up to 135 mg/m^3. The expected benefit is reducing the NO_x production of the boiler K3 from the current 235 tonnes per year to 86 tonnes per year. The investment has been carried out since June 2019 and was finished in April 2020. The expected total investment costs are EUR 7 million.

DeSO$_x$ – Intensification of wet scrub desulphurization

The main goal of this investment is to meet the upcoming legislative requirements BAT/BREF for air protection, which set up stricter emission limits for SO_x. The expected benefit is to increase the desulphurizing unit efficiency to 97% (currently 87%), reducing the concentration of SO_x from the current 700 mg/Nm^3 to 145 mg/Nm^3 and reducing concentration of solid pollutants from the current 50 mg/Nm^3 to 7 mg/Nm^3. The investment has been during 2020. The expected total investment costs are EUR 7 million.

Case Study
Attitude of Plzeňská teplárenská to Emission Mitigation

Plzeňská teplárenská 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 households in Pilsen. It is the biggest heat supplier in Pilsen with a growing number of connection points.

Fuels used are lignite, biomass and communal waste. Biomass is co-incinerated with coal from 2003 (where biomass is approximately one third from the total volume) and also in a separate biomass boiler (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.

Since 2016, Plzeňská teplárenská has started to participate in disposal of municipal waste from the whole region by transforming it into energy.

The modern facility ZEVO Pilsen burning waste provides ecological source of energy with capacity of 10.5 MWe and 31.7 MWth. Due to use of modern technology its GHG emission production is very low.

ZEVO is designed to burn 95 thousand tonnes of municipal waste per year.

In 2018, ZEVO Pilsen burned 93 thousand tonnes of waste which was composed mainly from municipal waste and bulky waste. It was assumed to produce 400 thousand GJ of heat and 36 thousand MWh of electric energy. At the end of the year, on 17 December 2019, an increased amount of incinerated waste from 95,000 tonnes to 105,000 tonnes was officially permitted for 2020.

Renewable energy

Renewable energy is proving to be a more significant topic for EPH. On the strategic level, as data show, we have invested in various energy sectors. In recent years we have significantly increased the share of biomass in our portfolio and thank to this renewables form about 6% of total EPH's EBITDA. However, even with the majority of assets being stationed in the traditional energy segment, we are aware of the important role this area plays and will play in the future of the decarbonisation process.

Our renewable activities in EPPE and EPIF

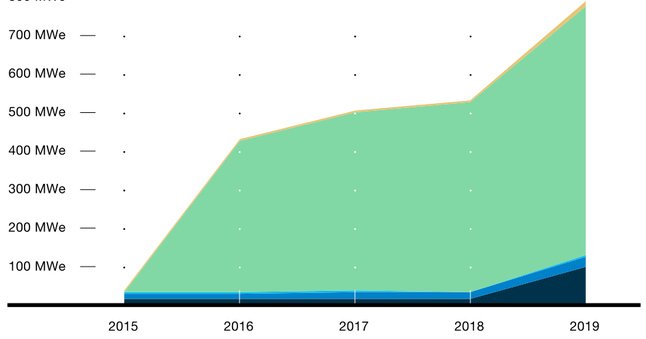
- **EPPE** operates three biomass power plants in Italy and one biomass plant in the United Kingdom, which are responsible for the majority of our production from renewable sources (EPPE's total net installed capacity in biomass was 636 MW in 2019). As a complement, we also operate 90 MW of installed capacity in wind energy (in France and Germany). And another 25 MW is installed in photovoltaic, battery storage and hydro units.
- **EPIF**'s strategy focuses on smaller power plants (photovoltaic, wind, hydro, biogas and other) and biomass cogeneration. Altogether these represent almost 41 MW of installed capacity.

Over the years, we have acquired a total of 791 MWe of renewable electricity sources in wind, photovoltaics, hydro, biomass and biogas. During the course of 2019, we chose to further invest in the generation of electricity from renewable sources, which explains the spike in the installed capacity during the period, mainly due to Plzeňská teplárenská's biomass and waste incineration, acquisition of new biomass sources in Italy and France and a conversion of existing coal power plant to 100% biomass plant in the United Kingdom. This underlines our strategy and effort to produce energy more sustainable and bring balance to our energy mix.

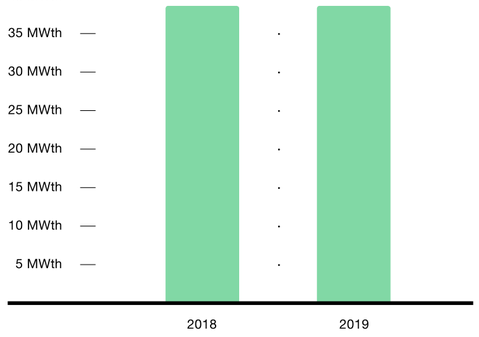
In 2019, EPH continued its efforts in increasing its portfolio in renewable energy sources. Most of our installed capacity in renewable sources is formed by biomass and acquisitions of these sources show our commitment to reduce our negative environmental footprint and improve sustainability of our portfolio.

In total, we produced over 3,387 GWh of electricity and 170 GWh of heat from renewable sources in 2019, which is a jump from 2018 and even larger from 2017. The main reason is that we acquired large biomass sources. Compared to the last year our electricity production from renewables has increased by 1,190 GWh, which is an increase of 54%.

Installed capacity renewables
Electricity



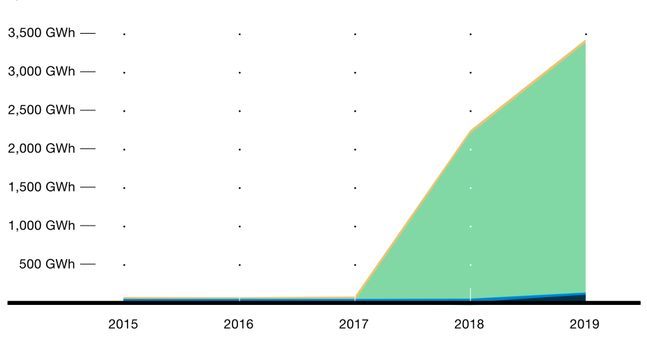
Installed capacity renewables
Heat



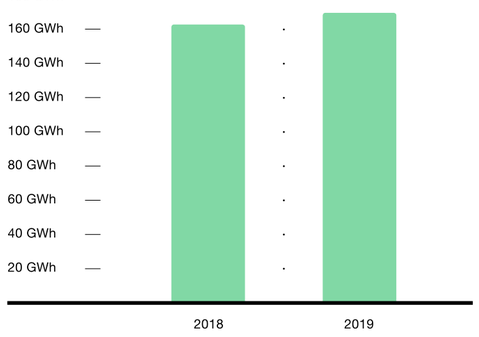
Graph 15 Installed capacity in renewables (electricity and heat).

EPH's installed capacity in renewable electricity sources increased from 531 MWe in 2018 to 791 MWe in 2019, which is an increase of 49%.

Net production in renewables
Electricity



Net production in renewables
Heat



Graph 16 Net production in renewables (electricity and heat).

Energy from renewable sources has a very important place in EPH's strategy, as we are always on the lookout for future opportunities in this area.

Case Study
Contemplated Construction of a Waste-to-energy Plant in Elektrárny Opatovice

Elektrárny Opatovice assesses possible development projects to partly replace lignite and hard coal with other sources. One of the possible alternatives is the production of heat and electricity energy from municipal waste.

As part of the 2019 preparation process, an analysis of the amount of produced waste in the region was carried out. Even after taking into account trends in waste management, it is possible to consider the need for the region to deal with up to 300,000 tonnes of waste per year that would otherwise end up in landfills.

The main benefits of the project include also ecology as modern waste-to-energy plants produce less emissions than existing coal sources. This is also the reason why the possible construction of a waste-to-energy plant in EOP is included under EOP environmental projects.

The whole project is currently in the preparatory phase. Successful implementation of the project will require support from cities and municipalities as well as support from the general public.

The EPIF Group also owns and operates three solar power plants and holds a minority interest in another solar power plant and a majority interest in one wind farm in the Czech Republic. The Group also operates two solar power plants and a biogas facility in Slovakia. In the segment of heating, majority of production comes from Plzeňská Teplárenská.

We are not only operating some of the renewable power plants, but we support their development in other ways. In the subsegment of power distribution, we are bound by law to **connect the renewable electricity sources to the grid**, thus facilitating and allowing them to produce electricity. In Slovakia, through SSE, we are also obliged to buy the electricity produced by these operators and help them get integrated into the electricity grid. We also help our customers to install their own small renewable plants, such as photovoltaics.

As a complement to EPPE's electricity production we operate operate a 10 MW storage within Kilroot Advancion Energy Storage Array, which is the first grid scale operational battery storage unit in Ireland. The battery storage helps to balance supply and demand in the grid and supports the stability of the Northern Ireland system. Storage makes existing renewable and thermal generation far more efficient by enhancing power supply enabling more efficient dispatch of power **and increasing the ability to integrate intermittent renewable energy** sources like wind and photovoltaics.

Mitigation of Environmental Impact

Efforts to reduce discharge of pollutants, careful disposal of hazardous material, cleaning of contaminated sites and support of biodiversity have become a core of our business operations.

Water

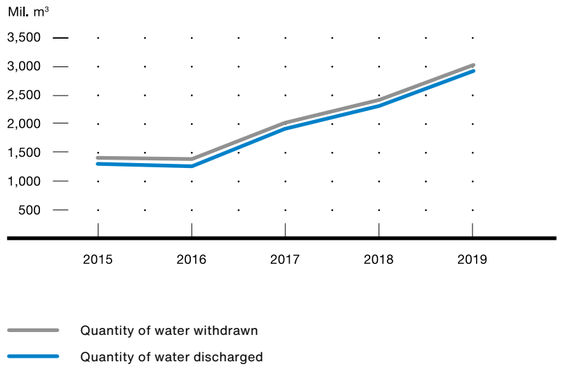
We fully understand the crucial role of water in the environment, be it on the global or local scale. The efficient use of water is a top priority for all our operations and our aim is to always consume the least amount of water required to run our production processes. For example, we strive to ensure that our use of water creates minimal 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 possible adverse effects.

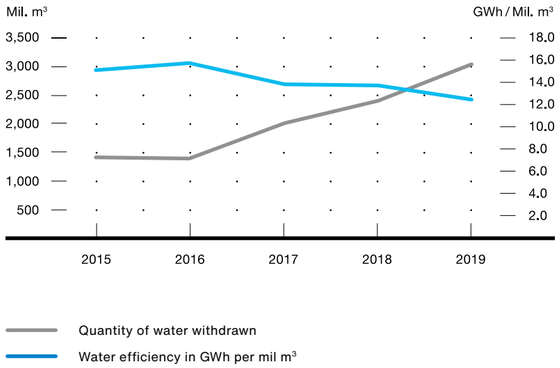
Water management in EPH

Water is extremely important to our operations for:

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

We aim to reduce our water footprint through several 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.





Graph 17 Quantity of water withdrawn and water management efficiency at EPH.

We recognize that climate change poses a serious risk as severe water scarcity might occur. In order to minimize the impact of this negative factor, we are putting serious effort into reducing our water usage.

Water withdrawal from our operations increased to 3,028 million m³ in 2019 (2,404 million m³ in 2018). 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 2,920 million m³ in 2019. This year-on-year increase in water withdrawn and discharge was caused mainly by higher power production. Overall water efficiency of EPH has decreased by 9% in 2019 compared to 2018.

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 municipalities in both EPIF and EPPE.

Unit	Category	2015	2016	2017	2018	2019	Annual change between 2018 and 2019	Total 5 year Average
mil. m³	Quantity of water withdrawn	912.8	1,377.3	2,004.9	2,404.0	3,028.3	624.3	1,945.5
mil. m³	Quantity of water discharged	794.4	1,256.7	1,894.7	2,295.0	2,919.9	624.8	1,832.1
GWh	Total net energy production	17,332.0	21,622.4	27,712.6	32,922.5	37,683.0	4,760.5	27,454.5
%	Electricity and heat production increase	/	24.8%	28.2%	18.8%	14.5%	n/a	n/a
%	GWh per mil. m³ generated*	18.99	15.70	13.82	13.70	12.44	-1.3	14.93
%	Net water efficiency increase**	/	-17.3%	-12.0%	-0.9%	-9.2%	n/a	n/a

Table 18 Water management efficiency at EPH.
* Indicator is calculated across whole EPH portfolio, which provides a slightly biased results (as this also involves water from mining operations).
** Efficiency increase is calculated as a year-to-year change in Net energy production / Quantity of water withdrawn.

Case Study
A Lake in Sight – the Cottbuser Ostsee will be the Largest Pit Lake in Germany

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 neighbouring 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.

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

Removing and dismantling the large-scale equipment

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

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. Less than 20% of the lake water result 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 tourist 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.

Waste and effluents

The main principle underlying our approach to waste management can be summarized as '**avoidance, recovery and disposal**'. Our waste generation is mainly associated with mining, generation, as well as with construction waste, which is inert in its effect.

Through our efficiency programmes we firstly endeavour 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).

Last, but not least, where recovery is not possible, we aim to continuously increase the percentage of hazardous and non-hazardous waste sent for recycling, to minimize waste going to landfill as much as possible. 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.

Total waste other than byproducts was equal to 317.5 thousand tonnes in 2019, which is 11% increase from 2018. The increase was mainly driven by EPPE and its acquisitions of new power plants in Italy, United Kingdom and in the Republic of Ireland.

EPIF also recorded an increase of waste generated, which was associated mainly with activities of eustream (extension and reconstructions of compressor stations), NAFTA (drilling and demolitions) and SPP-D (reconstruction of gas distribution network pipelines).

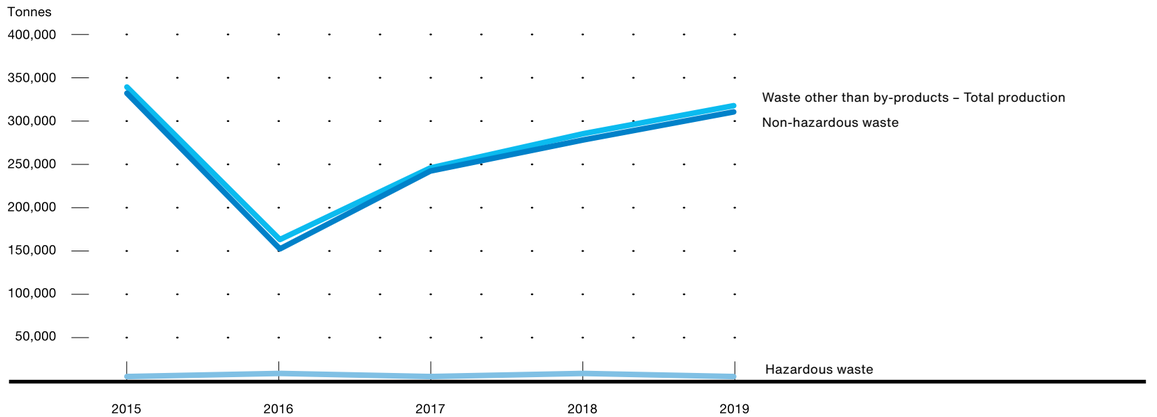
One of our main achievements in 2019 is that we have reduced our production of hazardous waste by 1,828 tonnes to the level of 5,500 tonnes, which is a 25% decrease in comparison to year 2018.

Waste management in EPH

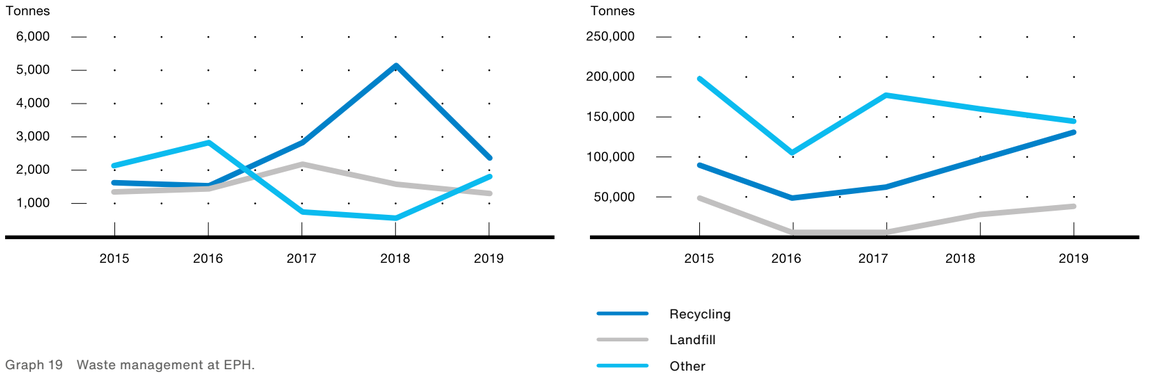
When analysing the total waste generated by the EPH and its subsequent management, it is necessary to note that data include overburden, which is a soil removed before extraction of coal deposits. As such, overburden is not a waste in its own sense, but an inert soil, that has its uses in recultivation and reclamation.

The company responsible for our mining operations MIBRAG is a large producer of mentioned overburden. Only in 2019 it produced 234.8 thousand tonnes of waste, which is 74% of all EPH's produced waste production. More than half of this amount is overburden, which fits the category "Other", and is used in reclamation and recultivation of mining sites. Also, it is worth mentioning that we increased the total non-hazardous waste recycled by 37% compared to the 2018.

Our waste generation slightly increased from the last year due to increase in non-hazardous waste primarily from new acquisitions. However, more waste was recycled and used in energy recovery, thus improving the overall environmental impact and lowering waste dump in landfill by 286 tonnes (or by 18%) in hazardous waste.



Graph 18 Total Waste generated at EPH.



Graph 19 Waste management at EPH.

Case Study
Our Efforts in Improving Waste Management: Waste-to-energy

Plzeňská teplárenská

Plzeňská teplárenská operates the waste-to-energy facility ZEVO Plzeň, an ecological source that can use a wide range of waste and convert it into energy. Heat energy occurring during the combustion process is subsequently used to supply heat to the territory of Pilsen city and for the production of electrical energy.

Elektrárny Opatovice

Elektrárna Opatovice is analyzing the possibility of building a waste-to-energy power plant, to phase out some of its coal production capacities.

United Energy

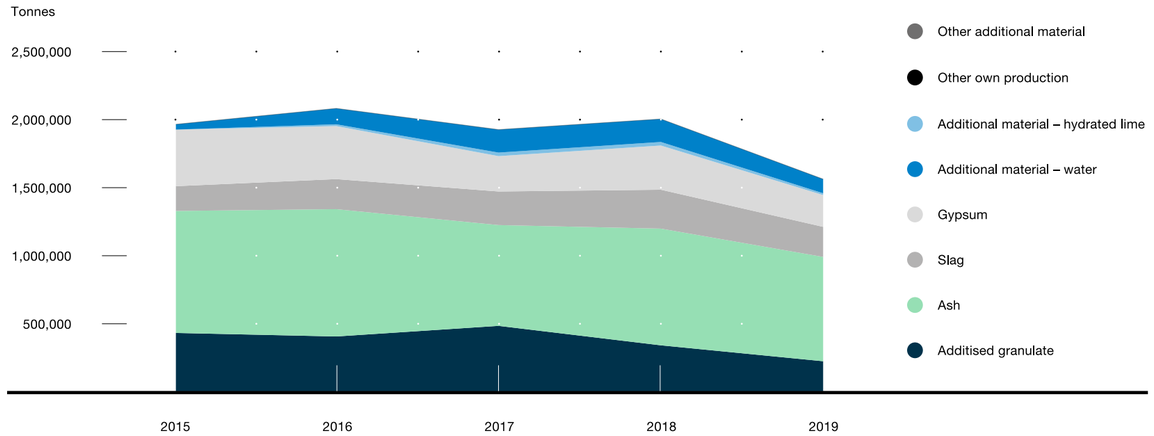
United Energy is entitled to use the label of Ecological Firm for its responsible approach to the environment, used product take-back and waste sorting.

Byproducts are a great way of reducing our waste in the first place and creating further value for our stakeholders.

Byproducts generation

In addition to waste, we also generated 1,560 thousand tonnes of byproducts in 2019. As we are frequently able to sell the byproducts for further commercial use when they are collected from our facilities, we report waste and byproducts separately. They are used in various business segments, primarily in construction. By using byproducts, we are actively reducing demand for primary construction materials, which results in a reduced carbon imprint coming from mining and associated logistics, as byproducts are often used locally.

Creation of byproducts translates to lower volumes of waste that are sent to landfills. The byproducts are all subject to regular certification process and tested by an authorized party for content of potentially dangerous elements such as heavy metals. All products have historically complied with the prescribed norms.



Graph 20 Byproduct generation.

Case Study
Utilization of Secondary Energy Products

Our heat and power generation assets generate fly ash, slag and gypsum from the combustion of lignite as secondary energy products used either for the reclamation and adjustment of terrains or further sell these products particularly for construction purposes.

The companies made sure that all secondary energy products were certified and they continue to explore other options for their use.

Overview of secondary energy products:

Ash

Used mainly by construction companies for production of concrete, cement or bricks. Utilization of coal ash in the construction industry saves the primary materials which would be used instead (limestone, clay, sand). The major customers sourcing ash from our companies include concrete plants and cement plants. The ash from pure biomass combustion is also used by farmers as a fertilizer

Slag

Primarily used for production of bricks and underlayment of roads. Slag is used as a substitute for gravel which would have to be extracted instead. Key customers comprise of brick plants and road construction companies

Gypsum

Used to produce plasterboards or as a gypsum agricultural fertilizer (reduces gypsum volumes which need to be mined)

Biodiversity and recultivation

Protecting biodiversity in the areas where we operate is also 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. The potential risks in planning and operations in regard to the preservation of biodiversity are monitored and evaluated on a regular basis.

To be a responsible user of natural resources, we have a clear commitment to reclaim all lands that have been affected by mining. EPH thus pays attention to the recultivation projects at the end of a power plant's lifetime period as well as in the segments of exploration and drilling where we are obliged to restore these sites to their original state. This is also required by the law, as for instance, according to the German Federal Mining Law, a mining company is obliged to re-cultivate/reclaim all the land used for mining purposes after discontinuation of mining operations. The requirements to be met for this purpose are set forth in a comprehensive framework operations plan and compliance is monitored by the mining authorities.

For that purpose of recultivation, special recultivation related provisions, have been created. All companies in EPH Group have regularly updated plans and contingencies for the site's closure. This is also reflected in the rehabilitation provisions that must be recognised for these activities.

EPH is well aware of the importance of biodiversity, the value of ecosystems and of the environmental benefits they provide places, and great importance on the responsible management of natural resources during all stages of our operations.

In the 2019, the total provision for restoration and decommissioning was EUR 1,082 million.

In general, rehabilitation provisions are primarily connected to following companies:

Company	EUR Mil.
EPIF	
Nafta	90
NAFTA Germany	66
POZAGAS	12
Eustream	6
SPP Storage	4

Company	EUR Mil.
EPPE	
MIBRAG	355
Gazel Energie Generation	184
EP Produzione	116
Helmstedter Revier	90
Fiume Santo	83
Eggborough Power Limited	13
Kraftwerk Mehrum	12
Lynemouth Power Limited	12

These provisions are recognized for the following restoration activities:

- Dismantling and removing structures;
- Rehabilitating mines and tailings dams;
- Dismantling operating facilities;
- Closure of plant and waste sites;
- Restoration and reclamation of affected areas, incl. soil preparation and treatment for subsequent agricultural and forest use.

Case Study
Recultivation Done by MIBRAG

The planning of the new landscapes after mining begins long before the first excavator shovel extracts lignite. Planning of recultivation develops in close dialogue with neighbors and in cooperation with specialist authorities for environmental protection as well as agriculture and forestry. The focus is on the return of an ecologically intact landscape. In many cases, the mining company creates even more forest and water areas, scenic diversity and habitats for endangered animal and plant species than before the beginning of the mining.

At MIBRAG, a team of environmental engineers as well as farmers and foresters ensure that all planned work is carried out carefully. During this time, the soils are upgraded for later agricultural use by means of a specific recultivation crop rotation. In addition, drainage ditches are being dug, path systems are being created and field trees are being planted.

In total, MIBRAG group recultivated the following areas in 2019 and 2018:

	2019	2018
Land creation and regeneration (ha)	**68.6**	**88.3**
Agricultural	35.1	24.5
Forest	26.4	22.7
Other uses for nature protection	4.1	33.2
Other uses	3.0	7.9

Case Study

What exactly do we do to improve the biodiversity of our environment?

NAFTA – waste pond recultivation

To minimize its environmental footprint, NAFTA is obliged to restore the sites affected by gas drilling activities to their original state. As an example, a waste pond in Moravany was used by NAFTA to accumulate drilling related waste. The accumulated sediment was subsequently stabilized (using a special binding substance). The stabilized sediment was then covered by several layers to prevent mixing with surface and underground waters. Grass was then planted on the top layer. The site has been continuously monitored since project finalization.

Case Study

Biodiversity support through the EPH Foundation

In addition to the activities of our subsidiaries, we contributed to a wide array of projects in the field of biodiversity through the EPH Foundation. EPH Foundation organizes a special donation programme “Na Prirodno” (Naturally), that supports projects in the area of biodiversity protection and restoration. In 2019 alone, we contributed and supported 26 projects in nature protection and education. Just to name a few:

Restoration and revitalization of the river Váh

With the civic association NaturAqua, we contributed to restoration and revitalization in third part of the dead arm of the river Váh. The aim of the project was to revive the dead arm in terms of fish population (create environment for fish reproduction) and expand the rest zone for inhabitants of the nearby village. The project involved restoration of the water area by deepening it and modifying the surrounding by planting trees typical for this environment and by improving area around the water by installing new benches and information boards.

Effort to protect and restore nature

We supported the civic association Permoníci, in their effort to protect and restore nature. During the whole year they conducted many events in which they cleaned areas from illegal dumps and took care of nature. For example, in cooperation with the Municipal Forest in Bratislava, volunteer work was done in the locality of Little Carpathians. In the plan was cleaning the Vydrica stream from infested trees, restoration of riverbed, treatment and removal of weedy plants. Another thing worth mentioning was removal of illegal dump in the area of Krpáš, which included around 480 tires.

Cave rescue group

We also contributed to Cave rescue group – Slovak Karst which cleaned underground watercourses. These form the predominant source of drinking water in the Rožňava district and in Košice okolie district. Therefore, the protection and purification of these water resources is extremely important.

Governance

The following section describes EPH’s approach to corporate governance and basic principles ensuring responsible behavior of employees and the management in everyday business activities. EPH and its subsidiaries understand the impact of their business operations and their contribution to the economy and sustainable growth. We gain this understanding through the establishment and regular review and monitoring of internal governance processes, related policies, and on-going stakeholder engagement.

Material Topics

Fair Conduct	Procurement practices	Risk and crisis management
Compliance	Supply chain management	Risk management
Policies and specialised committees		Investigations, litigations and sanctions
Business Ethics		Lobbying and political engagement

Table 19 Material topics in the governance section.

Introduction

EPH Sustainability structure centralises the monitoring and enforcement of ESG matters at the Group level.

Governance is one of the crucial pillars of corporate sustainability. By developing business principles in line with the long-term strategy and introducing various policies to enforce these principles, companies are able to transpose their long-term strategy into their everyday business activities.

The first section is focused on the corporate governance structure, introducing our top management, and showing how we manage ESG issues at EPH. The following sections describe the management approach and provide data related to identified material topics: Fair conduct, Procurement practices and Risk and Crisis management.

EPH Shareholders

Change in EPH shareholder structure

In 2017, following the sale of a minority shareholding in EPIF, changes 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. No major changes in EPH shareholder structure occurred in 2019.

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 EPH Group in all matters and is responsible for its day-to-day business management, while the Supervisory Board is responsible for the supervision of the EPH Group's activities and of the Board of Directors in its management of EPH and in such matters as defined in the Czech Corporations Act and the Articles of Association. Under the Czech Corporations Act[39], the Supervisory Board may not make management decisions. However, certain matters, defined below, are subject to the approval of the Supervisory Board. The EPH Goup has established a Risk Committee, Investment Committee and Compliance Committee.

Furthermore, in order to emphasize risk management within EPH, 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 portfolio of EPH from a Group risk perspective.

39 Sbírka zákonů České republiky; Obchodní zákoník, Oddíl 3; Orgány společnosti, §125–§140.

EPH Board of Directors

The Board of Directors has four members whereas the Chairman of the Board of Directors serves simultaneously as the Chief Executive Officer of EPH. The Board of Directors is the EPH Group'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 EPH, 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 EPH's Board of Directors as at the end of 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

Table 20 EPH Board of Directors.

EPH Supervisory Board

The Supervisory Board of EPH 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 EPH Group and of the Board of Directors in its management of EPH, 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 companies withing the EPH Group, including inquiries into their financial matters, review of the year-end financial statements, including profit allocation proposals.

The following table sets forth the members of the EPH Supervisory Board as at the end of 2019:

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

Table 21 EPH 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 have been completed and the formation of the EPPE subholding has finished.

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

Overview of EPIF's management is shown in the table below as at the end of 2019:

Board of Directors of EPIF

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

Table 22 Board of directors of EPIF.

Supervisory Board of EPIF

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

Table 23 Supervisory board of EPIF.

EP Power Europe management

Overview of EPPE's management is shown in the table below as at the end of 2019:

Board of Directors of EPPE

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

Table 24 EPPE Board of Directors.

Supervisory Board of EPPE

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

Table 25 EPPE Supervisory Board.

Profiles

Daniel Křetínský

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

Mr. Křetínský has been the chairman of the board of directors at EPH 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 a chairman of the board of directors since 2009. At the end of 2019, Mr. Křetínský also served on multiple boards of companies within the Group, as well as outside of the Group in companies both affiliated and unaffiliated with EPH, such as Czech Media Invest, a.s., EP Global Commerce a.s., EC Investments a.s. or AC Sparta Praha fotbal, a.s.

As at the end of 2019, Mr. Křetínský is a direct shareholder of Czech Media Invest a.s., EP Global Commerce a.s. and EC Investments a.s., an indirect shareholder of EPH and EP Industries, a.s. and through them, Mr. Křetínský is also an indirect shareholder of their respective subsidiaries.

Mr. Křetínský holds a bachelor's degree in political science and a master's and doctoral degree in law from Masaryk University in Brno.

Marek Spurný

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

Mr. Spurný has been a member of the board of directors since December 2013. At the end of 2019, Mr. Spurný is the chief legal counsel and a member of the board of directors of EPH and holds multiple positions in boards and managements of companies within the Group, as well as outside the Group, such as VESA Equity Investment S.à r.l., EP Global Commerce GmbH, Czech Media Invest a.s. and AC Sparta Praha fotbal, a.s.

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.

Profiles

Pavel Horský

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

Mr. Horský has been a member of the board of directors at EPH since December 2013.

At the end of 2019, he is a chief financial officer of EPH and holds a number of other positions within the Group as well as outside the Group, such as EP Industries, a.s., EP Global Commerce GmbH or Mall Group a.s.. At the same time, Mr. Horský serves as a member of the Risk Committee of EP Infrastructure, a.s. Prior to joining EPH, Mr. Horský held a market risk advisory position at The Royal Bank of Scotland.

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

Jan Špringl

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

Mr. Špringl has been working for EPH since 2009 and serves as a member of the board of directors of EPH. At the end of 2019, Mr. Špringl was a chairman of the board of directors of NAFTA a.s.; vice-chairman of the board of directors of EP Power Europe, a.s., and holds numerous positions in boards of companies within the Group as well as outside of the Group.

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

Fair Conduct

Enhancing the Group's ethical business conduct through preventive mechanisms, such as specialised committees and internal policies, helps to promote inclusiveness and increases access to justice regardless of status, gender or age. This topic is especially important to internal stakeholders, such as employees and the management. Nevertheless, it has a great impact on EPH business partners, customers, authorities and local communities, expecting transparency, regulatory compliance, comprehensive risk management and high ethical standards.

Compliance

EPH and its subsidiaries always act in accordance with the current local legislation and the Group's appropriate corporate policies and cooperate with local regulators. Going beyond mere compliance, we have our own corporate and local policies in place aiming to ensure the excellence of our responsible Operations. To assure even greater focus and best practice governance, EPH installed Mr. Gary Mazzotti as the independent member of the boards of directors of EPIF and EPPE in charge of the ESG agenda.

Policies and specialised committees

The EPH level policies apply to all EPH subsidiaries.

Policy	Established	Governance level
Anti-corruption and anti-bribery policy	2017	EPH
Anti-money laundering policy	2017	EPH
Sanctions policy	2017	EPH
Anti-trust law policy	2017	EPH
Know your customer ("KYC") procedures	2017	EPH
Environmental policy	2020	EPH
Operational policy	2020	EPH
Procurement policy	2020	EPH
ESG Master policy	2020	EPH
Code of Conduct	2020	EPH

Table 26 EPH level policies.

These policies contain 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 a predefined cash limit;
- 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.

Case Study
Policy Highlight:
EPH Group Policies

The commitment of the EPH Group to strengthen its sustainability performance resulted in approval of Group policies by the EPH Board of Directors in 2020. They were designed to bring all existing principles and commitments together and present them in English and in one place. These policies are applicable to all EPH subsidiaries and are currently being implemented on the local level.

ESG Master Policy

This document sets out a comprehensive policy framework and basic guidelines for the EPH Group as well as defining the core principles for sustainability related policies within the EPH Group and its specific policies described below act as add-ins to this Master policy.

Code of Conduct

This document defines our standards of behaviour, managed as a practical value for our day-to-day business and making all employees personally responsible for the performance and reputation of the Group, ensuring a good relationship with all our stakeholders. These commitments are already upheld by our subsidiaries on their own, in respective documents in their local languages.

Environmental Policy

This Policy defines our commitments in regard to behaviour that has a direct or indirect impact on the environment. The Environmental Policy describes basic principles we follow in terms of the climate change and carbon footprint reduction, protection of biodiversity, EMS, environmental impacts of the product portfolio, customer efficiency, regulatory compliance, renewable and clean energy promotion, resource and energy efficiency, waste management and end cycle management.

Operational Policy

This Policy defines our commitments in regard to the behaviour that has a direct or indirect impact on the safety and efficiency. This Policy concerns the basic principles we follow in matters of the access to basic services, health and safety management, environmentally safe operation of facilities, social impacts of our products, innovation and modernisation, emergency management, stakeholder engagement and responsible marketing.

Procurement Policy

This policy is focused especially on the monitoring of our supply chain and encouraging that our suppliers, as well as our customers, are compliant with local regulations and with our internal policies related to human rights, employees, and environmental matters.

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

In order to strengthen the Group’s current responsible approach in terms of compliance, in 2019 EPH established a new Compliance Committee.

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.

Case Study
EPH Compliance Committee

Focuses on ensuring compliance with new legislation, especially the General Data Protection Regulation (“GDPR”) and the Market Abuse Regulation (MAR), reviewing the existing Group policies and identifying new areas that should be covered by those policies (tax governance policy, discussing how to advance whistleblower protection on a Group level etc.) and addressing several issues of non-compliance reported by the Group’s operational companies and providing support regarding these incidents.

Case Study
GDPR Challenge

We pay great attention to the protection of personal data of our employees and business partners especially considering the latest General Data Protection Regulation. We approached the EU’s GDPR challenge as an opportunity to review and further strengthen our processes connected to personal data protection. By keeping these data safe, the following risks are mitigated:

Information risk

Only necessary data for specific purposes should be stored and made accessible for persons in charge. This lowers the risk of information leakage.

Lower administrative burden

The GDPR means a continuous process of effective data processing in a company.

Reputational risk

If data are adequately protected and information leakage risk is low, then the good name of a company in the area of data protection will be secured as well.

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

Case Study
Whistleblower Policies at Subsidiaries: Best Practices

Eustream
Standardised forms

The company uses established procedures regarding the complaints handling. There is an active e-mail address or a 24/7 hotline, which anyone suspecting unethical or anti-social behaviour may use. The procedure is subject to internal audit and there is a single person responsible for the collection, review and investigation.

To make the process even more efficient, the company introduced standardised forms, which is to be used by the employees who suspect unethical behaviour.

SPP – distribúcia
Involving external parties

The company encourages the use of the 24/7 hotline or any other whistleblower channels by external parties. Any supplier, customer or business partner having a suspicion about the behaviour of an SPP - distribúcia employee is encouraged to raise a complaint.

POZAGAS
Company Ombudsman

Employees may submit their complaints to Group Ombudsman, who is obliged to investigate them. Complaints may be anonymous. This function is formally set up and employees are informed about it. Employees also have an opportunity to submit their suggestions or proposals directly to the top management (followed by informing the Board of Directors) through boxes located in the office premises.

In case of complaint delivered directly to the Board Members or the top management by an external party (i.e. outside of the company), the decision lies with them if there will be a special audit to investigate whether the accusation is substantiated. Whistleblower activity can be performed by employees either via a special 24/7 hotline or by email/letter to a specified address, which ensures the anonymity of whistleblower.

NAFTA
Anti-social conduct

The process for handling of complaints has been established through the Anti-social Conduct Policy. Employees may submit their complaints either via e-mail or use a 24/7 hotline. The procedure is subject to internal audit and there is a single person responsible for the collection, review and investigation.

Case Study
EPH Code of Conduct

The EPH Group Code of Conduct contains standards of behavior to be upheld by all employees and is designed to ensure good relationships with all stakeholders. Selected key commitments are as follows:

- Complying with all binding legal regulations;
- Conducting its marketing activities in a responsible and fair manner;
- Ensuring security of sensitive customer data;
- Guaranteeing equal opportunities and avoiding all forms of discrimination towards existing or potential employees;
- Creating healthy and safe working conditions for its employees;
- Guaranteeing freedom of association and right to collective bargaining;
- Continuous training and talent development;
- Encouraging suppliers to not only comply with existing laws and regulation but also adhere to principles contained in the EPH Group policies;
- Minimizing environmental impact of its activities and maintaining appropriate environmental management standards;
- Promoting human rights through acknowledging the Ten Principles of the United Nations Global Compact.

Our business ethics

This section defines the EPH Group's commitments in its standards of behaviour, managed as a practical value for its day-to-day business and making all employees personally responsible for the performance and reputation of the Group, ensuring a good relationship with all its stakeholders.

EPH maintains consistently high standards in ethics throughout its operations and supply chain and does not tolerate corruption or any sort of inappropriate behaviour at any level. Our subsidiary companies uphold these standards on their own already. In fact, our subsidiaries already have their own Code of Conducts in place, in their local languages.

Procurement Practices

Maintaining high standards throughout the supply chain, EPH works to promote sustainable growth, reduce inequalities and enhance access to basic services. Procurement requirements considering social and environmental aspects are affecting Group's suppliers and can lead changes in their business practices. Suppliers and business partners are expecting fair and transparent treatment.

Supply chain management

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 make sure that the EPH Group upholds its commitment, thorough screening of any potential significant supplier is carried out, ensuring that the supplier complies with the stated principles and shares our commitments to law and regulation, ethical business conduct, human rights and working conditions, health and safety, and environmental protection.

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.

EPH maintains consistently high standards in ethics throughout its 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.

Since 2018, we have been systematically looking 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.

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 and transparency.

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 2019, 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 the 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.

Since 2018, we have been using 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 paperless and efficient procurement processes. Since 2018, in key companies, we have been focusing 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 focus 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.

Risk and Crisis Management

Strong mechanisms for evaluating risks and coordinating an effective response helps to enhance the resilience of business activities, communities and create a base for sustainable development. Effective risk and crisis management practices are expected by Group's investors, as well as local communities and municipalities.

Risk management at EPH

In order to emphasise risk management within the EPH Group, particularly resulting from the acquisition growth and completion of several recent major transactions, EPH has established a Risk Committee, which supervises all activities within the entire portfolio of EPH from a Group risk perspective.

The EPH Risk Committee has been established to oversee the EPH Group-wide risk management practices to assist the EPH board in:

Overseeing that the executive team has identified and assessed all the risks that the organization faces and has established a risk management infrastructure capable of addressing those risks

Overseeing, in conjunction with the EPH board (and if applicable with other board-level committees), risks such as credit, market, liquidity, operational, reputational and other risks, if relevant

In conjunction with the full board, approving the EPH Group's enterprise wide risk management framework.

The Risk Committee comprises of the following members and reports to the Board of Directors. This list sets forth the members as at the end of December 2019:

- Pavel Horský (Chairman)
- Tomáš Miřacký
- Michal Buřil (Head of Group Risk)
- Miroslav Haško

The Committee defines risk review activities regarding the initiatives and risk exposures and discusses Group's major risk exposures with the management and reviews the steps management has taken to monitor and control such exposures.

This risk assessment as well as the mitigation measures are subject to regular reviews and are continuously refined and improved.

We understand it is our obligation to provide information to local communities regarding the safety risks of our power plants and industrial sites, emergency plans, gas safety of network operations and electrical safety. These topics are described in detail in the environmental chapter.

EPH takes risks associated with its operations very seriously. Apart from our activities in reducing environmental impacts and subsequent risks, we analyse and mitigate financial, operational and strategic risks as well.

EPH Risk Committee helps to develop a culture of the enterprise risk, integrate risk management into the organisation's goals and create a corporate culture such that people at all levels manage risks rather than reflexively avoid or heedlessly take them.

Financial risk

Information related to the Group's exposure to financial and operational risks and the way it manages such risks is included in the EPH 2019 Consolidated Annual Report. The most important types of financial risks to which the Group is exposed are credit risk, liquidity risk, interest rate risk, commodity price risk, foreign exchange risk and concentration risk. To minimise this exposure, the Group enters into derivatives contracts to mitigate or manage the risks associated with individual transactions and overall exposures, using instruments available on the market.

Credit risk

The Group has established a credit policy under which each new customer requesting products/services over a certain limit (which is based on the size and nature of the particular business) is analysed individually for creditworthiness before the Group's standard payment and delivery terms and conditions are offered. The Group uses internal credit models as well as external credit databases for analysis of creditworthiness of new customers, who are also subject to Risk Committee approval. The exposure to credit risk is monitored on an ongoing basis.

Liquidity risk

The Group's management focuses on methods used by financial institutions, i.e. diversification of sources of funds. This diversification makes the Group flexible and limits its dependency on one financing source. Various methods of managing liquidity risk are used by individual companies in the Group.

Commodity risk

The Group's primary exposure to commodity price risks arises from the nature of its physical assets, namely power plants. In case of favourable power prices, the Group manages the natural commodity risk connected with its electricity generation by selling the power it expects to produce in the cogeneration power plants and in ancillary services on an up to two-year forward basis. In case of low power prices, instead of entering into such forward contracts, the Group uses the flexibility of its own power generating capacities to react to current power prices with the aim to achieve better average selling price.

Financial risks	Operational risks	Strategic risks
Credit risk	Cyber risk and system risk	Socio-economic and political risk
Liquidity risk	Physical incident risk	Joint ventures participation risks
Commodity risk	Regulatory risk	Concentration risk
	Climate change related risks	Competition risk
		Employment related risks
		Reputational risk

Table 27 Risk groups managed at EPH.

Operational risks

Operational risk is the risk of loss arising from fraud, unauthorised activities, error, omission, inefficiency or system failure. It arises from all activities and is faced by all business organisations. Operational risk also includes legal risk.

Cyber risk and system risk

Cyber security protects systems, networks, data and programs from digital attacks. Cyber threats are constantly evolving, so an adaptive approach to cyber security is adopted in the EPH Group with regular reviews of risks and selection of corresponding measures for the most effective protection. The risk-based approach means that the adopted cyber security measures are based on each company's unique risk profile to meet the exact demands of its concrete business environment with reasonable threat assessment.

EPH Group's companies follow requirements of many information security standards and frameworks, as well as laws, e.g. the GDPR or EU NIS Regulations (Network and Information Systems Regulations 2018). Companies with power grid, heat distribution, the transport network and information and communication systems are part of the so-called "critical infrastructure", for which it is essential to maintain vital functions, for the society. Their cyber security is managed in EPH according to relevant specific legislation and regulation to prevent damage or destruction by natural disasters, terrorism and criminal activity that may have negative nationwide consequences.

Physical incident risk

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, increase capital expenditures, harm the Group's business and reputation or cause significant harm to the environment.

The Group's transmission infrastructure, gas, power and heat distribution infrastructure, heat and power plants, gas storage infrastructure, energy trading platforms, wind and solar farms, biogas facilities, transport network and information systems controlling these facilities, could be subject to failure, breakdowns, unplanned outages, capacity limitations, system loss, breaches of security or physical damage due to natural disasters, human error, hacker attacks, fuel interruptions, criminal acts or unscheduled technological breakdowns at customers' facilities.

Certain businesses of the Group (including the Generation & Mining Business, Heat Infra Business, the Gas and Power Distribution Business and the Gas Transmission Business) are also sensitive to variations in weather.

In addition, the demand for EPH Group production may be adversely affected by unexpected technology failures in customers' facilities. Due to the technologies used in the facilities of some of our customers, the occurrence of such unplanned outages is not uncommon. Planned outages can also lead to the detection of unexpected issues, which can lead to long-term shutdowns until these issues are resolved.

Regulatory risk

The EPH Group's business may be adversely affected by changes in regulated tariffs or the introduction of new obligations to pay regulated tariffs.

The Group is exposed to risks resulting from the state regulation of electricity selling prices by the states in which it undertakes business activities. A substantial part of the sales of the Group's Gas Transmission Business, Gas and Power Distribution Business, Heat Infra Business, Generation & Mining Business and Renewable Energy Business are derived from activities which are subject to regulated tariffs.

Apart from the regulated tariffs, risks also arise from the changes in the European energy legislation affecting the scope and the market price of the European Emission Allowance, European miming legislation and European renewable energy support schemes.

Climate change related risks

We are closely monitoring the development of the climate change and subsequent climate deals and their possible impacts on our business segments. EPH's approach to climate change and its mitigation is further described in the chapter Environment, in the section of: GHG emissions: Our business and climate change.

EPH Group's senior management analyses possible risk through various lenses trying to assess possible development scenarios, preparing contingency strategies and plans.

Strategic risks

Socio-economic and political risk

The EPH Group's business is exposed to political, economic and social developments namely in the Slovak Republic, the Czech Republic, Germany, France, the UK, the Republic of Ireland, Italy and Hungary.

The Group's business activities are largely concentrated in the so-called "Emerging markets", which carry higher risks compared to more developed markets. Especially with regard to deterioration of the credit rating of individual countries, which affects the financing costs of EPH Group companies that are active in these countries.

The EPH Group also operates in the United Kingdom and Northern Ireland market, and is therefore exposed to the risk of Brexit, ie. the United Kingdom's withdrawal from the EU. At present, the form of the final agreement between the United Kingdom and the EU on further joint operation is unknown, therefore, the impact of Brexit on the EPH Group cannot yet be assessed.

The Group's business could be adversely affected by the continuing crisis in Ukraine and the political and economic uncertainty it creates. Heightened levels of tension between Russia and Ukraine, military activity on the border between Russia and Ukraine, the accession of Crimea to Russia and the imposition by the U.S., the EU and other countries of various sanctions and certain other measures against specified Ukrainian and Russian individuals and certain Russian entities could have a direct impact on the Group in the future. The interruption of gas flows from Ukraine could also negatively impact the performance of eustream as a portion of its revenues is dependent on the commercial gas flows in the eustream network.

Joint ventures participation risk

In cases of minority participations the EPH Group is dependent on the approval of certain matters by the joint venture partners or those authorized with operating these ventures. The consent of the partners may also be necessary for the EPH Group to obtain the disbursement of funds from projects or entities, or to transfer its participation in projects or entities. Additionally, some parts of joint ventures are held by a public entity, such as the Slovak Republic, or by other entities with interests that differ from the interests of the EPH Group.

Concentration risk

Major part of gas transmission, gas and power distribution and gas storage revenues, which are primarily recognized by SPPI Group and Stredoslovenská distribučná, are concentrated to a small number of customers. This is caused by the nature of business which has high barriers of entry. At the same time, majority of these revenues is subject to regulation as well as recognized under long-term contracts, often under 'take or pay' schemes which limit the volatility of revenues year-on-year. From the credit risk perspectives, the counterparties are typically high-profile entities which are dependent on the supplied service which naturally limits the present credit risk.

Competition risk

Many of the markets in which the Group's business lines operate, are increasingly competitive and as such, the Group is exposed to the risk of not being able to compete effectively on an ongoing basis. For example, in the Group's Heat Infra Business there are pricing pressures from alternative sources of power.

In addition, the energy supply market is very competitive with many businesses operating on the markets in which the Group operates. The Group's primary competitors in the Czech energy supply market are RWE, E.ON and ČEZ, and in the Slovak energy supply market are SPP, ZSE Energia, Innogy Slovensko and ČEZ Slovensko. The Group's customers may leave in order to obtain their energy from other suppliers. In order to compete with other energy suppliers, the Group may have to reduce prices further.

Employment related risks

The Group's ability to maintain its competitive position and to implement its business strategy is largely dependent on its ability to retain key managers and senior executives as well as skilled personnel and to attract and retain additional qualified personnel who have experience in the Group's industries and in operating a group of the Group's size and complexity. There may be a limited number of persons with the requisite experience and skills to serve in the Group's senior management positions, and the Group may not be able to locate or employ or retain qualified executives on acceptable terms, or at all.

EPH monitors its relations with the workforce. If the relations would deteriorate for any reason, including as a result of changes in its compensation or any other changes in the Group's policies or procedures that are perceived negatively by employees, or if the Group is unable to successfully conclude any collective bargaining agreements with the trade unions, the Group may experience a labour disturbance. This could take form of work stoppage at the relevant facility or facilities, which could have a material adverse effect on any such facility's operations and on the Group's business, financial condition, results of operations, cash flows and prospects.

Some subsidiaries of the EPH Group guarantee their current and former employees pension benefits on the basis of a certain pension system frameworks, which are in some cases managed by trustees, outside of the Group which has therefore limited control over the assets.

Reputational risk management

At EPH, we manage our reputation and brand image by conveying our values and communicating our approach to sustainable development, business ethics and our role within society and the environment.

One of our priorities is to present truthful information about EPH and to make sure that the publicly released claims by another party are true as well. By constantly monitoring public media, we are able to warn our stakeholders about any occurrence of false information release related to EPH. Our approach is to uphold standards of reliable communication, as we prepare our business, financial and accounting records accurately and transparently.

In regard to communication with our business partners, we provide all relevant information in a truthful, clear and fair manner. As for communication with our customers, we at EPH promote a responsible marketing approach, providing all information regarding our services or possible risks, emergencies or health issues objectively and truthfully.

Investigations, litigations and sanctions

To our knowledge, all companies are fully compliant with the current legislation and regulation in their respective countries of operation. Currently, there are no open critical cases of investigation, litigation or sanctions. For detailed information, please refer to our EPH Annual report 2019.

In 2019 there were no incidents or fines at any of the businesses of EPH resulting in significant impacts related to the environmental or social aspects. Compliance with all licensing regulations was consistently ensured across our operations. A minor environmental fine was imposed on BERT, one of EPIF's subsidiaries (EUR 142).

Lobbying and political engagement

We require our funding to be managed in a transparent way, ensuring that it does not support any illegal and unethical action or organisation, in keeping with our sustainability commitments. EPH is a responsible investor, as our Group neither supports political parties nor contributes to the funds of groups whose activities are deemed to promote party interests. We participate proactively and responsibly in discussions with governments and other organisations about the development of proposed legislation and other regulations which may affect our business interests.

Fine category	2018	2019
Environmental Fines	464	142
Society	0	0
Governance	0	0
Total	**464**	**142**

Table 28 List of significant fines during the 2019 (EUR).

Primary aim of the senior management is to correctly and objectively assess possible risks and opportunities in all our business areas.

Social

The main strengths of the EPH Group include good relationships with employees and their loyalty. The Group maintains good and fair relations with the trade and labour unions within the Group companies through regular meetings and discussions on labour, social and wage related issues. Similarly, respecting the human rights and implementing non-discriminatory guidelines are viewed as essential for securing an employee-friendly working environment across the EPH Group. Safety and quality management covers health protection at work, safety management systems, technology and human resources. We play an active role in supporting and developing our local communities through social initiatives.

Material Topics

Health & Safety	Employment and employee development	Customer relationship management	Development of the communities
Health and safety management at EPH	Our employees	Relation to our customers and EPH's approach	Community involvement and selected social initiatives
	Training and development		

Table 29 Material topics in the social section.

Introduction

The EPH Group is committed to conducting business activities in a transparent and operationally excellent manner, ensuring a good relationship with all its stakeholders. This chapter of the report aims to provide further details on identified material topics: Health & safety, Employment and employee development, Customer relationship management and Development of the communities.

Health & Safety

Health and safety are often at the core of both internal and external stakeholders' concerns. Understanding the critical importance of ensuring good wellbeing of our employees, we strive to put in place safety mechanisms of the highest standards and promote a culture of "putting health and safety first", throughout our supply chain. With these steps, our work feeds into global efforts in promoting health and wellbeing for all at all ages.

Health and Safety management at EPH

The EPH Group is committed to ensuring the highest standards in regard to the health and safety management of its employees, contractors, customers and all stakeholders. The EPH Group is committed to maintaining its certification standards on par with international levels and keeping the existing norms relevant to each subsidiary. The employees are obliged to adhere to all of the safety policies, with the EPH Group ensuring that all of its employees are informed of applicable laws and regulations and have completed relevant training in the area of health and safety at work.

We take the health and safety of our employees, contractors and other stakeholders very seriously in our operations. Moreover, we are constantly striving to improve the safety level of the Group's activities by introducing measures focused on risk assessment, elimination, mitigation and prevention.

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.

1 Commitment from the top management

Top management is actively involved in H&S issues and they are carefully considered in each decision-making process. H&S reporting is established and taken very seriously. For example, within SSE, weekly updates on H&S indicators are discussed at management meetings, while semi-annual and annual reports on H&S are presented directly to the Board of Directors. This issue holds the same importance in other companies of the Group.

2 H&S is integrated into our remuneration system

The integration of H&S results in the incentive scheme demonstrates the commitment of the each company to address these issues and link them to the assessment of employee performance.

3 Preventive approach

A reduction in accidents is an important goal, however, being able to continuously achieve better results over time represents one of the most challenging issues in H&S. In order to achieve and maintain decreasing accident trends for both our employees and contractors, various EPH companies focus on a preventive approach based on a detailed analysis of accidents, "near-misses" and remedial actions, with the aim of ensuring that similar accidents will not occur in the future.

Monitoring and analyses of near-misses and incidents is another important part of this preventive approach, as a reduction of near-misses can help lead to the prevention of severe and even fatal accidents.

4 Control and risk reduction

H&S management requires a precise risk assessment, as well as regular inspections on site. For instance, BERT performs such a work-related risk assessment for every type of work including not only activities performed by its own employees but also those of its contractors and subcontractors. It also runs enhanced controls for work with increased risks. Each work supervisor is required to pass an examination on BERT's safety rules.

At the workplaces of SPP-D, external entities perform systematic safety inspections that provide an important input for the assessment of projects and technological processes in terms of H&S.

5 Focus on behaviour

According to studies, 80–90% of accidents are caused by human error (Heinrich et al, 1980). At the same time, transformation of behaviour from unsafe to safe is one of the most difficult challenges a company can meet on the way towards achieving a goal of “zero harm”. Behaviour Based Safety (“BBS”) is a reinforcement action taken by an organisation’s management to identify the immediate and root causes of unsafe behaviour and then apply corrective measures to reduce unsafe actions by employees.

BBS puts employees at the centre, trying to understand the reasons of unsafe behaviour and defining the ways of improvement.

Observations are a key tool, when the worker observes and feels responsible not only for his or her behaviour but also for the behaviour of their colleague. BBS is an important step in the transformation of safety culture from reactive and dependent to proactive and interdependent.

6 Training and communication

H&S training as well as communication are recognised as important channels for the diffusion of H&S knowledge, awareness and culture among our employees and contractors. Training is not a one-off moment. We facilitate periodical retraining.

The EPH Group also provides general training programmes on employee safety and when selecting or assessing potential suppliers the Group also takes into account their approach and attitude towards safety issues.

In addition, for instance at BERT, EPIF’s subsidiary, we are raising awareness regarding the safest approach to work through the discussion of current H&S risks on daily and weekly O&M meetings.

BBS puts employees at the centre, trying to understand the reasons for unsafe behaviour and defining ways of improvement.

7 Emergency management and fire protection

Our companies work on enhancing procedures for fire protection and preparation for emergency situations, they have dedicated plans and perform regular drills and training.

As an example, at eustream, regular emergency drills are controlled by HSEQ department in collaboration with the dispatch department and fire safety brigades.

8 Health protection

The health of our employees is treated as seriously as their safety. Various initiatives aimed at the promotion of health and well-being in the workplace are in place in our companies. For example, SPP-D regularly performs medical examinations for their employees.

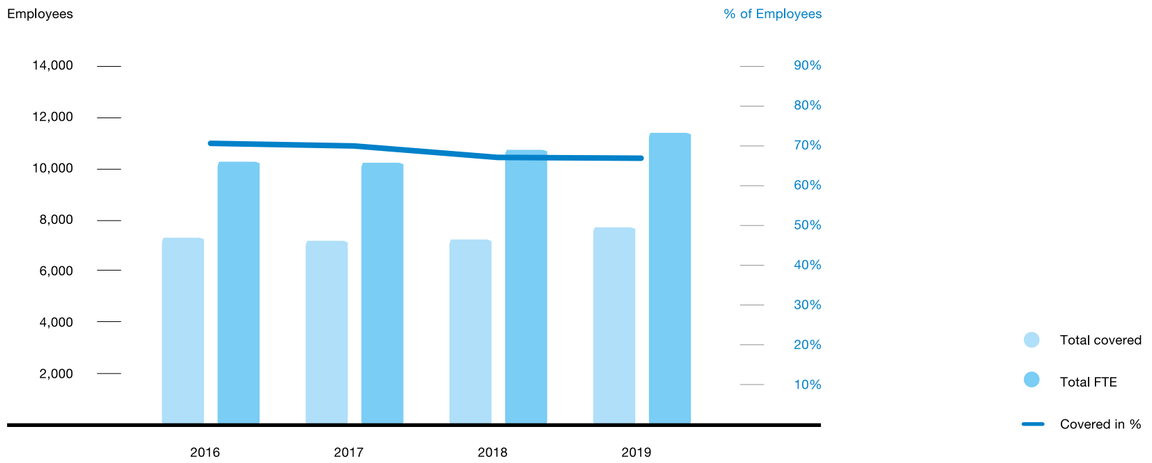
While the H&S results demonstrated by EPH and our subsidiaries are improving, the ultimate goal is to have all operations and sites capable of maintaining a sustainable “zero harm” objective. In order to meet this goal, EPH will continue to support our subsidiaries in reinforcing preventive tools, in 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.

We take pride in treating the health of our employees and contractors as a top priority. Regrettably, in 2019, 1 fatal incident occurred at SSE involving a contractor due to electrical shock when performing maintenance works on the power line. The investigation was terminated without any mistake on SSE side.

67% of EPH’s employees work in companies that were certificated under OHSAS 18001/ISO 45001.[40]

		2016	2017	2018	2019
Employees hours worked & Incidents					
mil. hours	Hours worked	16.1	16.7	16.8	18.1
#	Registered injuries	46	64	65	63
#	Fatal injuries	0	1	0	0
index	Injury Frequency Rate*	2.9	3.8	3.9	3.5
Contractors hours worked & Incidents					
mil. hours	Hours worked**	0.0	0.0	2.5	2.4
#	Registered injuries	6	16	18	10
#	Fatal injuries	0	0	0	1
index	Injury Frequency Rate*	0.0	0.0	0.0	0.0

Table 30 Employees and contractors hours worked and incidents.
Note: * number of registered injuries per million hours worked.
** The total number of hours worked by contractors has not been reported by all companies in the Group this year and therefore, the final figures may not be completely representative. We are working on changes in our reporting process, to be fully compliant in the next reporting period.



Graph 21 Employees covered by OHSAS 18001/ ISO 45001.

Our commitment to the health and safety of our employees can be proven by the fact that over 7 thousand employees (67%) out of more than 11 thousand employees work under the OHSAS 18001/ISO 45001 standard.

However, this does not mean that rest of our employees do not work in a safe and healthy environment. All EPH Group companies are compliant with the legislative requirements in the H&S area, in their respective countries. We are taking even more steps in managing H&S at our plants and we view this area as extremely important.

40 Certification of management system of safety and health protection at work.

Case Study
We Were Awarded:
Safe Enterprise Program

Pražská teplárenská firstly enrolled in the Safe Enterprise program in 2002, followed by Plzeňská teplárenská in 2003. The Safe Enterprise program, guaranteed by the State Labor Inspection Office, aims to increase the level of Occupational Safety and Health ("OSH"), environmental protection, work culture and well-being.

The scheme complies not only with the Czech regulation but also with regulation applicable in the EU member states. With this programme, our employees gradually acquired the understanding that occupational health is not only about protective tools but rather about responsibility and respect in a more generic sense.

For its efforts in occupational health and safety, Pražská Teplárenská was awarded the highest degree of award in the field. By fulfilling the Safe Enterprise program, we defended our position among the eighty-one companies in the Czech Republic that received this award. The field of energy features these companies: PRE, PRE distribuce, Teplárna ČB, ČEZ tepelné a vodní elektrárny, Energotrans, JE Dukovany, JE Temelín, ČEZ Distribuce, Elektrárna Chvaletice, ČEZ Měření, Teplárny Brno, ČEZ Distribuční služby.

The certificate received in 2018 is valid for three years and both companies will aim to retain the award in 2021.

Employment and Employee Development

Decent work conditions are intrinsic for the development of human capabilities, increase in productivity and sustainable growth. In our HR processes, we stress access to education as a critical aspect of our functioning. Striving to set standards of best practices in our field, we place access to decent work and continuous education to the core of our mission.

Our employees

We are convinced that effective and meaningful management of our employees is a prerequisite for successful operations across our different businesses. EPH Group encourages the particular local approach at subsidiary level, while maintaining corporate standards that ensure the respect for our Group's business principles and responsible behaviour. This is even more the case in today's challenging energy market environment, where attractiveness for experienced employees with a particular know-how is becoming a competitive advantage for any utility-type 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 grow in the most appropriate roles across the organization.

Within the holding structure of EPH, the human resource functions are decentralized and the responsibility for them lies within each subsidiary. This allows for much greater flexibility in responding to the needs of our employees and it is effectively a necessity in order to account for the inherent differences between our various operations, whether due to location, business area, size of the company's workforce, unionization, or other reasons.

We are an employer that offers equal and fair treatment for all of its employees, respecting their race, nationality, ethnicity, age, gender, sexual orientation, religious beliefs, political views or disabilities. The EPH Group acts in line with the relevant labour codes, applicable legal regulations and internal policies, ensuring recruitment, promotion and treatment on the sole basis of the employees' qualifications, abilities, experience, and work performance, avoiding all forms of discrimination. In addition, the Group respects its employees' right to participate in the trade union of their choice and does not tolerate any type of retaliation or hostile action towards people who participate in union activities.

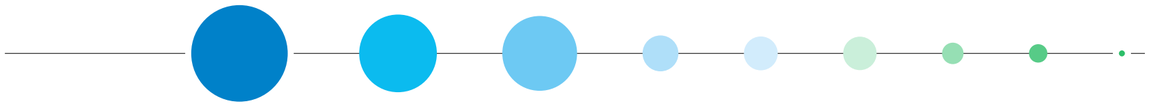
Regarding the working conditions of our employees, we are committed to creating and maintaining healthy and safe working conditions beyond the applicable regulation, with the most appropriate health and safety management system to mitigate potential risks arising from technological processes, technical equipment, human activity and working environment.

The EPH Group keeps its employees informed on how their contribution at work is evaluated, expecting them to actively take part in the evaluation process so they can keep improving their performance. We aim to ensure appropriate education to increase awareness among our employees regarding health and safety at work, which also involves business partners and visitors to a reasonable extent. The EPH Group pays attention to the professional growth of its employees.

In 2019, across our operations and geographies, EPH employed 11,453 (10,711 in 2018) professionals. From the total FTEs, 9,386 were male employees and 2,067 were female. The percentage of women in energy industry is in line with the sector standards. 93% of employees had permanent contract and 89% of EPH employees are covered by various collective employment agreement schemes.

From its position of the main shareholder, EPH strives to promote the trust, ownership, engagement and commitment of our employees as this has a direct impact on driving innovation, employee morale, productivity, retention and talent attraction.

	Slovakia	Germany	Czech Republic	Italy	France	UK	Hungary	Poland	Others
Headcount	**4,214**	**2,728**	**2,529**	**582**	**518**	**506**	**208**	**153**	**17**

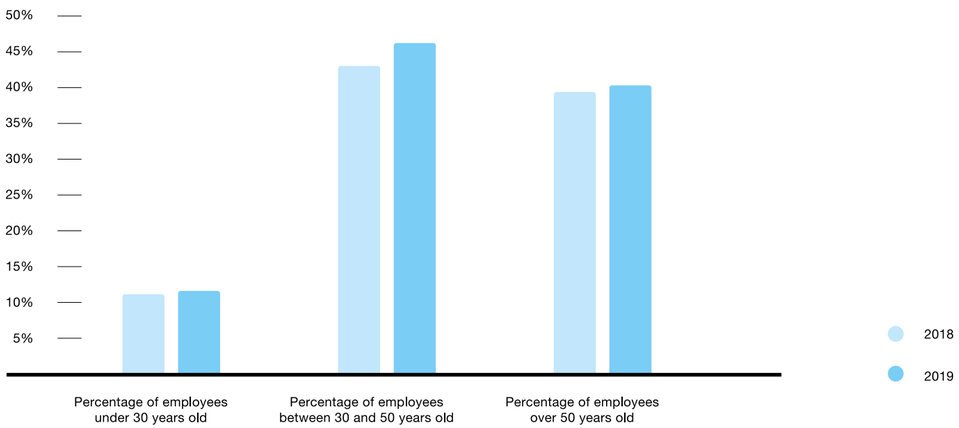


Graph 22 Employees by country in 2019.

We are proud employers of 288 employees with various disabilities. We strive to provide them with the best available conditions to engage in daily activities.

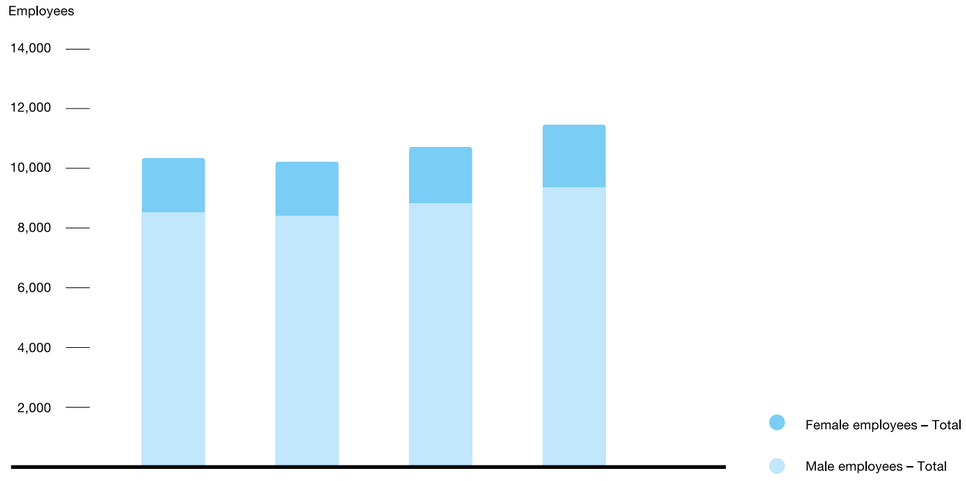
Majority of our employees are between 30 and 50 years, followed by employees over 50. Nevertheless, we strive to achieve a healthy mix of various generations to enhance diversity, continuous learning and effective cooperation. To attract young talents we designed various talent and educational programs as described in section „Training and Development“. In addition to that, we work towards inclusion of minority groups.

Age distribution of employees in percentages



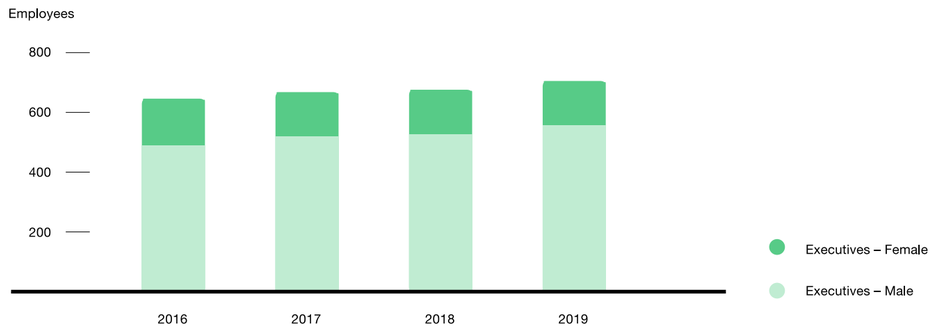
Graph 23 Age distribution of EPH employees.

Total number of employees



Graph 24 Total number of male and female employees.

Employees in management

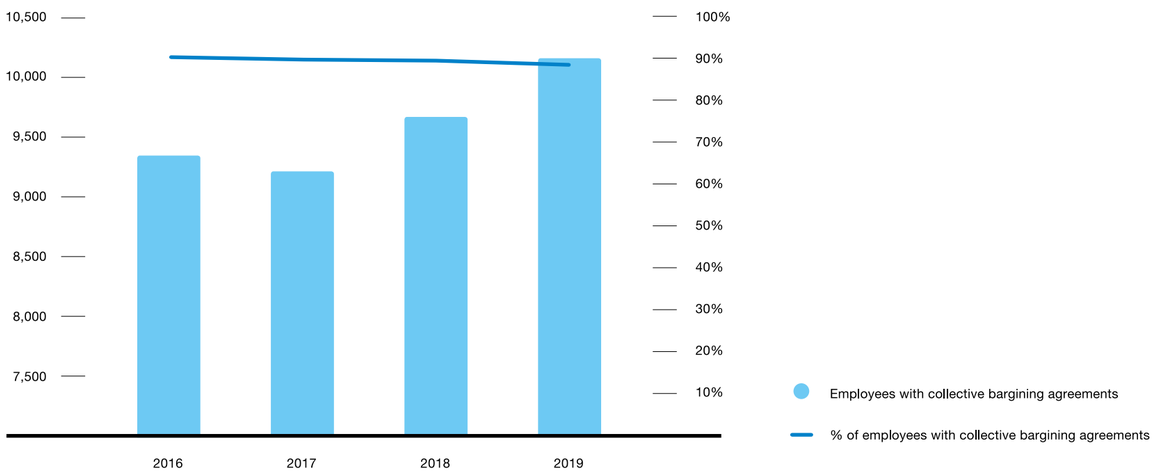


Graph 25 Total number of male and female executives in the top and middle management.

	2016	2017	2018	2019
New hires				
Number of new hires – Male	526	739	885	772
Number of new hires – Female	229	197	224	225
Number of new hires – Total	755	936	1,109	1,027
Leavers				
Number of leavers – Male	988	799	1077	823
Number of leavers – Female	232	205	222	265
Number of leavers – Total	1,220	1,004	1,298	1,088

Table 31 Employee turnover overview.

Almost 89% of our employees are covered by various collective bargaining agreements.



Graph 26 Collective bargaining.

As in any energy related field, the business area suffers from an acute shortage of women. These rates are thus comparable to our peers[41] in the energy business, being around 20% for women in standard positions and around 15% for women in the top and middle management positions, although we are aware of the decrease of women's share on the higher management level. The EPH Group respects and upholds all principles embedded in the ILO Declaration on Fundamental Principles and Rights at Work, including elimination of discrimination. The recruitment process, promotion and treatment is based solely on the employees' qualifications, experience and work performance. Even though there is no preferential treatment towards male candidates for any position, high portion of positions in the energy related fields is typically occupied by men. These ratios subsequently affect female representation at the top and middle management positions as well.

In total, there were 678 employees in the top and middle management in 2019 across the Group while the ratio of employees vs. executives remains relatively stable with approximately 1 executive on 16 employees.

41 Based on the analysis of 5 main comparable energy groups in Europe.

At EPH, we recognise and appreciate the need of our employees to coordinate in regard to the negotiations with their employer. As we are fully compliant with the European and national regulations, we allow freedom of association within all our companies.

Across all eleven countries in which EPH operates, we provide permanent contracts to 10,598 employees. Understanding protection of human and political rights as a must, we make sure that our employees have free access to mechanisms of collective bargaining. Around 89% of EPH's employees are covered by various collective bargaining schemes.

Training and development

EPH and its subsidiaries place great importance on the development of our employees as we recognise that our employees are our top asset and we are committed to their personal development. As mentioned in the previous subsection on Employment, given that EPH uses a decentralised approach in human resources, this section draws on the 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.

	2016	2017	2018	2019
Training				
Total training hours – all employees	235,729	239,037	258,564	284,946
Total training hours – per employee	22.9	23.3	24.0	24.9

Table 32 Training hours.

In 2019, more than 284,946 hours were dedicated and committed to training and development of the employees within the EPH Group, supporting lifelong learning in alignment with SDG 4, Quality education.

Case Study
MIBRAG:
“Colleagues Train Colleagues” Project

MIBRAG employees have complex knowledge and experience. The project “Colleagues train colleagues” intends to help to make more use of this knowledge within the scope of training classes offered internally within the company.

Potential MIBRAG trainers sat down together during a kickoff workshop in March 2019 to discuss opportunities and contents of training classes in the company.

Since 2019, internal training classes have been offered in the fields of labor and mining law, controlling and presentation techniques. Further classes – e.g. on compliance, energy management and occupational safety – will follow in 2020. On fixed dates, the trainers meet regularly to exchange experience and talk about teaching success.

This project does not only contribute to sustainable cost optimization, but also to the competency enhancement. Employees who become internal trainers can develop their strengths and deepen their knowledge. On the other hand, employees who attend the classes can benefit from contents tailor-made to MIBRAG’s needs for hands-on implementation.

The “colleagues train colleagues” concept will become a permanent and sustainable component of the MIBRAG’s employee education program.

Customer Relationship Management

We serve our customers by providing them with affordable, reliable and modern access to energy. Working to ensure sustainability of our services, we act as one of the most active companies in the region in speeding up the transition towards renewable energies. Through our services, we strive to contribute towards sustainable and inclusive economic growth.

Relation to our customers and EPH’s approach

EPH is a vertically integrated energy Group 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 and logistics. In addition, EPH is an important regional player in various segments of the gas industry, including gas transmission, gas distribution and gas storage.

As one of our crucial responsibilities, we strive to provide high quality and reliable electricity, gas and heat supply which is affordable for our customers. Energy 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 basic services, such as electricity, gas or heat, and other commodities across all the communities where we operate is a primary goal of the Group, through the use of new technologies and the development of specific projects to create shared values.

Our electricity, gas and heat business, as well as the coal extraction, is regulated by the states, which means we always offer reasonable prices to our customers. In addition, for instance in Slovakia, due to regulation, we offer better prices to vulnerable and disadvantaged customers.

As one of the leading distributors and suppliers of electricity, gas and heat, the EPH Group is responsible for ensuring reliable, quality and environmentally safe deliveries to our customers.

With regard to the operation of our facilities, we frequently update the information on safety risks associated with our services and products. Our companies have hotlines in place where customers can call in a case of an emergency. In addition, the websites of the EPH Group subsidiaries are frequently updated with any information regarding accidents or planned outages. In case of any emergency, the EPH Group communicates quickly and transparently with all involved stakeholders and governmental bodies. Our emergency plans are designed to include the best practices in safety management.

For distribution of electricity, the key indicators measuring network reliability ("SAIDI, SAIFI") have been well below the requirement of the regulator in 2012-2019. In the gas distribution segment, there are predictive maintenance processes in place to identify spots in the network where maintenance works should be preferentially performed.

In the area of customer communication, it is important to note that most of the EPH Group companies have an Ethics Manuals or Codes of Conduct[42] that contain the rules for employees in regard to the ethical and transparent conduct towards customers. As we place high importance on providing the best service possible, we have clear and accessible communications channels in place for our customers.

Our customer services are not limited exclusively to the supply or distribution of the aforementioned commodities. We understand that energy savings and providing sustainable products are highly important in the process of decarbonization.

These efforts are primarily concentrated in SSE, where we offer our customers services aimed at energy savings, such as LED lightning, highly efficient heating, heat pumps or we install solar panels. Also, for example at Pražská teplárenská, Plzeňská teplárenská or Elektrárny Opatovice, we inform our customers about optimal temperature, efficiency and its relation to energy savings. In Gazel, we share tips and tricks related to energy efficiency as well. We aim to educate our industry customers in long-term energy saving strategies and the public in daily habbits that lead to a positive change. We focus on the optimal use of lighting, heating, office equipment, machines and the relevance of insulation.

Through our activities in the EPH Foundation, or even at subsidiary levels, we are also raising the awareness among customers, children and the general public about energy savings and responsible behaviour with respect to energy. At the EPH Foundation, we fund educational campaigns primarily for children, showing them the importance of nature protection and a variety of environmental topics.

42 For greater detail, see the Governance section of the report.

Subsidiary companies of the EPH Group that have direct contact with the end consumers, also offer eco-efficiency services and products to help them save electricity, heat or even generate their own electricity.

Case Study
Plzeňská teplárenská: Energy Consumption Monitoring at Kindergartens

The main goal of this project is to extend the portfolio of services we offer to our customers. Monitoring includes all energy, which the customer consumes, and alerts to failures or energy accidents. This service allows customers to optimise their energy consumption and reduce energy costs. The expected benefit lies in the assumption that the customer will not attempt to change the energy supplier, if, for example, heat and hot water are supplied to the customer and monitoring of other commodities, such as energy and gas, is provided at the same time. This took place in several buildings in the Pilsen region. Since January 2020, the monitoring devices of energy consumption have been installed in some kindergartens in the city of Pilsen.

Case Study
SSE Holding:
Educating our Customers on Energy Efficiency

With the redesign of its website in 2016, SSE, a member company of the EPH Group, launched an online programme: Advice and tips for household savings, providing our customers with easy-to-gather advice on energy-saving practices. Our primary motivation was to offer our customers an understandable advice on energy savings, which is currently crucial for Slovak households due to rising prices of goods and services. We are actively reaching out to our current and potential customers through targeted media communication by using the influence of Facebook and Youtube social media. Due to the consumers' interest in the topic of household savings, we have been able to increase the number of visitors of website www.sse.sk/rady in the long term.

The yearly increase of 55% in traffic in the website section focused on sustainable household practices indicates that the programme has been successful in its pursuit of raising awareness about energy efficiency. In 2020, we plan to add more useful tips to this subpage, and we are determined to continue to educate Slovak households on their way to energy efficiency.

Development of Communities

EPH recognizes the opportunity to partner with communities as an opportunity for mutual growth. Through EPH Foundation, we act as proactive players in promoting number of initiatives ranging from university education up to supporting local municipalities with the common goal of promoting justice and building accountable and inclusive institutions.

Community involvement and selected social initiatives

It is important for EPH, as a key stakeholder, to support and develop the area we operate in. We believe that children are our future and that it is crucial to dedicate special effort and resources to their education, in our case, in the area of energy efficiency.

Case Study
SSE Holding:
Educating Children and Communities

Further expanding our work in education on energy efficiency to younger generations, our students' competition on energy efficiency reaches 100 schools annually increasing interest of thousands of students in sustainable practices. In 2019 we launched an educational project for children in kindergardens and elementary schools where an interactive friend "Šťukes" teaches them energy-saving practices.

Hoping to help schools in their educational activities, we prepared entertaining teaching materials which include brochures with various tasks, five educational videos and a series of educational games. Within this activity, the children were educated in efficient lighting, heating, cooking, showering and working with electrical appliances under the guidance of their teachers. The popularity of the competition is confirmed by 4,700 visits on web page www.sse.sk/stukes, while the year-on-year increase in the traffic reaches 28%. With over 2,400 views, videos on the SSE YouTube channel are also showing a growing trend. Complemented by a series of Youtube videos, our educational programmes have established themselves as one of the most influential educational activities in the field of energy in Slovakia.

Case Study
SSE Holding:
Engaging with our Communities in Slovakia

The cooperation between SSE and Zázrivá Station, a rescue centre for injured animals, has a long history and exceeds the traditional donor-recipient relationship restricted to financial assistance. EPH's professionals regularly come to support technical works which help to prevent deaths and serious injuries of birds on power distribution grids.

Equally important among our community relationships is the 8-year-long partnership with the Calvary Fund, an organisation dedicated to the restoration of a complex of buildings in Calvary which is commonly listed among most significant sacral monuments in Slovakia. We joined efforts with Calvary to set up an electrical illumination of the complex and save the UNESCO monument from deterioration. As a result, the number of visitors more than tripled reaching over 90,000 in 2019.

In 2019, the SSE Holding group organised several charitable collections for St. Elisabeth Caritas in Zvolen, and also within the SSE Holding Christmas market it collected EUR 6,000 for the Angel Wings Foundation, which helps the sick, disabled and people in difficult life situations.

Finally, following up on a series of charitable collections, we made a strategic decision to streamline our efforts and established a strong partnership with a civic association the Light of Hope. This partnership gives us the opportunity to contribute on a regular basis and in the long term to effective assistance for children suffering from cancer and their families.

United Energy:
Making a Home for a Falcon Family

After installation of a special booth on its chimney in 2014, the power station Komořany has become a home for a couple of falcons. In the past six years, the protected predators managed to enlarge their family by eighteen young birds, who were all born on the Komořany chimney. As recorded by ornithologists monitoring this falcon family, the three youngest members were born in 2019.

We also take our part in preserving the natural and cultural heritage for the future generations of the countries we operate in.

EPH Foundation and donations from our subsidiaries

The EPH Foundation was established at the end of 2014 and is a main facilitator of all our activities that are related to grants, charity and supporting social initiatives or community development programmes. **EPIF Group is the founder and primary benefactor of the EPH Foundation**.

The foundation was established mainly to support:

- development and protection of spiritual values, realization and protection of human rights or other humanitarian goals;
- protection of the environment;
- preservation of natural values;
- promotion and protection of people's health;
- protection of children and youth and their rights;
- development of education, humanitarian aid for an individual or a group of persons in a life-threatening situations or in need of urgent assistance in the event of natural disasters.

In 2019, the EPH Foundation participated in a total of 775 projects, through which EUR 1,659,049 in total was contributed. Altogether, EUR 842 thousand was distributed among grant programs described in the following chart. Additionally, the EPH Foundation creates partnerships with organizations whose goals and outputs contribute to the Foundation's objectives. In total, EUR 816 thousand was provided to partnership programs this year.

Besides the partnering projects with other organizations of similar focus, the highest amount spent, EUR 169 thousand, was again in the program „Municipality", established for further development and protection of cultural values. A program with the second-highest amount spent was „Foothold", aimed at organizations and social services supporting disadvantaged individuals, such as non-state children's homes, NGOs, civic associations, etc. The amount distributed by the Foundation on this project was EUR 150 thousand.

In total, during 2019 the EPH Foundation participated in and funded 775 projects, providing overall support of EUR 1.659 million.

Name of the programme	Areas covered	Support in EUR	Number of projects
To participate Zúčastniť sa	We support pupils and students participating in competitions and help them in their talent development.	50,000	30
Remember Pamätaj	The programme focuses on restoration and revitalization of cultural monuments, historical buildings or areas.	60,000	14
Sport within reach Sport na dosah	Through this programme, we support young talents with difficult access to sports due to an unfavorable health or social situation.	60,000	36
Foothold Oporný bod	The programme focuses on supporting local organizations or social services helping people in difficult life situations.	150,000	42
Real life Zo života	The goal of this programme is to support organizations and services focusing on hospice and palliative care.	77,330	15
Support of individuals – APPA Podpora jednotlivců – APPA	The programme was carried out by the Association for Assistance to the Disabled ("APPA") in cooperation with the EPH Foundation with the aim of support disabled individuals in rehabilitation and purchase of new equipment.	40,000	43
Support of individuals – charities Podpora jednotlivců – charity	In cooperation with Slovakia catholic charity, this programme provides material or food support for those in need.	110,000	365
Naturally Na prírodno	We support projects in the area of nature conservation and its protection.	50,000	26
In my area V mojom okolí	Our active employees use funds in this programme to finance the development of their communities in various ways.	60,000	52
Energy that helps Energia, ktorá PomáHa	After the successful programme "In my are" we widen its scope for another EPH companies.	15,760	20
Municipality Municipality	Through these projects, we directly contribute to the development of the municipalities in which we operate.	169,700	53
Total		**842,790**	**696**

Table 33 EPH Foundation programme allocation in 2019.

The EPH Foundation supports public benefit projects under open grant programmes and outside the grant schemes in 6 areas:

- Education and Innovation
- Culture
- Health and Sport
- Disadvantaged groups
- Environment
- Regional development

Area of support	Support in EUR	Number of projects
Education and Innovation	232,230	27
Culture	93,143	11
Health and sport	162,110	16
Disadvantaged groups	270,781	20
Regional development	42,995	2
Environment	15,000	3
Total	**816,259**	**79**

Table 34 Areas supported by partner projects in 2019.

As usual, we picked three interesting projects for 2019 from different areas →

Case Study

Restoring Rare Pieces of Technology and Remembering our History

The main feature of this project was the unique cooperation of restorers, students, volunteers and civic activists in the **preservation and restoration of a historical monument** – a steam boiler with preserved parts of the heating system of Jewish ritual baths, which are part of the world cultural heritage. The project was carried out in cooperation with Vita in suburbium, o. z.

Our aim was to connect the work of experts with the activities of volunteers and youth. We want to help them to understand the importance of the **specific historical value** of not only the monument itself, but also the tradition. We are part of the process of developing cultural, social and tourist point of Bardejov city, Jewish suburbia, the most important locality of Jewish cultural heritage in Slovakia.

Special emphasis was placed on **experiential education** of young people in connection with restoration and stabilization work. At the same time, repeated tours of the Jewish ritual buildings took place, during which students (including visitors) were introduced to the goals of the project. We consider the current generation of young people to be the bearers of the message that the Jewish cultural heritage does not only belong to the Jewish community, but forms part of our common cultural heritage.

Case Study

Improving the Quality of Life of Hospice Patients

The non-profit organization RAFAEL dom n.o. operates a hospice with a capacity of 14 beds. Hospice patients in the terminal stage need adequate provision of medicines, medical supplies and devices. Unfortunately, funds from health insurance companies are unable to cover all the costs of hospice care.

Through this project, the EPH Foundation contributed to improving the quality of life of hospice patients. During the period from June to September, the organization managed to secure sufficient amount of **medicines and medical supplies** necessary for the hospice care. Moreover, a new bio lamp Zepter Bioptron Pro 1 with a nano-filter stand was purchased, enabling better treatment of inflammation, wounds, skin lesions and other diseases.

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

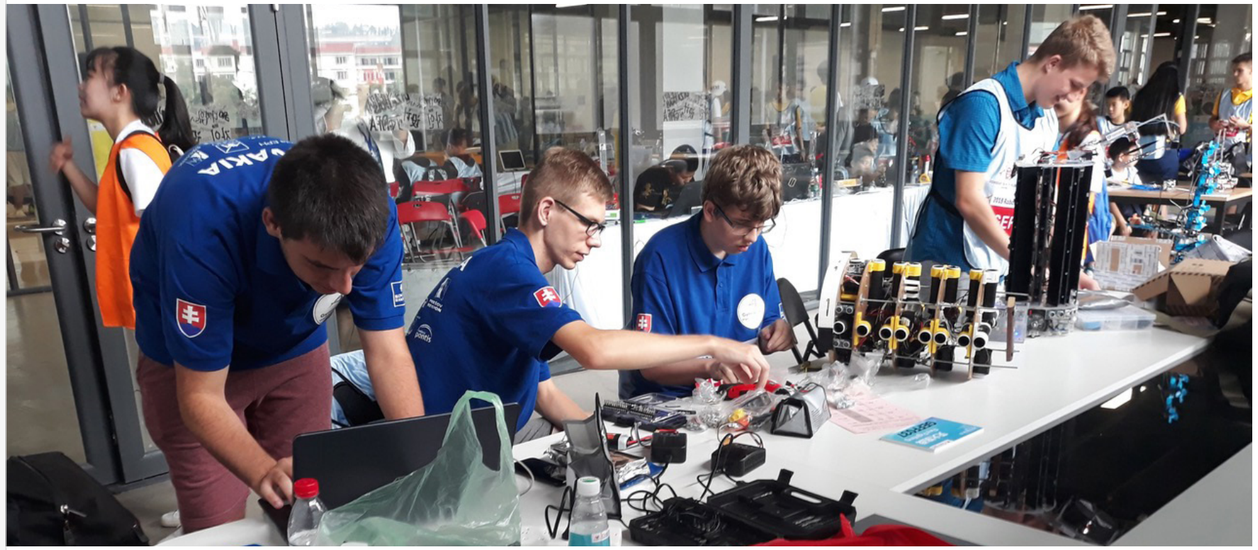
Case Study

International Competition

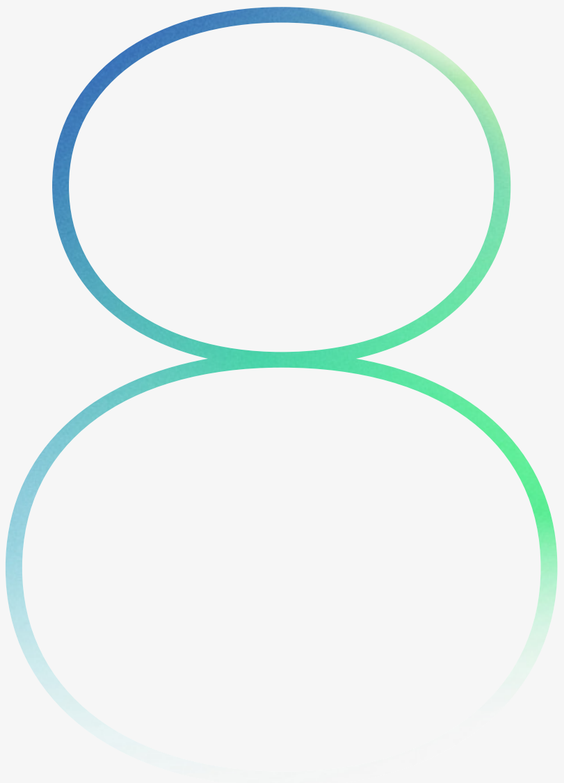
RoboRAVE in China

The Association for Youth, Science and Technology participated in the RoboRAVE Slovakia 2018 competition in Žilina, where their team won the Fire Fighting autonomous robot category and also a nomination for the international round. The 2019 event was held in China and hosted 1,700 competitors from 15 countries aged 8 to 18. The AVAMET team won 5th place out of a total of 36 teams.

By participating in this competition, students gain a wide range of experience, knowledge and technical skills, and have a unique opportunity to test **new technologies** and methods.



Assurance



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Report of Factual Findings

Board of Directors
Energetický a průmyslový holding, a.s.
Pařížská 130/26, 110 00
IC: 02 413 507
Prague 1

Based on the engagement letter dated 5 June 2020 we have been engaged to perform agreed upon procedures relating to below defined indicators included in the Energetický a průmyslový holding, a.s. group sustainability report for the year 2019 (hereinafter "the Report") to assist Board of Directors in indicators testing. Our engagement with Energetický a průmyslový holding, a.s (hereinafter "the Company", or in aggregate with its subsidiaries referred as "the Group") was conducted in accordance with the International Standards on Related Services applicable to agreed-upon procedures engagements ISRS 4400.

Our procedures were limited in nature and scope to those defined by you as those are most fitting to your current information needs, and as such may not necessarily identify all significant matters relating to the Company or detect any errors or deviations from the norm in the supporting materials. Responsibility for the sufficiency of the performed procedures rests exclusively with the recipients of this letter. The procedures that we have carried out are designed to satisfy the Company's information needs.

Agreed-Upon Procedures

We understand that you required us to carry out the procedures on below specified indicators for Czech Republic, Slovakia, Hungary and Great Britain or at group combined basis (further "Specified Indicators"):

- Total Energy consumption based on GRI standard 302-1, on page 265 of the Report,
- Total Quantity of water withdrawal based on GRI standard 303-1, on page 273 of the Report,
- Total Quantity of water discharged based on GRI standard 306-1, on page 273 of the Report,
- Total Registered injuries – Employees based on GRI standard 403-2 on page 280 of the Report.

Our procedures are defined as follows:

1. Recalculation of Specified Indicators as included in Group support source data file (test of mathematical accuracy of the data collected from individual entities and summarized in the Report).
2. Comparison of the methodology used for calculating the Specified Indicators presented in the Report to relevant guidance of GRI Standards: Core option as defined for such indicators including the GRI reporting limitations stated in the Report on pages 43, 47.
3. On sample basis, defined at minimum one company from Czech Republic, Slovakia, Hungary and Great Britain, compare that data provided by individual companies of the Group were properly transferred to the Group support source data file and compare the values reported by the companies to the underlying documentation.
4. For entities based in the Czech Republic except for those covered under procedure 3. (hereinafter "other CZ entities") compare that data provided by these companies were properly transferred to the Group support source data file.
5. For economic and financial data that consist of Total Sales, EBITDA and Total Assets as of 31 December 2019 and for the year then ended as presented on the pages 11, 36, 54, 113, 142 and 233 in the Report, marked with ("*") (hereinafter "Selected Financial data") reconcile to the Company`s consolidated financial statements as of 31 December 2019 that form part of the Company`s 2019 Annual Report.

Procedures and findings:

1. We recalculated data for the Specified Indicators. Calculation was provided to us by the Company in the form of Group support source data file. We recalculated amounts included in the file and then traced the amounts of Specified Indicators from Group support source data file to respected pages of the Report.

   We did not note any differences.

2. We compared the methodology used by the Group for calculation of Specified Indicators to relevant paragraph of GRI Standards: Core option methodology including the limitations disclosed in the Report on page 43, 47. The Group methodology is defined in the calculation questionnaire. Calculation questionnaire is provided to all companies of the Group.

   The methodology used by the Group for calculation of Specified Indicators, as included in the calculation questionnaire, is in line with the definitions of GRI Standards No. 302 -1, 303 – 1, 306 -1, 403 – 2, Core option including disclosed limitations in the Report on page 43 and 47.

3. Based on the table "EPH portfolio" included in the Report on the pages no. 44 - 46 and minimum scope requirement as described above, the following entities were selected for the testing: Eustream, a.s. (Slovakia), Budapesti Erõmû Zrt (Bert) (Hungary), Elektrárny Opatovice, a.s. (Czech Republic), Pražská teplárenská a.s. (Czech Republic) and Lynemouth (Great Britain) hereinafter "the Entities ".

   We compared data reported by the Entities to the Group in respect of Specified Indicators to the Group support source data file. We did not note any differences.

   We compared data relevant to Specified Indicators in questionnaires prepared by the Entities to the relevant supporting documentation available at the Entities. Relevant supporting documentation included protocols or minutes from measuring signed by relevant persons responsible for the measuring, invoices from energy or water supplier, details from HR system and reports from internal systems.

   We did not note any differences.

4. For other CZ entities we compared data reported by each individual entity to the Group with respect to Specified Indicators to the Group support source data file.

   We did not note any differences.

5. We reconciled Selected Financial data presented in the Report to Company`s consolidated financial statements as of 31 December 2019, as included in the 2019 Annual report, with no difference noted expect effect of rounding, if applicable.

* * *

Our engagement to apply agreed-upon procedures has been performed in accordance with the International Standard on Related Services (ISRS) 4400 – Engagements to Perform Agreed-Upon Procedures Regarding Financial Information as well as with the Code of Ethics for Professional Accountants issued the International Ethics Standards Board for Accountants. The sufficiency of the procedures is solely the responsibility of Energetický a průmyslový holding, a.s. Consequently, we make no representation regarding the sufficiency of the procedures either for the purpose for which our report is being prepared or for any other purpose.

Because the above procedures do not constitute either an audit or a review made in accordance with International Standards on Auditing or International Standards on Review Engagements, we do not express any assurance on financial statements of Energetický a průmyslový holding, a.s.

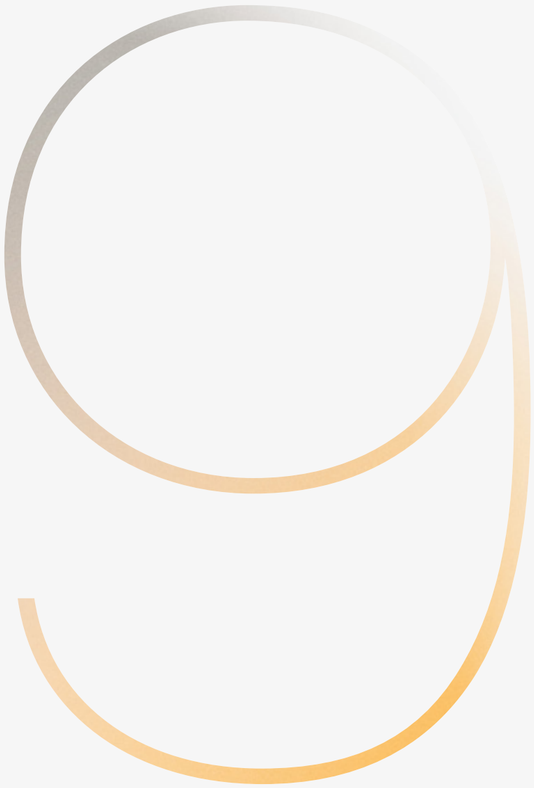
Had we performed additional procedures or had we performed an audit or review of the Company's statutory financial statements in accordance with International Standards on Auditing or International Standards on Review Engagements, other matters might have come to our attention that would have been reported to you.

Our report is solely for the purpose set forth in the first paragraph of this report. Our report is not to be used for any other purpose or to be distributed to any other parties. This report relates only to Specified Indicators defined above and does not extend to any financial statements of the Company.

Prague, 30 November 2020

KPMG Česká republika, s.r.o.

Annexes



List of Tables, Graphs and Figures

EBITDA Reconciliation to the Closest IFRS Measure

It must be noted that EBITDA is not a measure that is defined under IFRS. This measure is construed as determined by the Board of Directors and is presented to disclose additional information to measure the economic performance of EPH Group's business activities. This term should not be used as a substitute to net income, revenues or operating cash flows or any other measure as derived in accordance with IFRS. This non-IFRS measure should not be used in isolation. This measure may not be comparable to similarly titled measures used by other companies.

For the year ended 31 December 2019

In millions of EUR

	Gas Transmission	Gas and Power distribution	Gas Storage	Heat Infra	EPIF Other	Generation and Mining	Renewable Energy	EPPE Other	EPH Other	Total segments	Holding Entities	Inter-segment eliminations	Consolidated Financial Information
Profit from operations	**605**	**369**	**146**	**93**	**1**	**154**	**38**	**-**	**15**	**1,421**	**(2)**	**(1)**	**1,418**
Depreciation and amortisation	130	159	29	83	3	199	81	-	10	694	-	-	694
Negative goodwill	-	-	-	-	-	(31)	-	-	-	(31)	(30)	-	(61)
EBITDA	**735**	**528**	**175**	**176**	**4**	**322**	**119**	**-**	**25**	**2,084**	**(32)**	**(1)**	**2,051***

For the year ended 31 December 2018

In millions of EUR

	Gas Transmission	Gas and Power distribution	Gas Storage	Heat Infra	EPIF Other	Generation and Mining	Renewable Energy	EPPE Other	EPH Other	Total segments	Holding Entities	Inter-segment eliminations	Consolidated Financial Information
Profit from operations	**579**	**308**	**124**	**78**	**3**	**119**	**(3)**	**-**	**16**	**1,224**	**(26)**	**(8)**	**1,190**
Depreciation and amortisation	84	153	21	70	3	184	40	-	3	558	-	-	558
Negative goodwill	-	-	(5)	-	-	-	-	-	-	(5)	-	-	(5)
EBITDA	**663**	**461**	**140**	**148**	**6**	**303**	**37**	**-**	**19**	**1,777**	**(26)**	**(8)**	**1,743**

Table 35 Reconciliation is as follows.
Note: Differences in EBITDA of segments between EPH and EPIF sustainability report is only due to rounding.

(*) This data has received limited aasurance from the independent auditing firm KPMG.

Abbreviations

BBS	Behaviour Based Safety
BERT	Budapesti Erőmű Zrt.
CCGT	Combined Cycle Gas Turbines
CE	Central Europe: represents a region of the Czech Republic, Slovakia and Austria
CHP	Cogeneration
CHP	Combined Heat and Power plants
CO_2	Carbon dioxide
COP 21	Paris Climate Conference
CZK	Czech koruna
EBITDA	Earnings Before Interest, Taxes, Depreciation, and Amortization
EIA	Environmental Impact Assessment
EMIR	European Market Infrastructure Regulation
EMS	Environmental Management System
EMAS	EU Eco-Management and Audit Scheme
EOP	Elektrárny Opatovice a.s.
EPC	EP Commodities a.s.
EPC	EP Cargo a.s.
EPCP	EP Cargo Polska S.A.
EPET	EP Energy Trading a.s.
EPH	Energetický a průmyslový holding, a.s. (Parent company)
EPIF	EP Infrastructure a.s.
EPLI	EP Logistics International a.s.
EPNEI	EP New Energy Itali
EPPE	EP Power Europe a.s.
EPUKI	EP UK Investments
ENO	Nováky lignite power plant
EVO	Vojany coal power plant
ESG	Environment Social Governance
EU	European Union
EUR	Euro currency
FCL	Full Container Load
FSA	Feed Safety Assurance
GBP	British pound sterling
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	Global Reporting Initiative
H&S	Health and safety
HFCs	Hydrofluorocarbons
HR	Human resources
HSEQ	Health, Safety, Environment, and Quality
IFRS	International Financial Reporting Standards
IPCC	Intergovernmental Panel on Climate Change
ISRS 4400	International Standard on Related Services, Engagements to Perform Agreed-Upon Procedures Regarding Financial Information
ISO 14001	Certification of Environmental management system
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
LCL	Less Container Load
LEAG	Lausitz Energie Bergbau AG and Lausitz Energie Kraftwerke AG
LPL	Lynemouth Power Limited
M&A	Mergers and acquisitions
MAR	Market Abuse Regulation
MIBRAG	Mitteldeutsche Braunkohlengesellschaft mbH
MIFID	Markets in Financial Instruments Directive
MIRA	Macquarie Infrastructure and Real Assets
MO34	Mochovce nuclear power plant, unit 3 and unit 4
N_2O	Nitrous oxide
Nafta	NAFTA a.s.
NF_3	Nitrogen trifluoride
NG	Natural gas
NGOs	Non-governmental organisations
NO_x	Nitrogen oxide emissions
OCGT	Open-cycle gas turbine
O&M	Operation & Maintenance
OHSAS 18001	Occupational Health and Safety Management Systems (superseded by ISO 45001)
P2P	peer-to-peer
PFCs	Perfluorocarbons
PLTEP	Plzeňská Teplárenská a.s.
PV	Photovoltaic
REMIT	Wholesale Energy Market Integrity and Transparency
RES	Renewable Energy Sources
SAF	Solid alternative fuel
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SDGs	Sustainable development goals
SF_6	Sulphur hexafluoride
SNCR	Selective non-catalytic reduction
SO_2	Sulphur dioxide
SPH	Slovak Power Holding BV
SPP	Slovenský plynárenský priemysel, a.s.
SPP-D	SPP - distribúcia, 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
UE	United Energy a.s.
UK	United Kingdom
UGS	Underground gas storage
WWER	Water-water energetic reactor, light water cooled and moderated nuclear reactors

Units

#	number
%	percentage
p.p.	percentage point
bcm	billion cubic meters
CO_2-eq	carbon dioxide equivalent
GJ	gigajoule
GW	gigawatt
GWh	gigawatt-hour
k	thousand
km	kilometer
m	million
mcm	cubic meter
mil. tonnes	million tonnes
MW	megawatt
MWe	megawatt electrical
MWh	megawatt hour
MWth	megawatt thermal
PJ	petajoule
TJ	terajoule
tkm	tonne-kilometre
TWh	terawatt hour

EPIF, EPPE and EPLI Companies

EPIF Companies

Business segment: Gas Transmission

Eustream
Eustream owns and operates a 2,332 km long gas transit corridor in the Slovak Republic. Since 1972, eustream has secured the transmission of more than 2,500 bcm of natural gas across the area of Slovakia.[43] The company therefore successfully continues the tradition of the Slovak gas industry, which dates back over 160 years.

The eustream transmission system is an important energy link between the Russian Federation and the European Union. It is connected to the main transport routes in Ukraine, the Czech Republic, Austria and Hungary, and a new interconnection pipeline with Poland is under construction. Thanks to the continual modernization and upgrading of its infrastructure, the company ensures safe and reliable supply of ecological energy source to Central, Western and Southern Europe. eustream's business partners include major energy companies from both EU and non-EU member states. In 2019, we transported 69 bcm of natural gas[44], which is 16% more than in the previous year.

Business segment: Gas and Power Distribution

Stredoslovenská energetika
Stredoslovenská energetika ("SSE") is a multi-commodity energy supplier in Slovakia with around 600,000 offtake points and in 2019 delivered almost 4.1 TWh of electricity and more than 51 mcm of natural gas. Besides supplying energy, it also offers comprehensive solutions for improving energy efficiency, optimising demand and energy management.

Through its subsidiary company Stredoslovenská distribučná ("SSD"), SSE is the second largest regional electricity distribution company in Slovakia. It owns and operates an electricity distribution network with a total length of nearly 34,000 km and serves approximately 760,000 delivery points in Central Slovakia.

SSE also owns and operates a small number of generation assets with a total installed capacity of 63 MWe consisting of solar power plants with an aggregate capacity of 10 MWe, small hydropower plants with an aggregate capacity of 3 MWe and a 50 MWe gas turbine dedicated to the sale of system services to the Slovak TSO Slovenská elektrizačná prenosová sústava, a.s.

43 To show context, natural gas consumption of European Union in 2019 was 482 bcm (Source: EU Natural Gas Q4 2019 Report, 2020). From 1972 eustream transported more than 5 times as much.
44 For comparison, in 2019, the Czech Republic consumed 8.5 bcm of gas (Source: ERO. The Fourth Quarterly Report on the Operation of Czech Gas System 2019). Eustream thus in 2019 transported 8 times more than the yearly consumption of the Czech Republic.

SPP - distribúcia
SPP - distribúcia ("SPP-D") is the owner and operator of a gas distribution network, which accounts for approximately 98% of the volumes distributed in the territory of the Slovak Republic. The company is responsible for the reliable, safe and efficient distribution of natural gas from transmission networks through gas distribution systems to end customers, and also for securing connection to the distribution network and for meter-readings of consumed natural gas.

The total length of pipelines on all pressure levels operated by SPP - distribúcia is now 33,323 km. Over 94% of all inhabitants of the Slovak Republic have access to natural gas, making Slovakia the second in Europe in terms of gas network density. SPP - distribúcia is the Slovak leader in natural gas distribution delivering its services to 28 gas suppliers that utilize SPP-D network to deliver gas to over 1.5 million customers connected to the gas distribution system in the whole of Slovakia.

The technical safety and reliability of supplies and, at the same time, cost-effective distribution of natural gas, represent the pillar of the core business activities of SPP-D. Therefore, the company is continuously focused on optimising its internal processes and individual activities with emphasis put on maintaining the safety and reliability of the gas distribution network.

EP Energy Trading
EP Energy Trading ("EPET") is one of the leading suppliers of electricity, natural gas and related services to final customers in the Czech Republic and the Slovak Republic. EPET's core function is to use synergies with EPH Group's other segments to cover the entire energy value chain. Among other things, EPET buys power generated by EPH Group's Heat Infra segment and sells it to the wholesale market while also supplying the energy to the end customers. Currently, the company supplies over 66,000 offtake points.

An advantage of EP Energy Trading is the access to power plants from the EP Energy group such as Elektrárny Opatovice, Plzeňská Teplárenská and United Energy. Thanks to this, the company is a stable partner for its customers, offering certainty of keeping contract obligations. In 2019, the company supplied its end customers in the Czech Republic and Slovakia with almost 2.9 TWh of electricity and more than 206 mcm of natural gas[45].

45 Over 2.1 TWh of natural gas.

The company has been in the market for 15 years. Throughout that time, due to its competitive prices, professional approach, flexibility and customer focus, EPET has established itself as an important supplier of energies on the Czech market.

Business segment: Heat Infra

Pražská teplárenská
Pražská teplárenská is one of the largest district heating companies in the Czech Republic in terms of the number of customers. The company's activities are concentrated in the area of Prague and surrounding areas. Pražská teplárenská covers almost 25% of the market for thermal energy in Prague and delivers heat to more than 230,000 households, numerous office buildings, industrial companies, hundreds of schools and health facilities and other entities. Pražská teplárenská operates in total seven heat sources with total installed thermal capacity of 1,046 MWth.

A major source of heat for the Prague Heat Distribution System ("PTS") is Elektrárna Mělník I ("EMĚ I") – operated by Energotrans, a subsidiary of ČEZ, supplying c. 90% of the total heat supply to PTS. Sources operated by Pražská teplárenská – primarily heating plant Malešice, heating plant Michle and heating plant Krč are in place to cover winter demand peaks. Furthermore, the heat is also sourced from a local waste-to-energy plant (ZEVO Malešice).

Elektrárny Opatovice
Elektrárny Opatovice ("EOP") supplies thermal energy for more than 60,000 supply points in the Hradec Králové – Pardubice – Chrudim area of the Czech Republic. Among their customers are several hundred organisations such as industrial enterprises and administrative, commercial, sport, health and cultural facilities. Elektrárny Opatovice's heat supply system comprises approximately 319 km of heat supply networks.

Moreover, EOP has six co-generation boilers that produced altogether 943 GWh of net power in 2019, which is approximately one third of the 2019 demand in the Hradec Králové region[46]. The power station also has the capacity to supply balancing power, which helps to balance supply and demand in the Czech electricity, and it also ensures the possibility of island operation in the case of the collapse of the whole electricity grid.

Plzeňská teplárenská
Plzeňská teplárenská is a leading heat and electricity producer in western Bohemia in the Czech Republic. It operates a combined heat and power plant running in a co-generation mode with a total achievable thermal capacity of 814 MWth and a total achievable electrical capacity of 274 MWe. Plzeňská teplárenská operates a generation block that offers an opportunity to use coal and biomass together, which results in further ecologisation of the operation. In addition, the company operates a waste to energy plant ZEVO Chotíkov that incinerates communal waste and efficiently generates heat and electricity. In total, Plzeňská teplárenská supplies heat to more than 50,000 customers.

One of the company's unit serves as back-up one with an achievable output of 20 MWe. It provides ancillary services for the operator of the Czech electricity transmission system, ČEPS, supporting the operation of the Czech transmission system. The back-up unit ensures the stability and security of electricity supply for final customers and its technical design supports very quick reactions in emergencies related to the collapse and recovery of the electricity grid.

United Energy
United Energy („UE") is an important heat producer in the northern Bohemian region of the Czech Republic. It supplies heat to 34,000 supply points in Most and Litvínov, and also to industrial enterprises, schools, healthcare facilities, offices and various institutions. Part of the thermal energy is sold to the networks of third-party heat distributors. The total length of United Energy's heat distribution network consists of more than 140 km of distribution pipes.

United Energy operates the Komořany CHP plant near Most, which burns indigenous brown coal in 10 modern fluidised-bed boilers meeting all environmental and public health regulations. In 2019, it supplied 1.4 PJ of thermal energy. The Komořany CHP plant also generates electricity in eight turbine generator sets with an aggregate installed electrical capacity of 239 MWe.

46 Source: ERO. First to Fourth Quartal Reports on the Operation of the Electricity Grid 2019. Published in 2020.

Budapesti Erőmű
Budapesti Erőmű ("BERT") is a modern and leading heat and electricity producer in Budapest, Hungary with total heat and electricity capacity of 1,401 MWth and 396 MWe, respectively. BERT produces approximately 55% of the district heating in Budapest distributed by FÖTAV[47] and ~3% of total electricity demand in the country. BERT's basic objective is to generate energy from a less emission intensive energy source (natural gas), at the highest possible efficiency and with a minimum environmental impact, as well as steadily and reliably.

As a result of the technological modernisation and improved service quality, uninterrupted district heating at an increased comfort level is already ensured for almost half a million consumers living in 144,000 district heated homes. For strengthening Budapest's district heating assets and for satisfying the future energy demands, the company cooperates with its strategic partners and with the local municipalities.

EP Cargo
Rail transporter which is providing efficient shipping services to a wide range of customers. EP Cargo was licensed as a rail carrier in 2010. The company's objective is to offer cooperation in meeting the transportation needs of wide range of customers, including freight forwarders, carriers, manufacturing plants, as well as other companies. In 2019, the company transported more than 5 million tonnes of load.

EP Sourcing
EP Sourcing supplies more than 3 million tonnes of coal to companies United Energy, Plzeňská teplárenská and Elektrárna Opatovice.

Business segment: Gas Storage

EPH Group's Gas Storage Business consists of NAFTA, NAFTA Speicher, Pozagas and SPP Storage, which store natural gas under long-term contracts in underground storage ("UGS") facilities located in the Czech Republic, Slovakia and Germany.

The overall storage capacity is more than 5.7 bcm[48] and includes assets in strategic regions connected to key gas routes. In addition to its traditional assets in Slovakia, EPIF operated storage facilities in South-Eastern Bavaria acquired at the end of 2018 with capacity of almost 1.8 bcm. In 2019, we also continued to invest in operational security, storage technology modernisation, automation enhancement and utilisation of collected information to further optimise processes.

NAFTA
NAFTA is an international company with an extensive experience in underground gas storage and is a leading company in exploration and production of hydrocarbons. In addition, the company initiates research activities as well as projects focused on the storage of energy from renewable sources. NAFTA operates not only in Slovakia and the Czech Republic, but also in Germany, Austria and Ukraine.

In Slovakia, NAFTA operates a system of underground gas storage with a capacity of 2.6 bcm[49]. Working storage volume is a dynamic variable depending primarily on its mode of use by customers. The UGS facilities of NAFTA are connected to the Slovak distribution grid, transition system of eustream and Virtual Trading Point in Austria.

NAFTA Speicher
NAFTA Speicher owns and operates natural gas storage facilities in Germany close to the border with Austria in Wolfersberg, Inzenham and Breitbrunn-Eggstätt. The storage facilities of Nafta Speicher are directly connected to the Net Connect Germany Virtual Trading Point (NCG VTP) which is one of the most attractive gas trading hubs in Europe. The capacity of new assets is 1.8 bcm[50], representing 9% of the combined storage capacity in Germany. NAFTA Speicher is benefiting from NAFTA's 45-year-long experience in gas storage business.

Pozagas
POZAGAS is the second largest storage system operator in the Slovak Republic, with its technical operation being partially outsourced to NAFTA. Pozagas owns and operates an underground gas storage facility near the town of Malacky in Slovakia.

The company offers storage capacity service as well as other services on both a long-term and short-term basis. Storage capacity is of 0.7 bcm[51].

Since 1993, the company has earned an excellent record offering underground natural gas storage services. Working in a liberalised natural gas market, being strategically located in the proximity of Europe's main transport routes and the Virtual Trading Point, Austria, as well as owning direct connection to the hub's infrastructure, the company has grown into a flexible and reliable gas storage services provider operating in the region.

47 District heating operator in Budapest.
48 Over 61 TWh.
49 27.7 TWh.
50 19.9 TWh.
51 6.9 TWh.

SPP Storage
SPP Storage operates the Dolní Bojanovice underground gas storage facility in the Czech Republic; the UGS facility was developed in depleted oil&gas reservoirs and completed in 1999. Working gas capacity amounts to 0.7 bcm[52]. UGS Dolní Bojanovice is directly connected to the Slovak underground gas storage facility to the Brodské metering station (approximately 30 kilometres away), which is also connected to the Slovak gas transit network of eustream.

Renewable activities of EPIF

EPIF Group also undertakes certain other activities, primarily generating electricity from renewable sources in addition to those operated by the SSE and Plzeňská teplárenská. SSE owns and operates three solar power plants and holds a minority interest in another solar power plant and a majority interest in one wind farm in the Czech Republic. EPIF Group also operates two solar power plants and a biogas facility in Slovakia. In the segment of heating, majority of production comes from Plzeňská teplárenská due to its biomass combustion.

Powersun
POWERSUN operates photovoltaic power plants in Hustopeče (1 MWe) and Kyjov (2 MWe).

Triskata
Triskata operates a 1 MWe photovoltaic plant in Strážske (Slovakia).

VTE Pchery
VTE Pchery operates wind power plants near the village of Pchery in the Kladno area, with an installed capacity of 2 × 3 MWe. Thanks to these parameters, the Pchery wind power plant is a facility with the highest unit capacity in the Czech Republic. The power plant was put into operation in April 2008, with capital expenditure totalling EUR 7.5 million.

Alternative Energy
The biogas plant in Bošany, Slovakia is a facility using the latest technology in energy exploitation of biodegradable waste. The result of the process is the production of electricity and thermal energy production and certified fertilizers. Net installed capacity is 3 MWe.

Arisun
ARISUN operates a 1 MWe photovoltaic plant in Strážske (Slovakia).

Greeninvest Energy[53]
Greeninvest Energy operates a 5.2 MW photovoltaic plant in Ladná in the Břeclav area.

52 6.9 TWh.

53 As EPIF is not majority owner of the company, this report does not include the operational data from the Greeninvest.

EPPE Companies

Business segment: Generation & Mining

Eggborough Power Ltd
Eggborough Power is a former 1,960 MW coal-fired plant situated on the River Aire in North Yorkshire, England, which was closed in March 2018. In the same year, EPUKI gained development consent to construct a 2,500 MW Combined Cycle Gas Turbine (CCGT) Power Station at the site of the former Eggborough Coal Power Station.

If the project is concluded as feasible, the new power station would have a gross output capacity of up to 2,500 MWs and be capable of supplying the electricity needs of around 2 million homes. A new underground gas pipeline would be constructed to the north of the power station in order to connect it to the national gas transmission system. There would also be an electrical connection to the existing substation located at the former coal-fired power station site and water supply connections. Once constructed and operational, the new gas-fired power station would ensure that the Eggborough Power Station site continues to make an important contribution to the security of national energy supplies and the local economy.

EP Ballylumford Limited
This natural-gas-fired power station is the largest power station in Northern Ireland consisting of two Combined Cycle Gas Turbines (CCGT) and two Open Cycle Gas Turbines (OCGT), which was built on a brown field site and began full commercial operation in 2003. Highly flexible CCGTs are able to operate in several different modes (open cycle, CCGT) and have the lowest minimum generation for CCGT in the Irish market. Such attributes are ideal for a system with high levels of wind where flexibility and fast response is required. The OCGTs provide required fast response units, as well as much needed capacity. The combination of fast, flexible and diverse thermal assets, jointly with battery storage potential, makes the Ballylumford portfolio attractive and ideally suited to the future market in Ireland. The potential to install battery storage at scale (30 MW–100 MW) further enhances and diversifies the portfolio. Significant investment has been made in recent years, further enhancing Ballylumford's competitive position within the Irish market. The power plant's capacity is 688 MW and together with EP Kilroot, it secures over 60% of the region's electricity supply from diverse mix of assets.

EP Commodities, a.s.
EP Commodities (or "EPC") specializes in trading of energy commodities, transit and storage capacities. The company deals with transactions in natural gas, power, emissions allowances, coal and structural products like spreads across Europe. EPC focuses on countries where EPH Group has its assets or where liquidity enables efficient trading. Besides physical trading, it realizes financial hedging of commodities as well as sourcing portfolio of end-users in EPH Group companies.

EP Kilroot Limited
Kilroot power station is a coal and oil power station on the east coast of Northern Ireland, UK, commissioned in 1981. The station has installed capacity 513 MW in dual-fired boilers (coal and heavy fuel oil), along with 142 MW in four Open Cycle Gas Turbines (OCGT) and 10 MW of battery energy storage from the Kilroot Advancion Energy Storage Array, which is the only grid scale operational battery storage unit in Ireland with a potential to install a further 30–100 MW of battery storage. Together with EP Ballylumford, it secures over 60% of Northern Ireland's electricity demand.

EP Langage Limited
Langage is a CCGT (Combined Cycle Gas Turbine) power station located near Plymouth, Devon in South West England. Construction of the site started in 2008 and was commissioned in 2010. Total site capacity is 905 MW. High pressure steam system enables market leading efficiency (51.5%), flexible design is capable of two-shift operation and minimum load, enhancing the plant's capabilities. The combined cycle provides increased flexibility to National Grid for support and system services helping grid stability.

EP Produzione S.p.A.
Operates a total generation capacity exceeding 3,900 MW through five gas-fired power plants and one coal-fired power plant in Italy, making it one of the most relevant power generation players in the country. EP Produzione efficient and high-performance power stations are managed according to the highest environmental, safety and reliability standards.

EP Produzione includes hard coal power plant Fiume Santo on the Sardinia island with 599 MW of installed capacity, which is considered one of the most important industrial facilities in the north-western Sardinia. Other five gas power plants are located mainly in the north of Italy – Livorno Ferraris, Ostiglia, Tavazzano and Montanaso, Trapani and Scandale power plant. The latter is managed by Ergosud, a joint venture between EPH and A2A.

EP SHB Limited
South Humber Bank is a gas-fired power station located near Stallingborough, England. Total installed capacity of the power plant is 1,365 MW. The site consists of two separately operated units with a flexible design capable of two-shift operation with minimum load enhancing the flexibility of the plant, similarly to Langage power plant.

Gazel Energie S.A.S.
Gazel Energie (former Uniper France) is the third largest energy producer in France with a diversified portfolio of coal, gas and biomass fuelled power plants and wind and solar farms with a total production capacity of 2,263 MW. Gazel Energie is also the fourth largest French provider of electricity and gas for 11,500 supply points. In accordance with the French Energy Transition Act, the company has already invested more than € 1.2 billion in its assets and since 2008 has reduced CO_2-eq emissions by more than half, representing 8% of France's overall decarbonisation.

Helmstedter Revier GmbH
Helmstedter Revier operates the Buschhaus lignite-fired power station and the Schöningen surface mine in Lower Saxony in Germany. The mining history of the Helmstedter Revier ended on August 30, 2016 after more than 140 years. The extensive recultivation work in the former Schöningen opencast mine began in September 2016. The Schöningen open-cast mine was the last open-cast mine of Helmstedter Revier GmbH supplying lignite for the Buschhaus power plant. On 1 October 2016, the Buschhaus power plant of the HSR with a net output of 352 MW was switched to security readiness for four years due to the decision of the federal government in order to implement the new Energy Industry Act. The power plant is no longer used by the HSR on the market.

Kraftwerk Mehrum GmbH
Kraftwerk Mehrum GmbH operates a coal-fired power plant with a net installed capacity of 690 MW. Mehrum is located between the cities of Hannover and Braunschweig, Germany, north of the Mittelland Canal. The electrical output is enough to supply 700,000 households or about 1 million people with electrical energy, which corresponds to a supply area of the Hannover region. The operating range of the power plant is between 150 MW and 690 MW of net capacity. Due to the very flexible design, the system can adapt the power production to the individual needs of the power grid and meet the increasingly fluctuating load requirements due to the renewable energies.

The system is characterized by relatively high availability rates and high reliability for the shareholders and for the load dispatcher.

In 1979, the coal-fired power station with a net output of initially 654 MW was put into operation. In 2003, extensive efficiency-enhancing measures were implemented (retrofit measure at the turbine, heat recovery in the flue gas system, optimization of cooling tower installations), which led to an increase in net output of 36 MW to 690 MW today and an increase in efficiency to around 40%. Thanks to these measures, around 80,000 tonnes of hard coal and around 180,000 tonness of CO_2-eq are saved each year in the environmental balance with comparable output. Currently, around 120 employees ensure safe operations of the power plant.

Mitteldeutsche Braunkohlengesellschaft mbH (MIBRAG)
In 1994, Mitteldeutsche Braunkohlengesellschaft (MIBRAG) was the first East German lignite company to be privatized. Activities of the company have been focused in the south of Saxony-Anhalt – the company's headquarters are located at the city of Zeitz – and in the region south of Leipzig. MIBRAG is the sole shareholder of companies Helmsteder Revier (HSR), GALA-MIBRAG-Service, Bohr-und Brunnenbau, MIBRAG Consulting International and MIBRAG Neue Energie. The company holds shares in three more entities offering a wide range of services from energy generation, landscaping to civil engineering, disposal, mine engineering services and the operation of a wind farm at the border of United Schleenhain mine in Saxony.

For more than two decades MIBRAG has made a stable contribution to the security of supply in the energy and heat sector. A total up to 19 million tonnes of raw lignite are mined at both mines in Profen (Saxony-Anhalt) and United Schleenhain (Saxony) each year. The modern Lippendorf (Saxony) and Schkopau (Saxony-Anhalt) power plants are major customers of the domestic fuel. The company also includes dust plant at Deuben and industrial power plants at Deuben and Wählitz. MIBRAG's industrial power plants – among other things – supply district heating, hot water and steam to end customers. Lignite fuel dust is further processed in the cement industry.

MIBRAG has established as reliable partner and stabilizing factor in the economic life of Central Germany. A total share of about 65% of delivery contracts covering an average annual order volume of EUR 180m are concluded with the companies

in the Central German region alone. On this basis, mining helps to secure jobs also outside the company. Furthermore, the company is strongly committed to local alliances for jobs and for regional economic development. The MIBRAG group currently employs 2,700 people, including nearly 160 trainees.

Tynagh Energy Limited
Tynagh is a 384 MW Combined Cycle Gas Turbine (CCGT) in east County Galway, the Republic of Ireland. The power station is the only independent CCGT plant in the Irish market and provides a flexible daily electricity product to the Irish wholesale electricity market since 2006. It is a major player in securing electricity supply to Galway and the west of Ireland with 9% of the country's electricity requirements supplied directly to the national grid. The CCGT plant was developed on the former disused Tynagh Mines site, being a major contributor to the local economy while minimising the environmental impact.

Business segment: Renewables

Biomasse Crotone S.p.A.
The biomass-fired power plant of Crotone, owned and operated by Biomasse Crotone, a company acquired by EP New Energy Italia in December 2017, is situated in the central-eastern part of Calabria region. Crotone is a biomass-fired power plant with a total capacity of 27 MW. The plant is mainly fuelled with biomass made of wood chips, derived from forest maintenance and agro-food residuals coming from local and national markets. The yearly biomass consumption is about 300,000 tonnes, and the total annual production at full capacity is about 220 GWh.

Biomasse Italia S.p.A.
The biomass-fired power plant of Strongoli, owned and operated by Biomasse Italia, a company acquired by EP New Energy Italia in December 2017, is situated in the central-eastern part of Calabria region. The 46 MW plant is mainly fuelled with biomass made of wood chips, derived from forest maintenance and agro-food residuals coming from local and national markets. The yearly biomass consumption is about 400,000 tonnes, and the total annual production at full capacity is about 360 GWh.

Fusine Energia S.r.l.
Fusine Energia was created in 2006 to obtain the authorization for the construction and operation of a new biomass power plant. The site is located in the province of Sondrio, Italy, and operates at full capacity since June 2011. The 6 MW plant is fuelled with biomass made of wood chips originating mainly from neighbouring regions, which has a positive impact on local economy. The yearly biomass consumption is about 82,000 tonnes and the total annual production of electricity reaches 41 GWh, the equivalent of powering more than 11,000 households.

Lynemouth Power Limited
Lynemouth Power Station (or "LPL") is at the forefront of the UK's energy market as one of the most ambitious renewable energy investment projects in the UK that over recent years has been undertaken. The plant has undergone a major conversion programme that has seen the former coal-fired power station convert to full biomass electricity generation. The conversion project has meant significant collaboration amongst LPL employees, contractor partners, Government agencies and EPH. Now fully handed over to LPL, the plant has 407 MW of net installed capacity, powering approximately 450,000 homes.

Lynemouth Power Station uses sustainably sourced, renewable wood pellets, primarily from the USA and Canada, which are transported to the UK by sea. Carbon emissions arising from transportation are included in the calculation made by LPL to report against current sustainability criteria under the CfD. It is one of the largest sites of its kind in Europe and has, since converting to biomass, reduced nitrous oxide emissions by two-thirds and more than halved dust emissions. Sulphurous oxide emissions have also been reduced by more than 95% to minimal compared to previous coal generation.

Process safety is a crucial part of everyday operations to protect all personnel and those visiting the site. Lynemouth Power Station's exceptional safety record is testament to the robust systems and procedures in place, in particular, those implemented during the plant's conversion to biomass. LPL complies with and adheres to strict industry legislation, as well as health and safety codes, to ensure the highest operational standards at all times.

Share participations of EPPE

Ergosud S.p.A
Ergosud, which is jointly owned by EPH and A2A gencogas S.p.A, built and manages the thermoelectric plant in Scandale, Italy. The plant belongs to the most advanced and modern electricity generation powerplants, thanks to the use of the innovative combined cycle technology. It adopts the most advanced construction technologies in order to minimize the environmental impact and maximize the thermal efficiency (which reaches 56.67%, one of the best values achievable with this type of system). By combining two thermodynamic cycles (the Brayton cycle and the Rankine cycle), the combined cycle allows to optimize the exploitation of the energy contained in the fuel (natural gas).

The Scandale plant has set environmental protection and the health and safety of workers as its primary objective. Adopting the most advanced technical solutions, the plant has been achieving one of the lowest emission limits in the sector, proving the combined cycle technology to be one of the most efficient ways of producing electricity. In addition, the plant is equipped with a "zero liquid discharge" system that allows to reuse all wastewater, including part of rainwater, limiting the use of water from the outside to a minimum.

The Scandale plant, prepared for cogeneration, consists of two equal, independent modules with a total capacity of 834 MW (417 MW per module).

LEAG
LEAG as a brand stands jointly for two key operating companies and their subsidiaries: Lausitz Energie Bergbau AG and Lausitz Energie Kraftwerke AG. The main area of operation is the Lusatian mining district – the second largest mining district in Germany.

LEAG is the largest power plant operator in eastern Germany, and also among the biggest private employers in this area. The portfolio comprises mining, refining and generating electricity and heat from lignite. LEAG operates four mines (Jänschwalde, Welzow-Süd, Nochten and Reichwalde), four power plants (Jänschwalde, Lippendorf, Schwarze Pumpe and Boxberg) and one refining plant (Schwarze Pumpe).

Additionally, LEAG is expanding their business areas. Therefore, the focus is set on future-oriented energy technologies in the fields of renewable energy, electricity storage and cross-sectoral cooperation as well as energy and industrial services for the market. With the BigBattery Lausitz, a power storage facility is being established at the Schwarze Pumpe site that is unique in Europe. Continuous operations start in summer 2020. With the virtual power plants “LEAG energy cubes” there is the opportunity of connecting assets of different sizes and functions to agile, virtual units for the electricity market. In addition, there are the services of the subsidiaries of Lausitz Energie Bergbau AG. Transport- und Speditionsgesellschaft Schwarze Pumpe mbH (TSS GmbH), is a full-service provider for logistics, material and warehouse management.

Slovenské elektrárne, a.s.
Slovenské elektrárne (or “SE”) is the largest electricity producer in Slovakia, operating two nuclear, two thermal, 31 hydroelectric and two photovoltaic power plants, generating over 70% of the country’s total electricity production. With gross capacity of 4,081 MWe, it is one of the largest electricity producers in Central and Eastern Europe. Its unique portfolio enables it to produce up to 92.5% of electricity without greenhouse gases, avoiding 15 million tonness of carbon dioxide emissions every year.

SE primarily sells electricity on a fully liberalized wholesale electricity market, but the company is also the main supplier of support services in Slovakia. Through its affiliates, the company sells electricity, gas, heat and energy services to end customers in Slovakia, the Czech Republic and Poland. Its client portfolio also includes some of the largest industrial companies in the region.

EPLI Companies

EOP & HOKA, s.r.o.
EOP & HOKA provides road freight transport of loose materials in silo tanks and tipping semi-trailers. It has its own fleet of more than 100 wagons. Operating in the Czech Republic, Slovakia, Poland, Germany and Austria, the company handles bulk substrates with focus on operating coal mines, coal mining and operating of the rear fuel cycle of power plants including material solutions. The company also provides solutions for handling secondary energy products (EN450 fly ash, energy gypsum, slag...).

EP Cargo Deutschland GmbH
EP Cargo Deutschland is responsible for forwarding services within the framework of rail transports in Germany and also other EU countries. It specializes, among other things, in the transport of black and brown coal, energy gypsum, fly ash, energy byproducts, etc. It provides complex customer services, including transport optimization, delivery of suitable type of carriages for special transports, route planning, securing of the last mile, handling of relevant documents, etc.

EP Cargo Polska S.A.
The company deals with rail transport, rail forwarding and freight forwarding from ports at national and international level. It provides loading in the ports of Gdańsk, Gdynia, Szczecin, Swinoujscie, and also loading in national ports on the eastern border. EPCP specializes in the transport of brown and black coal, limestone and energy byproducts and offers complex transportation services for power plants and industrial plants in the Czech Republic, Germany and Poland. For customers, EPCP implements railway transport optimization projects, individual siding management and operation, special transportation of technical equipment, optimization of own siding operation, etc.

EP Intermodal a.s.
EP Intermodal is a company providing customized project solutions in the field of continental combined transport that subsequently puts into practice and ensures reliable functioning of the entire process. The main objective of the company is to analyze the current state of the European transport system and to focus on combined transport according to the partners’ requirements. The company offers independent and flexible service based on the knowledge and long-term experience in the area of development and sustainability of the intermodal transport network.

LOCON Logistik & Consulting AG
Locon Logistik & Consulting AG is a German railway company specialized in transporting goods, materials and containers as well as railway construction. The company has a portfolio of more than 250 cars and 30 locomotives, over 150 employees, including highly qualified professionals, and operates its own repair service. The company carries out shipments throughout Germany, both regular (e.g. from the German ports of Wilhelmshaven and Bremerhaven) and ad hoc shipments, including cross-border to Belgium, the Czech Republic, the Netherlands, Austria and Slovakia. The company operates its own terminal with reloading station for intermodal transports. Locon Logistik & Consulting AG has been specializing in rail construction projects for more than 17 years: from concept and planning, through the provision of technical equipment and personnel, to precise implementation (e.g. in the recent move of a steel bridge on two parallel rolling stocks).

LokoTrain, s.r.o.
A company providing training in the rail industry. It provides service work and education for carriers, railway operators and companies engaged in the repair, maintenance and modernization of railway infrastructure and other services related to railway issues. Within its own LokoPool, it offers locomotive rentals in the Czech Republic, Slovakia, Poland, Germany, Austria and Hungary. Within its own PersPool, it offers a possibility of renting a train drivers, carriage and wagon examiners and shunting masters in the Czech Republic, Slovakia and Poland. The company also offers counselling and consultations in railway transport, organizes trainings, seminars and conferences focused on the railway segment and provides proper training and courses for locomotive drivers and other necessary trainings about railway traffic and transport.

SPEDICA GROUP COMPANIES, s.r.o.
The SPEDICA Group is a holding company of RM LINES, Railsped, SPEDICA LOGISTIC, s.r.o. and SPEDICA, s.r.o. The group offers one-stop tailor-made logistics solutions including the following: Rail transportation supporting both European and Asian markets, Ocean freight transport services to and from all major seaports worldwide (FCL, LCL and breakbulk cargo, Eurasian rail container transport services, International and domestic full truck/rail car transports within the European Union, International and domestic parcel collection and delivery, Supply chain planning supported by multi-modal transport to optimize the given solution, Supply Chain Management according to client’s individual needs, Complex transport and logistics services, Rail transport and logistics operations certified by the Czech Rail Authorities to operate on both private rail spurs and also on the complete existing Czech rail infrastructure (National railway in the Czech Republic, Rail siding), Transport and freight insurance and control of transport assets to insure effective operations and services.

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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, Pages 43–46.

EPH and its business

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Electricity – Total**						
EU1	**EP Infrastructure**						
	Czech Republic	MW	1,031	1,031	868	–	0%
	Slovakia	MW	68	67	67	0	1%
	Hungary	MW	396	396	396	–	0%
	Total – EP Infrastructure	**MW**	**1,495**	**1,494**	**1,331**	**0**	**0%**
	EP Power Europe						
	France	MW	2,262	–	–	2,262	
	Germany	MW	1,147	1,147	1,147	–	0%
	UK	MW	4,025	4,637	4,625	(612)	(13%)
	Ireland	MW	384	–	–	384	
	Italy	MW	3,989	4,284	4,284	(294)	(7%)
	Total – EP Power Europe	**MW**	**11,807**	**10,067**	**10,056**	**1,740**	**17%**
	Total – EPH	**MW**	**13,302**	**11,561**	**11,387**	**1,741**	**15%**

EPH and its business

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Electricity – Conventional sources**						
EU1	**EP Infrastructure**						
	Czech Republic	MW	1,008	1,008	859	–	0%
	Slovakia	MW	50	50	50	–	0%
	Hungary	MW	396	396	396	–	0%
	Total – EP Infrastructure	**MW**	**1,454**	**1,454**	**1,305**	**–**	**0%**
	EP Power Europe						
	France	MW	2,018	–	–	2,018	
	Germany	MW	1,140	1,140	1,140	–	0%
	UK	MW	3,608	4,230	4,230	(622)	(15%)
	Ireland	MW	384	–	–	384	
	Italy	MW	3,907	4,207	4,207	(300)	(7%)
	Total – EP Power Europe	**MW**	**11,057**	**9,577**	**9,577**	**1,480**	**15%**
	Total – EPH	**MW**	**12,511**	**11,031**	**10, 881**	**1,480**	**13%**

Note: UK excludes Eggborough power plant (1,960 MW) from 2019 as it was decommissioned in 2018. This site was sold in February 2019.

EPH and its business

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Electricity – Renewable sources**						
EU1	**EP Infrastructure**						
	Czech Republic	MW	23	23	9	–	–
	Slovakia	MW	18	17	17	0	3%
	Germany	MW	–	–	–	–	
	Hungary	MW	–	–	–	–	
	Total – EP Infrastructure	**MW**	**40**	**40**	**26**	**0**	**1%**
	EP Power Europe						
	France	MW	244	–	–	244	
	Germany	MW	7	7	7	–	–
	UK	MW	417	407	395	10	2%
	Ireland	MW	–	–	–	–	
	Italy	MW	83	77	77	6	7%
	Total – EP Power Europe	**MW**	**751**	**491**	**479**	**260**	**53%**
	Total – EPH	**MW**	**791**	**531**	**506**	**260**	**49%**

Note: Lynemouth biomass conversion project was in progress from 2016. Production from biomass started in 2018.
Note: We excluded 3 MW capacity of Greeninvest from EPIF as these are not IFRS consolidated in both 2019 and 2018.

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Heat**						
EU1	**EP Infrastructure**						
	Czech Republic	MW	4,136	4,223	3,519	(87)	(2%)
	Hungary	MW	1,401	1,401	1,401	–	0%
	Total – EP Infrastructure	**MW**	**5,537**	**5,624**	**4,920**	**(87)**	**(2%)**
	EP Power Europe						
	Germany	MW	156	156	156	–	0%
	Total – EP Power Europe	**MW**	**156**	**156**	**156**	**–**	**0%**
	Total – EPH	**MW**	**5,693**	**5,780**	**5,076**	**(87)**	**(2%)**

EPH and its business

For the year ended 31 December 2019

Fuel

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Electricity – Total**						
EU1	**EP Infrastructure**						
	Conventional sources	MW	1,454.1	1,454.1	1,304.5	–	0%
	Renewable sources	MW	40.5	40.0	26.5	0	1%
	Total – EP Infrastructure	**MW**	**1,494.5**	**1,494.0**	**1,331.0**	**0**	**0%**
	EP Power Europe						
	Conventional sources	MW	11,056.9	9,576.5	9,576.5	1,480	15%
	Renewable sources	MW	750.6	490.8	479.0	260	53%
	Total – EP Power Europe	**MW**	**11,807.5**	**10,067.3**	**10,055.5**	**1,740**	**17%**
	Total – EPH	**MW**	**13,302.0**	**11,561.3**	**11,386.5**	**1,741**	**15%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Electricity – Conventional sources**						
EU1	**EP Infrastructure**						
	Hard coal	MW	110.0	110.0	110.0	–	0%
	Lignite	MW	847.5	847.5	707.0	–	0%
	CCGT	MW	396.0	396.0	396.0	–	0%
	OCGT and other NG	MW	70.5	70.5	70.5	–	0%
	Oil	MW	19.6	19.6	21.0	–	0%
	Other	MW	10.5	10.5	–	–	0%
	Total – EP Infrastructure	**MW**	**1,454.1**	**1,454.1**	**1,304.5**	**–**	**0%**
	EP Power Europe						
	Hard coal	MW	2,829.0	3,248.5	3,248.5	(420)	(13%)
	Lignite	MW	450.0	450.0	450.0	–	0%
	CCGT	MW	7,131.2	5,352.0	5,352.0	1,779	33%
	OCGT and other NG	MW	470.2	213.4	213.4	257	120%
	Oil	MW	163.9	300.0	300.0	(136)	(45%)
	Other	MW	12.6	12.6	12.6	–	0%
	Total – EP Power Europe	**MW**	**11,056.9**	**9,576.5**	**9,576.5**	**1,480**	**15%**
	Total – EPH	**MW**	**12,511.0**	**11,030.6**	**10,881.0**	**1,480**	**13%**

Note: Hard coal in EPPE excludes Eggborough power plant (1.960 MW) from 2019 as it was decommissioned in 2018. This site was sold in February 2019.
Note: Change in oil capacity in EPPE in 2019 is connected to EP Produzione, where the capacity is not suitable for operation, so it is newly exceluded.

EPH and its business

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Electricity – Renewable sources**						
EU1	EP Infrastructure						
	Wind	MW	6	6	6	–	0%
	Photovoltaic	MW	15	15	15	–	0%
	Hydro	MW	3	3	3	0	19%
	Biomass	MW	14	14	–	–	0%
	Other	MW	3	3	3	–	0%
	Total – EP Infrastructure	**MW**	**40.5**	**40.0**	**26.5**	**0**	**1%**
	EP Power Europe						
	Wind	MW	90	7	7	84	1211%
	Photovoltaic	MW	13	2	2	11	421%
	Hydro	MW	2	2	2	–	0%
	Biomass	MW	636	480	468	156	32%
	Other	MW	10	–	–	10	
	Total – EP Power Europe	**MW**	**751**	**491**	**479**	**260**	**53%**
	Total – EPH	**MW**	**791**	**531**	**506**	**260**	**49%**

Note: Biomass is including also Lynemouth biomass net installed capacity (conversion project).

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net installed capacity – Heat**						
EU1	**EP Infrastructure**						
	Hard coal	MW	242.0	242.0	242.0	–	0%
	Lignite	MW	2,767.4	2,872.4	2,239.0	(105)	(4%)
	CCGT	MW	1,400.9	1,400.9	1,400.9	–	0%
	OCGT and other NG	MW	821.9	803.9	803.9	18	2%
	Oil	MW	234.0	234.0	234.0	–	0%
	Other	MW	70.3	70.3	–	–	0%
	Total – EP Infrastructure	**MW**	**5,537**	**5,624**	**4,920**	**(87)**	**(2%)**
	EP Power Europe						
	Lignite	MW	156.0	156.0	156.0	–	0%
	Total – EP Power Europe	**MW**	**156**	**156**	**156**	**-**	**0%**
	Total – EPH	**MW**	**5,692.5**	**5,779.5**	**5,075.8**	**(87)**	**(2%)**

EPH and its business

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU1	**Net power production – Total**						
EU1	**EP Infrastructure**						
	Czech Republic	TWh	1.9	2.6	2.3	(0.7)	(27%)
	Slovakia	TWh	0.0	0.0	0.0	0.0	6%
	Hungary	TWh	1.4	1.2	1.3	0.2	14%
	Total – EP Infrastructure	**TWh**	**3.4**	**3.9**	**3.7**	**(0.5)**	**(14%)**
	EP Power Europe						
	France	TWh	2.4	–	–	2.4	
	Germany	TWh	1.4	3.2	1.0	(1.8)	(58%)
	UK	TWh	11.0	7.9	3.7	3.2	40%
	Ireland	TWh	0.3	–	–	0.3	
	Italy	TWh	15.0	13.3	15.0	1.7	13%
	Total – EP Power Europe	**TWh**	**30.1**	**24.4**	**19.8**	**5.7**	**23%**
	Total – EPH	**TWh**	**33.4**	**28.3**	**23.5**	**5.1**	**18%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Net power production – Conventional sources**						
EU2	**EP Infrastructure**						
	Czech Republic	TWh	1.8	2.5	2.3	(0.7)	(28%)
	Slovakia	TWh	0.0	0.0	0.0	0.0	0%
	Hungary	TWh	1.4	1.2	1.3	0.2	14%
	Total – EP Infrastructure	**TWh**	**3.2**	**3.7**	**3.7**	**(0.5)**	**(14%)**
	EP Power Europe						
	France	TWh	2.2	–	–	2.2	
	Germany	TWh	1.4	3.2	1.0	(1.8)	(58%)
	UK	TWh	8.6	6.5	3.7	2.1	33%
	Ireland	TWh	0.3	–	–	0.3	
	Italy	TWh	14.4	12.7	15.0	1.7	13%
	Total – EP Power Europe	**TWh**	**26.9**	**22.4**	**19.7**	**4.5**	**20%**
	Total – EPH	**TWh**	**30.0**	**26.1**	**23.4**	**3.9**	**15%**

EPH and its business

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Net power production – Renewable sources**						
EU2	**EP Infrastructure**						
	Czech Republic	GWh	154.7	176.3	10.9	(21.6)	(12%)
	Slovakia	GWh	29.7	28.2	29.2	1.6	6%
	Total – EP Infrastructure	**GWh**	**184.4**	**204.4**	**40.1**	**(20.0)**	**(10%)**
	EP Power Europe						
	France	GWh	149.8	–	–	149.8	
	Germany	GWh	14.4	12.3	15.1	2.1	17%
	UK	GWh	2,441.0	1,390.7	–	1,050.3	76%
	Italy	GWh	598.3	590.2	5.6	8.1	1%
	Total – EP Power Europe	**GWh**	**3,203.4**	**1,993.1**	**20.7**	**1,210.3**	**61%**
	Total – EPH	**GWh**	**3,387.8**	**2,197.6**	**60.8**	**1,190.3**	**54%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Net heat production**						
EU2	**EP Infrastructure**						
	Czech Republic	TWh	2.6	2.6	2.0	(0.0)	(1%)
	Hungary	TWh	1.7	1.7	1.9	(0.0)	(3%)
	Total – EP Infrastructure	**TWh**	**4.3**	**4.3**	**3.9**	**(0.1)**	**(1%)**
	EP Power Europe						
	Germany	TWh	0.0	0.3	0.4	(0.3)	(99%)
	Total – EP Power Europe	**TWh**	**0.0**	**0.3**	**0.4**	**(0.3)**	**(99%)**
	Total – EPH	**TWh**	**4.3**	**4.6**	**4.3**	**(0.4)**	**(8%)**

EPH and its business

For the year ended 31 December 2019

Fuel

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Net power production – Total**						
EU2	**EP Infrastructure**						
	Conventional sources	TWh	3.2	3.7	3.7	(0.5)	(14%)
	Renewable sources	TWh	0.2	0.2	0.0	(0.0)	(10%)
	Total – EP Infrastructure	**TWh**	**3.4**	**3.9**	**3.7**	**(0.5)**	**(14%)**
	EP Power Europe						
	Conventional sources	TWh	26.9	22.4	19.7	4.5	20%
	Renewable sources	TWh	3.2	2.0	0.0	1.2	61%
	Total – EP Power Europe	**TWh**	**30.1**	**24.4**	**19.8**	**5.7**	**23%**
	Total – EPH	**TWh**	**33.4**	**28.3**	**23.5**	**5.1**	**18%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Net power production – Conventional sources**						
	EP Infrastructure						
	Lignite	TWh	1.7	2.4	2.3	(0.7)	(29%)
	CCGT	TWh	1.4	1.2	1.3	0.2	14%
	OCGT and other NG	TWh	0.0	0.0	0.0	0.0	0%
	Oil	TWh	(0.0)	(0.0)	(0.0)	0.0	(11%)
	Other	TWh	0.0	0.0	–	0.0	25%
	Total – EP Infrastructure	**TWh**	**3.2**	**3.7**	**3.7**	**(0.5)**	**(14%)**
	EP Power Europe						
	Hard coal	TWh	4.6	6.3	4.9	(1.6)	(26%)
	Lignite	TWh	0.6	0.6	0.7	0.0	0%
	CCGT	TWh	21.6	15.5	13.9	6.1	39%
	OCGT and other NG	TWh	0.0	0.0	0.2	0.0	177%
	Oil	TWh	0.0	–	–	0.0	
	Other	TWh	0.0	0.0	0.0	(0.0)	(29%)
	Total – EP Power Europe	**TWh**	**26.9**	**22.4**	**19.7**	**4.5**	**20%**
	Total – EPH	**TWh**	**30.0**	**26.1**	**23.4**	**3.9**	**15%**

EPH and its business

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Net power production – Renewable sources**						
EU2	**EP Infrastructure**						
	Wind	GWh	9	7	7	2	30%
	Photovoltaic	GWh	16	17	17	(1)	(3%)
	Hydro	GWh	6	5	5	2	41%
	Biomass	GWh	142	166	–	(23)	(14%)
	Other	GWh	10	10	10	0	1%
	Total – EP Infrastructure	**GWh**	**184**	**204**	**40**	**(20)**	**(10%)**
	EP Power Europe						
	Wind	GWh	92	12	15	80	648%
	Photovoltaic	GWh	11	3	2	8	235%
	Hydro	GWh	2	2	4	0	13%
	Biomass	GWh	3,099	1,976	–	1,123	57%
	Total – EP Power Europe	**GWh**	**3,203**	**1,993**	**21**	**1,210**	**61%**
	Total – EPH	**GWh**	**3,388**	**2,198**	**61**	**1,190**	**54%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Net heat production**						
EU2	**EP Infrastructure**						
	Lignite	TWh	2.3	2.3	1.9	0.0	1%
	CCGT	TWh	1.7	1.7	1.9	(0.0)	(3%)
	OCGT and other NG	TWh	0.0	0.1	0.2	(0.0)	(50%)
	Oil	TWh	0.0	0.0	0.0	0.0	10%
	Other	TWh	0.2	0.2	–	(0.0)	(3%)
	Total – EP Infrastructure	**TWh**	**4.3**	**4.3**	**3.9**	**(0.1)**	**(1%)**
	EP Power Europe						
	Lignite	TWh	0.0	0.3	0.3	(0.3)	(100%)
	Oil	TWh	0.0	0.0	0.0	(0.0)	(1%)
	Total – EP Power Europe	**TWh**	**0.0**	**0.3**	**0.4**	**(0.3)**	**(99%)**
	Total – EPH	**TWh**	**4.3**	**4.6**	**4.3**	**(0.4)**	**(8%)**

EPH and its business

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
EU2	**Total net energy production**						
EU2	**EP Infrastructure**						
	Czech Republic	TWh	4.5	5.2	4.4	(0.7)	(14%)
	Slovakia	TWh	0.0	0.0	0.0	0.0	6%
	Hungary	TWh	3.1	2.9	3.2	0.1	4%
	Total – EP Infrastructure	**TWh**	**7.6**	**8.2**	**7.6**	**(0.6)**	**(7%)**
	EP Power Europe						
	France	TWh	2.4	–	–	2.4	
	Germany	TWh	1.4	3.5	1.4	(2.2)	(61%)
	UK	TWh	11.0	7.9	3.7	3.2	40%
	Ireland	TWh	0.3	–	–	0.3	
	Italy	TWh	15.0	13.3	15.0	1.7	13%
	Total – EP Power Europe	**TWh**	**30.1**	**24.7**	**20.1**	**5.4**	**22%**
	Total – EPH	**TWh**	**37.7**	**32.9**	**27.7**	**4.8**	**14%**

Note: Includes electric energy and heat production.

EPH and its business

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-9	**Amount of electric energy sold**						
102-7	**EP Infrastructure**						
	Czech Republic	TWh	5.1	5.4	4.7	(0.2)	(4%)
	Slovakia	TWh	4.1	4.0	3.9	0.1	4%
	Hungary	TWh	1.5	1.3	1.3	0.2	17%
	Total – EP Infrastructure	**TWh**	**10.8**	**10.6**	**9.9**	**0.2**	**2%**
	EP Power Europe						
	France	TWh	11.1	–	–	11.1	
	Czech Republic	TWh	20.4	4.8	0.0	15.6	321%
	Germany	TWh	1.0	2.9	0.7	(1.8)	(63%)
	UK	TWh	11.0	7.9	3.5	3.1	39%
	Ireland	TWh	0.4	–	–	0.4	
	Italy	TWh	15.7	14.0	15.5	1.7	12%
	Total – EP Power Europe	**TWh**	**59.6**	**29.6**	**19.8**	**30.0**	**102%**
	Total – EPH	**TWh**	**70.4**	**40.2**	**29.7**	**30.2**	**75%**

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

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-9	**Heat supplied to district heating network**						
102-7	**EP Infrastructure**						
	Czech Republic	PJ	16.5	16.5	15.2	(0.1)	0%
	Hungary	PJ	6.0	6.2	6.7	(0.2)	(3%)
	Total – EP Infrastructure	**PJ**	**22.5**	**22.7**	**21.9**	**(0.2)**	**(1%)**
	EP Power Europe						
	Germany	PJ	0.4	0.4	0.4	0.0	2%
	Total – EP Power Europe	**PJ**	**0.4**	**0.4**	**0.4**	**0.0**	**2%**
	Total – EPH	**PJ**	**22.9**	**23.1**	**22.3**	**(0.2)**	**(1%)**

Note: Before heat losses in district heating networks.

Environment / Climate change and energy

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN3	**Energy consumption**						
302-1	**EP Infrastructure**						
	Czech Republic	PJ	35.1 (*)	44.5 (*)	38.7 (*)	(9.3)	(21%)
	Slovakia	PJ	8.6 (*)	6.5 (*)	7.1	2.1	32%
	Germany	PJ	0.3	–	–	0.3	
	Hungary	PJ	14.3 (*)	12.9 (*)	14.1	1.3	10%
	Total – EP Infrastructure	**PJ**	**58.3**	**63.9**	**59.9**	**(5.6)**	**(9%)**
	EP Power Europe						
	France	PJ	15.3	–	–	15.3	
	Germany	PJ	18.0	35.2	14.5	(17.2)	(49%)
	UK	PJ	90.8 (*)	66.1	30.7	24.7	37%
	Ireland	PJ	2.3	–	–	2.3	
	Italy	PJ	118.2	106.6	108.4	11.6	11%
	Total – EP Power Europe	**PJ**	**244.6**	**207.9**	**153.6**	**36.7**	**18%**
	EP Logistics international						
	Czech Republic	PJ	0.0	0.0	0.0	(0.0)	(100%)
	Germany	PJ	0.0	–	–	0.0	
	Total – EP Logistics International	**PJ**	**0.0**	**0.0**	**0.0**	**(0.0)**	**(100%)**
	Other companies within the Group						
	Czech Republic	PJ	0.0	0.1	0.1	(0.1)	(100%)
	Poland	PJ	–	0.0	0.0	(0.0)	(100%)
	Total – Other companies within the Group	**PJ**	**0.0**	**0.1**	**0.1**	**(0.1)**	**(100%)**
	Total – EPH	**PJ**	**303.0**	**271.9**	**213.7**	**31.0**	**11.41%**

(*) This data has received limited assurance from the independent auditing firm EY (2018 and previous years) and KPMG (2019).

Environment / Climate change and energy

For the year ended 31 December 2019

Fuel

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 – 2018	%
G4-EN3			Energy consumption				
302-1	**EP Infrastructure**						
	Hard Coal	PJ	–	2.4	6.0	(2.4)	(100%)
	Lignite	PJ	31.2	37.7	31.5	(6.5)	(17%)
	Natural Gas	PJ	23.5	20.0	22.1	3.6	18%
	Oil	PJ	0.0	0.0	0.2	(0.0)	(30%)
	Diesel	PJ	0.0	0.0	0.0	0.0	9%
	Purchased Electricity	PJ	0.2	0.1	0.1	0.0	12%
	Biomass	PJ	2.4	2.7	–	(0.3)	(11%)
	Other	PJ	1.0	0.9	0.0	0.1	9%
	Total – EP Infrastructure	**PJ**	**58.3**	**63.9**	**59.9**	**(5.6)**	**(9%)**
	EP Power Europe						
	Hard Coal	PJ	49.5	64.6	50.9	(15.1)	(23%)
	Lignite	PJ	9.7	9.6	10.6	0.2	2%
	Natural Gas	PJ	152.0	109.6	91.2	42.4	39%
	Oil	PJ	0.3	0.5	0.1	(0.1)	(31%)
	Diesel	PJ	0.4	2.0	0.2	(1.6)	(81%)
	Purchased Electricity	PJ	0.3	0.5	0.2	(0.1)	(30%)
	Purchased Heat	PJ	0.0	0.0	0.0	0.0	4%
	Biomass	PJ	32.3	21.2	0.2	11.1	52%
	Other	PJ	0.1	0.0	0.0	0.1	720478%
	Total – EP Power Europe	**PJ**	**244.6**	**207.9**	**153.4**	**36.7**	**18%**
	EP Logistics international						
	Diesel	PJ	0.1	0.0	0.0	0.1	1528%
	Purchased Electricity	PJ	0.1	0.0	0.0	0.0	308%
	Other	PJ	0.0	0.0	0.0	0.0	275%
	Total – EP Logistics International	**PJ**	**0.1**	**0.0**	**0.0**	**0.1**	**575%**
	Other companies within the Group						
	Diesel	PJ	0.1	0.1	0.1	(0.0)	(19%)
	Purchased Electricity	PJ	–	–	–	–	
	Other	PJ	0.0	0.0	0.0	0.0	9%
	Total – Other companies within the Group	**PJ**	**0.1**	**0.1**	**0.1**	**(0.0)**	**(18%)**
	Total – EPH	**PJ**	**303.2**	**271.9**	**213.4**	**31.2**	**11%**

Environment / Climate change and energy

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 – 2018	%
G4-EN15			Direct GHG Emissions (Scope 1)				
305-1	**EP Infrastructure**						
	Czech Republic	million tons CO_2 eq.	2.8	3.7	3.5	(0.9)	(25%)
	Slovakia	million tons CO_2 eq.	0.4	0.3	0.4	0.1	34%
	Germany	million tons CO_2 eq.	0.0	–	–	0.0	
	Hungary	million tons CO_2 eq.	0.8	0.7	0.8	0.1	9%
	Total – EP Infrastructure	**million tons CO_2 eq.**	**4.1**	**4.8**	**4.7**	**(0.7)**	**(15%)**
	EP Power Europe						
	France	million tons CO_2 eq.	0.8	–	–	0.8	
	Germany	million tons CO_2 eq.	1.8	3.3	1.4	(1.6)	(47%)
	UK	million tons CO_2 eq.	3.7	2.9	2.0	0.8	29%
	Ireland	million tons CO_2 eq.	0.1	–	–	0.1	
	Italy	million tons CO_2 eq.	7.6	6.8	7.9	0.8	11%
	Total – EP Power Europe	**million tons CO_2 eq.**	**14.0**	**13.0**	**11.4**	**1.0**	**8%**
	Total – EPH	**million tons CO_2 eq.**	**18.1**	**17.8**	**16.1**	**0.3**	**1%**

Environment / Climate change and energy

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN18	GHG Emissions intensity – Including heat component						
	EP Infrastructure						
	Czech Republic	ton CO_2 eq./ GWh	625	714	797	(89)	(12%)
	Slovakia	ton CO_2 eq./ GWh	9	10	27	(0)	(5%)
	Germany	ton CO_2 eq./ GWh	–	–	–	–	
	Hungary	ton CO_2 eq./ GWh	258	247	250	11	4%
	Total – EP Infrastructure	**ton CO_2 eq./ GWh**	**474**	**544**	**564**	**(70)**	**(13%)**
	EP Power Europe						
	France	ton CO_2 eq./ GWh	352	–	–	352	
	Germany	ton CO_2 eq./ GWh	1,285	949	1 045	336	35%
	UK	ton CO_2 eq./ GWh	339	368	551	(30)	(8%)
	Ireland	ton CO_2 eq./ GWh	392	–	–	392	
	Italy	ton CO_2 eq./ GWh	505	510	529	(5)	(1%)
	Total – EP Power Europe	**ton CO_2 eq./ GWh**	**466**	**527**	**568**	**(61)**	**(12%)**
	Total – EPH	**ton CO_2 eq./ GWh**	**468**	**531**	**567**	**(63)**	**(12%)**

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 the Czech Republic and in respective summary indicators, in the ammount of 0.5 and 0.3 mil ton of CO_2 in 2019 and 2018 respectively.

Environment / Climate change and energy

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN3	Indirect GHG Emissions (Scope 2)						
305-2	**EP Infrastructure**						
	Czech Republic	ton CO_2 eq.	65,350	68,388		(3,039)	(4%)
	Slovakia	ton CO_2 eq.	6,193	6,187		5	0%
	Germany	ton CO_2 eq.	1,354	–		1,354	
	Hungary	ton CO_2 eq.	3,026	5,149		(2,123)	(41%)
	Total – EP Infrastructure	**ton CO_2 eq.**	**75,922**	**79,725**	**–**	**(3,803)**	**(5%)**
	EP Power Europe						
	Germany	ton CO_2 eq.	22,405	19,274		3,131	16%
	UK	ton CO_2 eq.	17,692	11,249		6,443	57%
	Ireland	ton CO_2 eq.	390	–		390	
	Italy	ton CO_2 eq.	1,569	2,390		(821)	(34%)
	Total – EP Power Europe	**ton CO_2 eq.**	**42,056**	**32,913**	**–**	**9,143**	**28%**
	Total – EPH	**ton CO_2 eq.**	**117,978**	**112,638**	**–**	**5,340**	**5%**

Environment / Air emissions

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN21				Total SO_2 emissions			
305-7	**EP Infrastructure**						
	Czech Republic	thousand tons	5.3	7.8	7.7	(2.5)	(32%)
	Slovakia	thousand tons	0.0	0.0	0.0	(0.0)	(17%)
	Hungary	thousand tons	0.0	0.0	–	(0.0)	(21%)
	Total – EP Infrastructure	**thousand tons**	**5.3**	**7.8**	**7.7**	**(2.5)**	**(32%)**
	EP Power Europe						
	France	thousand tons	0.1	–	–	0.1	
	Germany	thousand tons	1.6	2.6	1.4	(1.1)	(40%)
	UK	thousand tons	0.5	0.7	1.3	(0.2)	(25%)
	Ireland	thousand tons	0.0	–	–	0.0	
	Italy	thousand tons	1.8	1.5	1.8	0.4	26%
	Total – EP Power Europe	**thousand tons**	**4.0**	**4.8**	**4.5**	**(0.8)**	**(16%)**
	Total – EPH	**thousand tons**	**9.4**	**12.6**	**12.1**	**(3.2)**	**(26%)**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN21				Total NO_x emissions			
305-7	**EP Infrastructure**						
	Czech Republic	thousand tons	3.0	3.8	3.4	(0.8)	(20%)
	Slovakia	thousand tons	0.4	0.3	0.3	0.1	35%
	Hungary	thousand tons	0.4	0.4	0.5	(0.0)	(2%)
	Total – EP Infrastructure	**thousand tons**	**3.8**	**4.5**	**4.2**	**(0.7)**	**(15%)**
	EP Power Europe						
	France	thousand tons	0.3	–	–	0.3	
	Germany	thousand tons	1.2	2.3	1.0	(1.1)	(48%)
	UK	thousand tons	2.3	2.4	1.6	(0.1)	(5%)
	Ireland	thousand tons	0.1	–	–	0.1	
	Italy	thousand tons	4.2	3.1	3.1	1.0	33%
	Total – EP Power Europe	**thousand tons**	**8.0**	**7.9**	**5.6**	**0.1**	**2%**
	Total – EPH	**thousand tons**	**11.8**	**12.3**	**9.8**	**(0.5)**	**(4%)**

Environment / Air emissions

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN21				Total dust emissions			
305-7	**EP Infrastructure**						
	Czech Republic	thousand tons	0.1	0.2	0.3	(0.1)	(41%)
	Slovakia	thousand tons	0.0	0.0	0.0	0.0	3%
	Hungary	thousand tons	0.0	–	0.0	0.0	
	Total – EP Infrastructure	**thousand tons**	**0.1**	**0.2**	**0.3**	**(0.1)**	**(40%)**
	EP Power Europe						
	France	thousand tons	0.0	–	–	0.0	
	Germany	thousand tons	0.0	0.0	0.0	(0.0)	(49%)
	UK	thousand tons	0.0	0.1	0.2	(0.1)	(79%)
	Italy	thousand tons	0.1	0.1	0.1	(0.0)	(20%)
	Total – EP Power Europe	**thousand tons**	**0.1**	**0.2**	**0.3**	**(0.1)**	**(40%)**
	Total – EPH	**thousand tons**	**0.3**	**0.5**	**0.6**	**(0.2)**	**(40%)**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN21				SO_2 emissions intensity			
305-7	**EP Infrastructure**						
	Czech Republic	ton / GWh	1.2	1.5	1.7	(0.3)	(21%)
	Slovakia	ton / GWh	0.0	0.0	0.0	(0.0)	(63%)
	Hungary	ton / GWh	0.0	0.0	–	(0.0)	(24%)
	Total – EP Infrastructure	**ton / GWh**	**0.7**	**1.0**	**1.0**	**(0.3)**	**(26%)**
	EP Power Europe						
	France	ton / GWh	0.0	–	–	0.0	
	Germany	ton / GWh	1.2	0.7	1.0	0.4	54%
	UK	ton / GWh	0.0	0.1	0.4	(0.0)	(46%)
	Ireland	ton / GWh	0.0	–	–	0.0	
	Italy	ton / GWh	0.1	0.1	0.1	0.0	12%
	Total – EP Power Europe	**ton / GWh**	**0.1**	**0.2**	**0.2**	**(0.1)**	**(31%)**
	Total – EPH	**ton / GWh**	**0.25**	**0.38**	**0.44**	**(0.1)**	**(35%)**

Environment / Air emissions

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN21				NO_x emissions intensity			
305-7	**EP Infrastructure**						
	Czech Republic	ton / GWh	0.7	0.7	0.8	(0.1)	(7%)
	Slovakia	ton / GWh	0.6	0.6	0.6	(0.0)	(6%)
	Hungary	ton / GWh	0.1	0.1	0.1	(0.0)	(6%)
	Total – EP Infrastructure	**ton / GWh**	**0.45**	**0.51**	**0.52**	**(0.1)**	**(12%)**
	EP Power Europe						
	France	ton / GWh	0.1	–	–	0.1	
	Germany	ton / GWh	0.9	0.7	0.7	0.2	34%
	UK	ton / GWh	0.2	0.3	0.4	(0.1)	(32%)
	Ireland	ton / GWh	0.2	–	–	0.2	
	Italy	ton / GWh	0.3	0.2	0.2	0.0	18%
	Total – EP Power Europe	**ton / GWh**	**0.27**	**0.32**	**0.28**	**(0.1)**	**(17%)**
	Total – EPH	**ton / GWh**	**0.30**	**0.37**	**0.34**	**(0.1)**	**(17%)**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN21				Dust emissions intensity			
305-7	**EP Infrastructure**						
	Czech Republic	ton / GWh	0.03	0.04	0.06	(0.01)	(31%)
	Slovakia	ton / GWh	0.02	0.02	0.02	(0.00)	(5%)
	Hungary	ton / GWh	0.00	–	0.00	0.00	
	Total – EP Infrastructure	**ton / GWh**	**0.02**	**0.03**	**0.03**	**(0.01)**	**(36%)**
	EP Power Europe						
	France	ton / GWh	0.00	–	–	0.0	
	Germany	ton / GWh	0.01	0.01	0.01	0.00	33%
	UK	ton / GWh	0.00	0.01	0.04	(0.01)	(85%)
	Italy	ton / GWh	0.01	0.01	0.01	(0.00)	(29%)
	Total – EP Power Europe	**ton / GWh**	**0.005**	**0.010**	**0.015**	**(0.00)**	**(51%)**
	Total – EPH	**ton / GWh**	**0.01**	**0.01**	**0.02**	**(0.01)**	**(48%)**

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 20 tonnes NO_x in CZ in 2018 (18 tonnes in 2018 and 10 tonnes in 2017). 334 tonnes NO_x in SK in 2019 (244 ton in 2018 and 296 tonnes in 2017) and 6 tonnes dust in SK in 2019 (5 tonnes in 2018 and 2 tonnes in 2017).

Environment / Water

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN8				Quantity of water withdrawn			
303-1	**EP Infrastructure**						
	Czech Republic	million m^3	54.6*	75.0*	127.2	(20.4)	(27%)
	Slovakia	million m^3	0.0*	0.0	0.0	(0.0)	(11%)
	Germany	million m^3	0.0	–	–	0.0	
	Hungary	million m^3	14.4*	10.4	14.8	4.0	39%
	Total – EP Infrastructure	**million m^3**	**69.0**	**85.4**	**142.1**	**(16.4)**	**(19%)**
	EP Power Europe						
	France	million m^3	3.2	–	–	3.2	
	Germany	million m^3	94.2	99.7	100.7	(5.5)	(5%)
	UK	million m^3	1,410.2*	878.0	258.1	532.1	61%
	Ireland	million m^3	0.0	–	–	0.0	
	Italy	million m^3	1,451.7	1,341.0	1,504.0	110.7	8%
	Total – EP Power Europe	**million m^3**	**2,959.2**	**2,318.7**	**1,862.8**	**640.6**	**28%**
	Total – EPH	**million m^3**	**3,028.2**	**2,404.0**	**2,004.9**	**624.2**	**26%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN22				Quantity of water discharged			
306-1	**EP Infrastructure**						
	Czech Republic	million m^3	47.1*	64.9*	122.0	(17.8)	(27%)
	Slovakia	million m^3	0.1*	0.1	0.1	0.0	13%
	Germany	million m^3	0.0	–	–	0.0	
	Hungary	million m^3	13.8*	9.8	14.4	4.0	41%
	Total – EP Infrastructure	**million m^3**	**61.1**	**74.9**	**136.5**	**(13.8)**	**(18%)**
	EP Power Europe						
	France	million m^3	2.0	–	–	2.0	
	Germany	million m^3	1.8	2.8	1.3	(1.0)	(37%)
	UK	million m^3	1,409.8*	876.8	252.3	533.0	61%
	Ireland	million m^3	0.0	–	–	0.0	
	Italy	million m^3	1,445.2	1,340.6	1,504.6	104.7	8%
	Total – EP Power Europe	**million m^3**	**2,858.8**	**2,220.2**	**1,758.1**	**638.6**	**29%**
	Total – EPH	**million m^3**	**2,919.9**	**2,295.0**	**1,894.7**	**624.8**	**27%**

(*) This data has received limited assurance from the independent auditing firm EY (2018) and KPMG (2019).

Environment / Water

For the year ended 31 December 2019

Type

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN8	**Quantity of water withdrawn**						
303-1	**EP Infrastructure**						
	Surface water	million m³	66.7	83.2	140.5	(16.5)	(20%)
	Ground water	million m³	0.1	0.1	0.1	(0.0)	(8%)
	Municipalwatersuppliesorotherwaterutilities	million m³	1.7	1.6	0.9	0.1	7%
	Other	million m³	0.6	0.5	0.7	0.0	8%
	Total – EP Infrastructure	**million m³**	**69.0**	**85.4**	**142.1**	**(16.4)**	**(19%)**
	EP Power Europe						
	Surface water	million m³	2,891.3	2,259.6	1,799.1	631.7	28%
	Ground water	million m³	66.0	58.0	63.1	8.0	14%
	Municipalwatersuppliesorotherwaterutilities	million m³	1.9	1.0	0.6	0.8	79%
	Other	million m³	0.0	0.0	–	0.0	109%
	Total – EP Power Europe	**million m³**	**2,959.2**	**2,318.7**	**1,862.8**	**640.6**	**28%**
	Total – EPH	**million m³**	**3,028.2**	**2,404.0**	**2,004.9**	**624.2**	**26%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN8	**Cooling Water**						
303-1	**EP Infrastructure**						
	Cooling water – withdrawal	million m³	64.3	80.8	138.8	(16.5)	(20%)
	Cooling water – discharge	million m³	57.8	72.1	133.2	(14.3)	(20%)
	Total – EP Infrastructure – Usage	**million m³**	**6.6**	**8.7**	**5.6**	**(2.2)**	**(25%)**
	EP Power Europe						
	Cooling water – withdrawal	million m³	2,856.7	2,225.7	1,763.5	631.0	28%
	Cooling water – discharge	million m³	2,852.6	2,217.0	1,757.0	635.6	29%
	Total – EP Power Europe – Usage	**million m³**	**4.1**	**8.7**	**6.4**	**(4.6)**	**(53%)**
	Total – EPH – Usage	**million m³**	**10.6**	**17.4**	**12.0**	**(6.8)**	**(39%)**

Environment / Effluents and waste

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN23	**Byproducts – Total production**						
306-2	**EP Infrastructure**						
	Czech Republic	thousand tons	1,118.7	1,488.1	1,496.4	(369.4)	(25%)
	Hungary	thousand tons	0.3	0.3	0.3	(0.0)	(6%)
	Total – EP Infrastructure	**thousand tons**	**1,119.0**	**1,488.4**	**1,496.6**	**(369.4)**	**(25%)**
	EP Power Europe						
	France	thousand tons	50.1	–	–	50.1	
	Germany	thousand tons	204.3	318.8	209.8	(114.6)	(36%)
	UK	thousand tons	43.4	54.5	70.0	(11.2)	(20%)
	Italy	thousand tons	143.7	135.9	143.9	7.8	6%
	Total – EP Power Europe	**thousand tons**	**441.4**	**509.2**	**423.7**	**(67.8)**	**(13%)**
	Total – EPH	**thousand tons**	**1,560.4**	**1,997.6**	**1,920.3**	**(437.2)**	**(22%)**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN23	**Waste other than byproducts – Total production**						
306-2	**EP Infrastructure**						
	Czech Republic	thousand tons	2.0	2.6	2.4	(0.6)	(23%)
	Slovakia	thousand tons	42.8	35.8	40.2	7.0	20%
	Germany	thousand tons	0.8	–	–	0.8	
	Hungary	thousand tons	0.0	0.0	0.1	(0.0)	(91%)
	Total – EP Infrastructure	**thousand tons**	**45.6**	**38.5**	**42.7**	**7.1**	**18%**
	EP Power Europe						
	France	thousand tons	0.8	–	–	0.8	
	Germany	thousand tons	239.8	216.5	198.0	23.3	11%
	UK	thousand tons	3.7	3.0	4.0	0.6	21%
	Ireland	thousand tons	0.0	–	–	0.0	
	Italy	thousand tons	27.5	26.9	2.4	0.7	2%
	Total – EP Power Europe	**thousand tons**	**271.9**	**246.4**	**204.4**	**25.4**	**10%**
	Total – EPH	**thousand tons**	**317.5**	**284.9**	**247.1**	**32.6**	**11%**

Environment / Effluents and waste

For the year ended 31 December 2019

Type

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN23	**Byproducts – Total production**						
306-2	**EP Infrastructure**						
	Additised granulate	thousand tons	215.3	332.0	478.7	(116.7)	(35%)
	Ash	thousand tons	489.2	564.1	486.7	(74.9)	(13%)
	Slag	thousand tons	161.3	223.5	187.9	(62.2)	(28%)
	Gypsum	thousand tons	139.5	171.9	155.3	(32.4)	(19%)
	Additional material – hydrated lime	thousand tons	15.1	27.6	22.9	(12.5)	(45%)
	Additional material – water	thousand tons	97.1	167.7	165.2	(70.6)	(42%)
	Other own production	thousand tons	1.6	1.6	–	0.0	0%
	Total – EP Infrastructure	**thousand tons**	**1,119.0**	**1,488.4**	**1,496.6**	**(369.4)**	**(25%)**
	EP Power Europe						
	Additised granulate	thousand tons	–	–	–	–	
	Ash	thousand tons	287.3	300.6	256.9	(13.3)	(4%)
	Slag	thousand tons	57.5	57.2	54.7	0.3	1%
	Gypsum	thousand tons	96.0	151.5	112.1	(55.4)	(37%)
	Additional material – hydrated lime	thousand tons	–	–	–	–	
	Additional material – water	thousand tons	–	–	–	–	
	Other own production – please specify	thousand tons	0.6	–	–	0.6	
	Other additional material – please specify	thousand tons	–	–	–	–	
	Total – EP Power Europe	**thousand tons**	**441.4**	**509.2**	**423.7**	**(67.8)**	**(13%)**
	Total – EPH	**thousand tons**	**1,560.4**	**1,997.6**	**1,920.3**	**(437.2)**	**(22%)**

Environment / Effluents and waste

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN23	**Byproducts – Total by means of disposal**						
306-2	**EP Infrastructure**						
	Sales	thousand tons	169.5	128.4	136.4	41.1	32%
	Storage – own stock	thousand tons	157.0	209.3	149.4	(52.2)	(25%)
	Storage – external	thousand tons	210.9	213.7	81.7	(2.7)	(1%)
	Stabilizate production	thousand tons	362.9	597.6	648.1	(234.7)	(39%)
	Storage – chargeable waste	thousand tons	218.7	339.5	481.1	(120.8)	(36%)
	Total – EP Infrastructure	**thousand tons**	**1,119.0**	**1,488.4**	**1,496.6**	**(369.4)**	**(25%)**
	EP Power Europe						
	Sales	thousand tons	202.4	263.2	164.0	(60.9)	(23%)
	Storage – own stock	thousand tons	24.4	37.1	27.0	(12.7)	(34%)
	Storage – external	thousand tons	0.6	0.6	0.6	(0.0)	(3%)
	Stabilizate production	thousand tons	201.5	188.7	216.3	12.8	7%
	Storage – chargeable waste	thousand tons	22.1	(7.2)	2.6	29.3	(408%)
	Other	thousand tons	25.2	17.3	16.6	7.9	45%
	Total – EP Power Europe	**thousand tons**	**476.1**	**499.8**	**427.1**	**(23.7)**	**(5%)**
	Total – EPH	**thousand tons**	**1,595.1**	**1,988.2**	**1,923.7**	**(393.1)**	**(20%)**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN23	**Waste other than byproducts – Total production**						
306-2	**EP Infrastructure**						
	Non-hazardous waste	thousand tons	42.5	36.4	40.8	6.1	17%
	Hazardous waste	thousand tons	3.1	2.1	1.9	1.0	48%
	Total – EP Infrastructure	**thousand tons**	**45.6**	**38.5**	**42.7**	**7.1**	**18%**
	EP Power Europe						
	Non-hazardous waste	thousand tons	269.5	241.2	200.5	28.3	12%
	Hazardous waste	thousand tons	2.4	5.2	3.8	(2.9)	(55%)
	Total – EP Power Europe	**thousand tons**	**271.9**	**246.4**	**204.4**	**25.4**	**10%**
	Total – EPH	**thousand tons**	**317.5**	**284.9**	**247.1**	**32.6**	**11%**

Environment / Effluents and waste

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN23	**Waste other than by products – Non-hazardous – Disposal**						
306-2	**EP Infrastructure**						
	Recycling	thousand tons	19.1	14.5	6.2	4.6	32%
	Landfill	thousand tons	3.9	4.2	3.1	(0.3)	(8%)
	Other	thousand tons	19.6	17.7	31.5	1.8	10%
	Total – EP Infrastructure	**thousand tons**	**42.5**	**36.4**	**40.8**	**6.1**	**17%**
	EP Power Europe						
	Recycling	thousand tons	110.9	80.6	54.2	30.3	38%
	Landfill	thousand tons	33.5	23.1	1.5	10.4	45%
	Other	thousand tons	125.0	142.5	144.8	(17.5)	(12%)
	Total – EP Power Europe	**thousand tons**	**269.4**	**246.2**	**200.5**	**23.2**	**9%**
	Total – EPH	**thousand tons**	**311.9**	**282.6**	**241.3**	**29.3**	**10%**

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
G4-EN23	**Waste other than by products – Hazardous – Disposal**						
306-2	**EP Infrastructure**						
	Recycling	thousand tons	0.3	0.2	0.7	0.1	64%
	Landfill	thousand tons	1.1	1.4	0.5	(0.3)	(23%)
	Other	thousand tons	1.8	0.6	0.7	1.2	224%
	Total – EP Infrastructure	**thousand tons**	**3.1**	**2.1**	**1.9**	**1.0**	**48%**
	EP Power Europe						
	Recycling	thousand tons	2.1	5.0	2.1	(2.9)	(58%)
	Landfill	thousand tons	0.2	0.2	1.7	0.0	19%
	Other	thousand tons	0.0	–	–	0.0	
	Total – EP Power Europe	**thousand tons**	**2.3**	**5.2**	**3.8**	**(2.9)**	**(55%)**
	Total – EPH	**thousand tons**	**5.5**	**7.3**	**5.7**	**(1.8)**	**(25%)**

Social / Occupational health and safety

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
403-2	**Fatal injuries – Employees**						
G4-LA6	**EP Infrastructure**						
	Czech Republic	#	–	–	–	–	
	Slovakia	#	–	–	1	–	
	Germany	#	–	–	–	–	
	Hungary	#	–	–	–	–	
	Netherlands	#	–	–		–	
	Total – EP Infrastructure	**#**	**–**	**–**	**1**	**–**	
	EP Power Europe						
	Czech Republic	#	–	–	–	–	
	France	#	–	–	–	–	
	Germany	#	–	–	–	–	
	UK	#	–	–	–	–	
	Ireland	#	–	–	–	–	
	Italy	#	–	–	–	–	
	Switzerland	#	–	–	–	–	
	Total – EP Power Europe	**#**	**–**	**–**	**–**	**–**	
	Other companies within the Group						
	Czech Republic	#	–	–	–	–	
	Poland	#	–	–	–	–	
	Slovakia	#	–	–	–	–	
	Hungary	#	–	–	–	–	
	Germany	#	–	–	–	–	
	UK	#	–	–	–	–	
	Italy	#	–	–	–	–	
	Netherlands	#	–	–	–	–	
	Total – other comapnies	**#**	**–**	**–**	**–**	**–**	
	Total – EPH	**#**	**–**	**–**	**1**	**–**	

Social / Occupational health and safety

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
403-2	**Registered injuries – Employees**						
G4-LA6	**EP Infrastructure**						
	Czech Republic	#	16*	13*	12	3	23%
	Slovakia	#	20*	13	15	7	54%
	Hungary	#	1*	3	2	(2)	(67%)
	Total – EP Infrastructure	**#**	**37**	**29**	**29**	**8**	**28%**
	EP Power Europe						
	France	#	2	–	–	2	
	Germany	#	15	27	28	(12)	(44%)
	UK	#	2*	–	–	2	
	Italy	#	–	3	1	(3)	(100%)
	Total – EP Power Europe		**19**	**30**	**29**	**(11)**	**(37%)**
	Other companies within the Group						
	Czech Republic	#	6*	5*	6	1	20%
	Poland	#	–	1	–	(1)	(100%)
	Germany	#	1	–	–	1	
	Total – other comapnies	**#**	**7**	**6**	**6**	**1**	**17%**
	Total – EPH	**#**	**63**	**65**	**64**	**(2)**	**(3%)**

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 (2018) and KPMG (2019).

Social / Occupational health and safety

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
403-2	**Worked hours – Employees**						
G4-LA6	**EP Infrastructure**						
	Czech Republic	million hours	3.4	3.7	3.2	(0.3)	(9%)
	Slovakia	million hours	6.9	5.8	6.9	1.0	17%
	Germany	million hours	0.1	–	–	0.1	
	Hungary	million hours	0.4	0.4	0.4	0.0	3%
	Netherlands	million hours	0.0	–		0.0	
	Total – EP Infrastructure	**million hours**	**10.7**	**9.9**	**10.4**	**0.8**	**8%**
	EP Power Europe						
	Czech Republic	million hours	0.2	0.1	0.1	0.0	29%
	France	million hours	0.3	–	–	0.3	
	Germany	million hours	3.8	3.7	4.3	0.1	2%
	UK	million hours	0.9	1.5	0.7	(0.5)	(37%)
	Ireland	million hours	0.0	–	–	0.0	
	Italy	million hours	1.0	0.9	0.5	0.1	7%
	Switzerland	million hours	0.0	–	–	0.0	
	Total – EP Power Europe	**million hours**	**6.2**	**6.2**	**5.5**	**(0.0)**	**0%**
	Other companies within the Group						
	Czech Republic	million hours	0.8	0.5	0.5	0.3	65%
	Poland	million hours	0.3	0.2	0.2	0.0	16%
	Slovakia	million hours	0.0	0.0	–	0.0	65%
	Germany	million hours	0.1	0.0	0.0	0.1	4808%
	Netherlands	million hours	–	–	0.0	–	
	Total – other comapnies	**million hours**	**1.2**	**0.7**	**0.7**	**0.5**	**63%**
	Total – EPH	**million hours**	**18.1**	**16.8**	**16.7**	**1.3**	**8%**

Social / Occupational health and safety

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
403-2	**Injury Frequency Rate – Employees**						
G4-LA6	**EP Infrastructure**						
	Czech Republic	index	4.8	3.5	3.8	1.2	35%
	Slovakia	index	2.9	2.2	2.2	0.7	31%
	Hungary	index	2.7	8.3	5.1	(5.6)	(67%)
	Total – EP Infrastructure	**index**	**3.5**	**2.9**	**2.8**	**0.5**	**18%**
	EP Power Europe						
	France	index	6.3	–	–	6.3	
	Germany	index	4.0	7.3	6.6	(3.3)	(46%)
	UK	index	2.1	–	–	2.1	
	Italy	index	–	3.4	2.1	(3.4)	(100%)
	Total – EP Power Europe	**index**	**3.1**	**4.9**	**5.2**	**(1.8)**	**(36%)**
	Other companies within the Group						
	Czech Republic	index	7.1	9.7	12.4	(2.6)	(27%)
	Poland	index	–	4.4	–	(4.4)	(100%)
	Germany	index	9.8	–		9.8	
	Total – other comapnies	**index**	**5.7**	**8.0**	**8.3**	**(2.3)**	**(29%)**
	Total – EPH	**index**	**3.49**	**3.87**	**3.83**	**(0.4)**	**(10%)**

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

Social / Occupational health and safety

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
403-2	**Fatal injuries – Contractors**						
G4-LA6	**EP Infrastructure**						
	Czech Republic	#	–	–	–	–	
	Slovakia	#	1	–	–	1	
	Germany	#	–	–	–	–	
	Hungary	#	–	–	–	–	
	Netherlands	#	–	–	–	–	
	Total – EP Infrastructure	**#**	**1**	**–**	**–**	**1**	
	EP Power Europe						
	Czech Republic	#	–	–	–	–	
	France	#	–	–	–	–	
	Germany	#	–	–	–	–	
	UK	#	–	–	–	–	
	Ireland	#	–	–	–	–	
	Italy	#	–	–	–	–	
	Switzerland	#	–	–	–	–	
	Total – EP Power Europe	**#**	**–**	**–**	**–**	**–**	
	Other companies within the Group						
	Czech Republic	#	–	–	–	–	
	Poland	#	–	–	–	–	
	Slovakia	#	–	–	–	–	
	Hungary	#	–	–	–	–	
	Germany	#	–	–	–	–	
	UK	#	–	–	–	–	
	Italy	#	–	–	–	–	
	Netherlands	#	–	–	–	–	
	Total – other comapnies	**#**	**–**	**–**	**–**	**–**	
	Total – EPH	**#**	**1.0**	**–**	**–**	**1.0**	

Social / Occupational health and safety

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	2019	2018	2017	2019 - 2018	%
403-2	**Registered injuries – Contractors**						
G4-LA6	**EP Infrastructure**						
	Czech Republic	#	–	–	1	–	
	Slovakia	#	–	1	–	(1.0)	(100%)
	Germany	#	–	–	–	–	
	Hungary	#	–	–	–	–	
	Netherlands	#	–	–		–	
	Total – EP Infrastructure	**#**	**–**	**1**	**1**	**(1.0)**	**(100%)**
	EP Power Europe						
	Czech Republic	#	–	–	–	–	
	France	#	2	–	–	2.0	
	Germany	#	5	4	5	1.0	25%
	UK	#	2	2	8	–	0%
	Ireland	#	–	–	–	–	
	Italy	#	1	11	1	(10.0)	(91%)
	Switzerland	#	–	–	–	–	
	Total – EP Power Europe	**#**	**10**	**17**	**15**	**(7.0)**	**(41%)**
	Other companies within the Group						
	Czech Republic	#	–	–	–	–	
	Poland	#	–	–	–	–	
	Slovakia	#	–	–	–	–	
	Hungary	#	–	–	–	–	
	Germany	#	–	–	–	–	
	UK	#	–	–	–	–	
	Italy	#	–	–	–	–	
	Netherlands	#	–	–	–	–	
	Total – other comapnies	**#**	**–**	**–**	**–**	**–**	
	Total – EPH	**#**	**10**	**18**	**16**	**(8.0)**	**(44%)**

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.
Restatement: Registrated injuries of contractors were not reported by two of our companies by mistake in 2018, this was corrected in 2019 data submission, thus the total registrated injuries increased from 13 to 18 for 2018.

Social / Employment

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	Total	Male	Female
102-7	**Headcount (FTE)**				
G4-9	**EP Infrastructure**				
	Czech Republic	FTE	1,982	1,595	386
	Slovakia	FTE	4,209	3,353	856
	Germany	FTE	58	51	7
	Hungary	FTE	208	173	35
	Netherlands	FTE	2	1	1
	Total – EP Infrastructure	**FTE**	**6,458**	**5,173**	**1,285**
	EP Power Europe				
	Czech Republic	FTE	88	71	17
	France	FTE	518	406	112
	Germany	FTE	2,516	2,164	352
	UK	FTE	506	450	55
	Ireland	FTE	11	8	3
	Italy	FTE	582	514	68
	Switzerland	FTE	4	3	1
	Total – EP Power Europe	**FTE**	**4,225**	**3,616**	**609**
	Other companies within the Group				
	Czech Republic	FTE	459	342	117
	Poland	FTE	153	122	31
	Slovakia	FTE	5	4	1
	Germany	FTE	154	129	25
	Total – other comapnies	**FTE**	**771**	**597**	**173**
	Total – EPH	**FTE**	**11,453**	**9,386**	**2,068**

Social / Employment

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	Total 19	% of total
102-41	**Employees with collective bargining agreements**			
G4-11	**EP Infrastructure**			
	Czech Republic	FTE	1,783	90%
	Slovakia	FTE	4,158	99%
	Germany	FTE	52	90%
	Hungary	FTE	207	100%
	Total – EP Infrastructure	**FTE**	**6,200**	**96%**
	EP Power Europe			
	Czech Republic	FTE	–	–
	France	FTE	518	100%
	Germany	FTE	2,356	94%
	UK	FTE	365	72%
	Italy	FTE	582	100%
	Total – EP Power Europe	**FTE**	**3,821**	**90%**
	Other companies within the Group			
	Czech Republic	FTE	22	5%
	Poland	FTE	119	78%
	Total – other comapnies	**FTE**	**141**	**18%**
	Total – EPH	**FTE**	**10,161**	**89%**

Social / Employment

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	Total	Male	Female
401-1	**Number of new hires – Total**				
	EP Infrastructure				
	Czech Republic	FTE	198	139	59
	Slovakia	FTE	327	209	118
	Germany	FTE	4	3	1
	Hungary	FTE	24	23	1
	Total – EP Infrastructure	**FTE**	**553**	**374**	**179**
	EP Power Europe				
	Czech Republic	FTE	31	22	9
	France	FTE	6	2	4
	Germany	FTE	133	115	18
	UK	FTE	41	34	7
	Italy	FTE	18	12	6
	Switzerland	FTE	4	3	1
	Total – EP Power Europe	**FTE**	**233**	**188**	**45**
	Other companies within the Group				
	Czech Republic	FTE	130	111	19
	Poland	FTE	101	90	11
	Slovakia	FTE	2	1	1
	Germany	FTE	8	8	–
	Total – other comapnies	**FTE**	**241**	**210**	**31**
	Total – EPH	**FTE**	**1,027**	**772**	**255**

Social / Employment

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	Total	Male	Female
401-1	**Number of leavers – Total**				
	EP Infrastructure				
	Czech Republic	FTE	204	118	86
	Slovakia	FTE	276	185	91
	Germany	FTE	5	4	1
	Hungary	FTE	12	9	3
	Total – EP Infrastructure	**FTE**	**497**	**316**	**181**
	EP Power Europe				
	Czech Republic	FTE	21	18	3
	France	FTE	41	28	13
	Germany	FTE	219	184	35
	UK	FTE	52	48	4
	Italy	FTE	21	18	3
	Total – EP Power Europe	**FTE**	**354**	**296**	**58**
	Other companies within the Group				
	Czech Republic	FTE	130	113	17
	Poland	FTE	101	94	7
	Slovakia	FTE	1	–	1
	Germany	FTE	5	4	1
	Total – other comapnies	**FTE**	**237**	**211**	**26**
	Total – EPH	**FTE**	**1,088**	**823**	**265**

Social / Employment

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	Total	Male	Female
G4-LA1	**New hires rate**				
	EP Infrastructure				
	Czech Republic	%	10%	9%	15%
	Slovakia	%	8%	6%	14%
	Germany	%	8%	7%	15%
	Hungary	%	12%	13%	3%
	Total – EP Infrastructure	**%**	**9%**	**7%**	**14%**
	EP Power Europe				
	Czech Republic	%	35%	31%	52%
	France	%	1%	0%	4%
	Germany	%	5%	5%	5%
	UK	%	8%	8%	13%
	Italy	%	3%	2%	9%
	Switzerland	%	100%	100%	100%
	Total – EP Power Europe		**6%**	**5%**	**7%**
	Other companies within the Group				
	Czech Republic	%	28%	32%	16%
	Poland	%	66%	74%	36%
	Slovakia	%	40%	25%	100%
	Germany	%	5%	6%	0%
	Total – other comapnies	**%**	**31%**	**35%**	**18%**
	Total – EPH	**% %**	**9%**	**8%**	**12%**

Social / Employment

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	Total	Male	Female
G4-LA1	**Employee turnover rate**				
	EP Infrastructure				
	Czech Republic	%	10%	7%	22%
	Slovakia	%	7%	6%	11%
	Germany	%	9%	8%	18%
	Hungary	%	6%	5%	9%
	Total – EP Infrastructure	**%**	**8%**	**6%**	**14%**
	EP Power Europe				
	Czech Republic	%	24%	25%	17%
	France	%	8%	7%	12%
	Germany	%	9%	9%	10%
	UK	%	10%	11%	7%
	Italy	%	4%	4%	4%
	Total – EP Power Europe	**%**	**8%**	**8%**	**10%**
	Other companies within the Group				
	Czech Republic	%	28%	33%	15%
	Poland	%	66%	77%	23%
	Slovakia	%	20%	0%	100%
	Germany	%	3%	3%	4%
	Total – other comapnies	**%**	**31%**	**35%**	**15%**
	Total – EPH	**%**	**10%**	**9%**	**13%**

Social / Training

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	Hours	Hours per Employee
G4-LA9	**Total training hours – all employees**			
	EP Infrastructure			
	Czech Republic	#	25,082	12.7
	Slovakia	#	170,036	–
	Germany	#	463	8.0
	Hungary	#	2 047	9.8
	Total – EP Infrastructure	**#**	**197,627**	**30.6**
	EP Power Europe			
	Czech Republic	#	1,284	14.6
	France	#	5,729	11.1
	Germany	#	34,278	13.6
	UK	#	13,745	27.2
	Italy	#	15,657	26.9
	Total – EP Power Europe	**#**	**70,692**	**16.7**
	Other companies within the Group			
	Czech Republic	#	11,009	24.0
	Poland	#	4,616	30.3
	Total – other comapnies	**#**	**16,627**	**21.6**
	Total – EPH	**#**	**284,946**	**24.9**

Restatement: Amount in 2018 was showing incomplete infomation: The correct amount of training hours in 2018 was 258 thousands. The dfference was identified in the cathegory “Other companies withing the Group”.

Social / Employment

For the year ended 31 December 2019

Country

GRI / EUSS	KPI	Unit	Permanent contract	Temporary contract ale
102-8	**Employees: pernament and temporary contract**			
	EP Infrastructure			
	Czech Republic	%	95%	5%
	Slovakia	%	91%	9%
	Germany	%	95%	5%
	Hungary	%	99%	1%
	Netherlands	%	100%	0%
	Total – EP Infrastructure	**%**	**92%**	**8%**
	EP Power Europe			
	Czech Republic	%	91%	9%
	France	%	96%	4%
	Germany	%	92%	8%
	UK	%	98%	2%
	Ireland	%	100%	0%
	Italy	%	99%	1%
	Switzerland	%	100%	0%
	Total – EP Power Europe	**%**	**94%**	**6%**
	Other companies within the Group			
	Czech Republic	%	85%	13%
	Poland	%	62%	38%
	Slovakia	%	80%	20%
	Germany	%	100%	0%
	Total – other comapnies	**%**	**83%**	**15%**
	Total – EPH	**%**	**93%**	**7%**

Social / Employment

For the year ended 31 December 2019

GRI / EUSS	KPI	Unit	Employees under 30 years old	Employees between 30 and 50 years old	Employees over 50 years old
405-1	**Employees: pernament and temporary contract**				
	EP Infrastructure				
	Czech Republic	% FTE	9%	49%	42%
	Slovakia	% FTE	8%	52%	40%
	Germany	% FTE	10%	39%	51%
	Hungary	% FTE	2%	52%	45%
	Netherlands	% FTE	0%	100%	0%
	Total – EP Infrastructure	**% FTE**	**8%**	**51%**	**41%**
	EP Power Europe				
	Czech Republic	% FTE	29%	64%	3%
	France	% FTE	19%	52%	29%
	Germany	% FTE	20%	30%	46%
	UK	% FTE	9%	34%	28%
	Ireland	% FTE	9%	82%	9%
	Italy	% FTE	2%	41%	57%
	Switzerland	% FTE	0%	75%	25%
	Total – EP Power Europe	**% FTE**	**16%**	**36%**	**42%**
	Other companies within the Group				
	Czech Republic	% FTE	12%	61%	25%
	Poland	% FTE	33%	56%	10%
	Slovakia	% FTE	0%	80%	20%
	Germany	% FTE	9%	55%	36%
	Total – other comapnies	**% FTE**	**16%**	**59%**	**24%**
	Total – EPH	**% FTE**	**11%**	**46%**	**40%**

EPH
Sustainability Report 2019

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Map of Europe with Countries – Single Color by FreeVectorMaps.com

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