ANNUAL AND SUSTAINABILITY REPORT

2022

HEP Group

Note for readers

A part of the text connecting information published on websites or a part of the text referring to a chapter within HEP Group's Annual and Sustainability Report 2022 is highlighted in blue.

Contents

Fundamental Values

MISSION

Sustainable, reliable and competitive energy generation, distribution and supply, in line with customers' needs along with a high degree of social responsibility.

VISION

HEP is going to be a regional energy leader, developing technological options, competitive advantages and innovative business models focused on future needs of its users, in cooperation with national and international companies.

COMPETITIVENESS AND INNOVATION

Our employees are our most valuable potential and support in the implementation of the Company's mission and vision, as well as in the creation of the value of the Company we belong to. Along with being open to new ideas and creativity, we develop knowledge and skills.

QUALITY AND BUSINESS EXCELLENCE

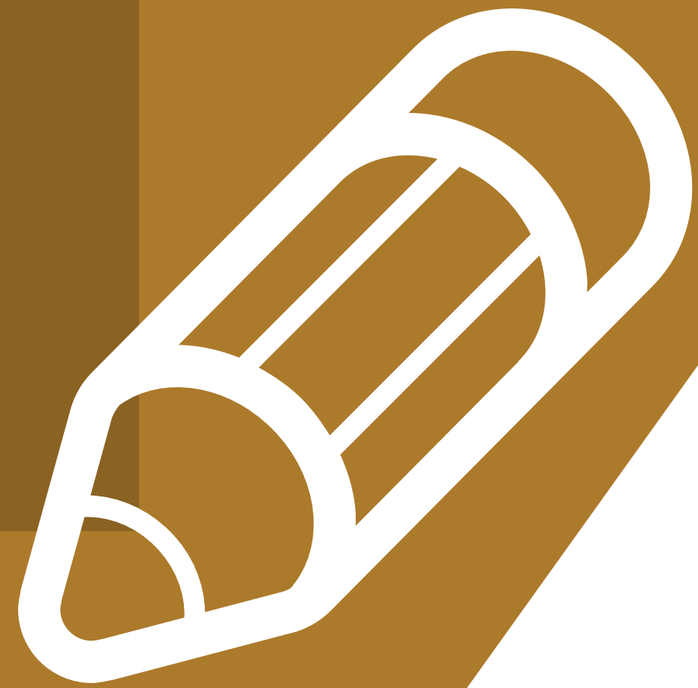
Taking into account the demands and expectations of all interested groups, we increase the quality of our products and services. Our goal is the Company's business excellence.

INTEGRITY

Our relation to customers, business partners, employees and assets is professional and conscientious. We affirm the attitude of zero tolerance of corruption. Our principles of business conduct have been defined by the Code of Ethics.

ENVIRONMENTAL RESPONSIBILITY

We generate, transmit and distribute energy in an environmentally friendly manner. We encourage effective and rational energy use among our customers as well as the development and use of renewable energy sources.



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MANAGEMENT BOARD REPORT

Business operations of HEP in 2022 took place in extremely complex and even crisis circumstances. The energy sector in the whole of Europe, including Croatia, was exposed to a high level of uncertainty, which was a consequence of a number of factors, most notably Russia's invasion of Ukraine. Energy markets were faced with extreme volatility, on the one hand caused by the recovery of energy demand after a period of partial or total lockdown due to the coronavirus pandemic, and on the other by ongoing geopolitical tensions.

Last year, Europe was hit by the worst drought in the last 500 years. Croatia was also exposed to extremely unfavourable hydrological conditions. Due to the reduced energy value of the water inflow, 1.9 TWh of electricity was produced in our hydropower plants, i.e. 27 percent less compared to 2021. Lower hydro generation was replaced by the increased, and significantly more expensive production of thermal power plants and by electricity import. Compared to the previous year, the average prices of all input elements increased enormously, namely natural gas for the production of electricity and heat by 206 percent, coal by 188 percent, CO_2 emission units by 103 percent, and imported electricity by 219 percent.

In order to avoid the spillover of the extreme market price increase trend to energy sales prices for households and the economy, the Government of the Republic of Croatia adopted two packages of measures for the protection of customers of electricity, gas and heat energy in 2022. HEP Group made a key contribution to the implementation of the aforementioned measures in order to mitigate the impact of the energy price increase on citizens and the economy. HEP continued to make a big contribution to eliminating the consequences of the earthquake that hit Banovina in late 2020. Based on the conclusions adopted by the Government, HEP Group companies wrote off HRK 126.6 million of receivables from households in 2021 and 2022.

Similarly to the recent crisis caused by the coronavirus pandemic, thanks to good financial indicators and the responsible management of its financial position and liquidity in the last few years, HEP met the current energy crisis strong and well prepared. Despite this, due to the aforementioned unfavourable circumstances, the drastic increase in operating costs and the limited selling prices of electricity and heat energy, in 2022 HEP Group generated a consolidated net loss in the amount of HRK 5.72 billion. With regard to HEP losses resulting from the implementation of said measures, and with the aim of ensuring the sustainability of the company's operations and investment potential, the Government of the Republic of Croatia on 30 March 2023 passed the Decision on granting a shareholder loan to Hrvatska elektroprivreda d.d. and the start of recapitalization activities, all in the total value of up to EUR 900 million.

In the circumstances of the energy crisis and the uncertainty regarding the security of supply that prevailed throughout the year, we fully met all of our customers' energy needs. And not only that, we achieved an increase in electricity sales, both on the Croatian market, by 4.2 percent compared to 2021, and abroad, by 56.2 percent. The market share of HEP Group in Croatia increased from 89 to 92.7 percent. During the 2022 crisis, in addition to the electricity market, HEP also played a key role in ensuring the stability of supply on the gas market. In accordance with the EU regulation on measures for the protection of the security of gas supply, the Government's decision on the provision of gas supplies on the territory of the Republic of Croatia and the order of the Crisis Team, we procured all the necessary quantities of gas with the aim of filling the gas storage by 1 November 2022. Also, these crisis circumstances proved that the decision to build an LNG terminal on Krk, managed by a company co-owned by HEP, was of exceptional strategic importance for Croatia. At the end of October, we successfully paid off the Eurobonds issued on the international capital market in 2015 in the amount of USD 550 million, thus giving a strong positive signal to the investment public.

Despite the unfavourable circumstances, we continued with the implementation of investment plans, which increased by 10.5 percent compared to 2021 amounting to HRK 3.4 billion. The largest ongoing investment is the Senj 2 hydropower system (HPP Kosinj / HPP Senj 2). As part of the Kosinj HPP project, work began last year on the construction of the first hydrotechnical facility, the Bakovac-Lika tunnel and canal. Other capital production projects include the continuation of the construction of the high-efficiency combined generation unit in CCPP Zagreb (150 MWe/114 MWt; HRK 1,052.7 million), which was 90% completed by the end of the year.

The investment cycle in solar power plants continued. Stankovci (2.5 MW) and Obrovac (connection and installed capacity of 7.35 MW and 8.7 MW, respectively) solar power plants were put into operation, of which the latter is currently the largest solar power plant in Croatia. The construction of three more solar power plants has begun: Donja Dubrava (9.9 MW), Radosavci (9.9 MW) and Jambrek (5 MW). The procurement procedure for the construction of Črnkovci solar power plant (8.5 MW) was carried out. It is the first power plant that will be built under the cooperation agreement concluded between HEP and several local self-government units. The first procurement stage for the Korlat solar power plant construction project (75MW) in accordance with the EBRD rules was also carried out.

In transmission and distribution of electricity, a number of capital projects for the construction and reconstruction of substations and transmission lines was completed, continued or launched. The implementation of the Pilot Project for the introduction of advanced networks is nearing its end. This as well as two larger thermal energy projects are co-financed by the European funds. The second season of the HRK 700 m Zagreb hot water network revitalization project was completed. The revitalization covers 63 kilometers, or one third of the hot water network. The implementation of the hot water pipeline replacement project from Osijek CCGT to Osijek Heating Plant continued.

New investments will comply with the energy policy goals of the European Union and Croatia. System operators are increasingly being asked to prepare the electricity networks to accept production from an increasing number of new renewable sources. With this goal in mind, the National Recovery and Resilience Plan also allocated HRK 2.8 billion for the implementation of transmission and distribution projects. In addition to network investments, our priority also extends to the construction of renewable energy sources. The goal set in the HEP2030 strategy is to include 700 MW of wind and solar power plants in our portfolio by 2030. In the long term, we are developing about 60 projects with a total capacity of about 1,400 MW and an estimated investment value of almost 1.5 billion euro. All available financial sources will be used for funding said investments, including the EU funds, the Recovery and Resilience Plan funds as well as other sources, while counting on a quality cooperation with the EBRD, EIB and domestic banks, as well as the support of the Government.

With an average 400 million euro investment, corresponding to the amount in previous years, we intend to maintain the status of one of the largest investors in Croatia. This, in turn, will have a strong positive effect on the employment rate, budgetary revenue, GDP growth and the stability and growth of the Croatian economy in general.

Frane Barbarić

ABOUT HEP GROUP AND SUSTAINABILITY REPORTING

HEP d.d. (Hrvatska elektroprivreda – joint-stock company) is the parent company of HEP Group with its seat in Zagreb at Ulica grada Vukovara 37, wholly owned by the state. It consolidates the management of its subsidiaries and is the owner of the assets which it contractually transfers to subsidiary companies for management.

The core activities of HEP Group are production, transmission, distribution of electricity, supply of electricity to customers and supervision of the electricity system. In addition to the aforementioned core activities, HEP Group is also engaged in the production and distribution of thermal energy through district heating systems in Zagreb, Osijek and Sisak (DHS) and in the production and distribution of thermal energy in boiler rooms for heating the towns of Zaprešić, Samobor and Velika Gorica outside DHS. The activity of HEP Group also includes the distribution of gas in Osijek-Baranja, Požega-Slavonia, Virovitica-Podravina, Bjelovar-Bilogora, Krapina-Zagorje and Vukovar-Srijem counties. Additionally, by the decision of the Government of the Republic of Croatia on securing gas supplies on the territory of Croatia from June 2022, HEP d.d. was mandated with the procurement and storage of strategic gas supplies. On the basis of the Regulation on elimination of disturbances on the domestic energy market, HEP d.d. also became responsible for the procurement of gas produced in Croatia in the period from 1 October 2022 to 31 March 2024, and for selling it to gas distributors for the purpose of covering losses for customers of thermal energy from independent heating systems, for the public service for the needs of household customers and for gas customers from the category of public institutions.

GRI 2-1

HEP Group companies 31 December 2022

Reporting period 2022		Company name and country of registered office	Core activity
		HEP Group	
Name, legal form, form of ownership and market	HEP Group parent company is wholly owned by the state	**HEP d.d.** Republic of Croatia	The controlling company of HEP Group which consolidates the management of subsidiaries and is the owner of the assets that it contractually transfers to its subsidiaries for management.
	Company owned by HEP d.d.	**HEP-Proizvodnja d.o.o.** Republic of Croatia	Generation of electricity and heat
		CS Buško Blato d.o.o. Bosnia and Herzegovina	Maintenance of hydro equipment
		HEP-VHS Zaprešić d.o.o. Republic of Croatia	Design and construction of multi-purpose hydrotechnical system
		HEP-Operator distribucijskog sustava d.o.o. Republic of Croatia	Electricity distribution
		HEP Nastavno-obrazovni centar Republic of Croatia	Training, professional development and accommodation services
		HEP ELEKTRA d.o.o. Republic of Croatia	Electricity supply of customers as a public service
		HEP-Opskrba d.o.o. Republic of Croatia	Electricity supply
		HEP Energija d.o.o. Republic of Slovenia	Electricity supply
		HEP-Toplinarstvo d.o.o. Republic of Croatia	Production, distribution and supply of thermal energy
		HEP-Plin d.o.o.[1] Republic of Croatia	Gas distribution and supply
		HEP-ESCO d.o.o. Republic of Croatia	Implementation and funding of energy efficiency projects
		HEP-Trgovina d.o.o. Republic of Croatia	Electricity trade and optimization of power plant operations
		HEP Energija d.o.o. Mostar Bosnia and Herzegovina	Trade and supply of electricity
		HEP Energija d.o.o. Beograd Republic of Serbia	Trade and supply of electricity
		HEP Energija sh.p.k. Priština Republic of Kosovo	Trade and supply of electricity
		HEP-Upravljanje imovinom d.o.o. Republic of Croatia	Management of non-operating assets and tourism
		Plomin Holding d.o.o. Republic of Croatia	Development of local infrastructure in the vicinity of Plomin
		Sunčana elektrana Poreč d.o.o. Republic of Croatia	Electricity production
		Ornatus d.o.o. Republic of Croatia	Electricity production
		Peharda izgradnja d.o.o.[2] Republic of Croatia	Construction of residential and non-residential buildings
		Sunčana elektrana Vis d.o.o. Republic of Croatia	Electricity production
		Energetski park Korlat d.o.o. Republic of Croatia	Electricity production
		HEP-Telekomunikacije d.o.o. Republic of Croatia	Telecommunication services
	Joint ventures	**NE Krško d.o.o.**[3] 50% HEP d.d. and 50% GEN Energija Republic of Slovenia	Electricity production
		LNG Hrvatska d.o.o.[4] 75% HEP d.d. and 25% Plinacro d.o.o. Republic of Croatia	Liquefied natural gas operations
	Independent transmission operators	**Hrvatski operator prijenosnog sustava d.o.o.**[5] Republic of Croatia	Electricity transmission
HEP Group registered office		Ulica grada Vukovara 37, 10000 Zagreb	

[1] GP Krapina d.o.o. and Darkom DP d.o.o., acquired in 2021, were merged with HEP Plin d.o.o. in January 2022
Pakrac plin d.o.o. was taken over in May 2022, and in November 2022 merged with HEP Plin d.o.o., which is its sole owner.
[2] Peharda izgradnja d.o.o. was acquired in January 2022 by Plomin Holding d.o.o. as its sole owner.
[3] In consolidated financial statements, the share in NE Krško d.o.o. is shown by the method of joint asset and liabilities management. HEP Group's share is shown for each asset and liability across income and expenditure.
[4] Joint venture with Plinacro d.o.o. (75%:25%)
[5] As of 1st July 2013, HOPS operates under the Independent Transmission Operator model (ITO model)

GRI 2-2
GRI 2-3

Sustainability reporting

The HEP Group Annual and Sustainability Report for 2022 refers to the period from 1 January to 31 December 2022 and was compiled according to the 2021 Consolidated Guidelines of the GRI Standards. We publish annual and sustainability reports for the same period as the annual consolidated financial statements. We prepared the first report according to the Global Reporting Initiative (GRI G4) guidelines and published it in 2015 for 2013 and 2014 in Croatian and English. We have published reports every year since 2016. *Annual and Sustainability Reports* have been published in a digital form only on our website since 2019.

The HEP Group Annual and Sustainability Report for 2022 includes companies that are also included in the revised 2022 Annual Consolidated Financial Statements.

Audit

GRI 2-5

The independent auditor of the Annual Consolidated Financial Statements for 2022, PKF FACT revizija d.o.o. and Audit d.o.o., determined the content compliance of the 2022 Annual and Sustainability Report of HEP Group with the content set under Article 21 of the Amendments to the Accounting Act from 2016.

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Difference in released information to 2021

Below is the difference in released information in 2022 compared to 2021. It includes:

Information regarding new companies merged with the existing companies in 2022, and listed in the table HEP Group companies 31 December2022. The merger of GP Krapina d.o.o., Darkom DP d.o.o. and Pakrac plin d.o.o. resulted in the increased number of customers. Details of said merger are given in *Gas distribution and supply.*

- Under the Decision of the Croatian Government on securing gas supply on the territory of Croatia from June 2022, HEP d.d. was mandated for the procurement and storage of Croatian gas reserves. Pursuant to the Regulation on the elimination of distortions at the domestic energy market and the Decision on the price and distribution of natural gas capacities, which Hrvatska elektroprivreda d.d. took over from natural gas producer, HEP d.d. is also obliged to procure gas produced in Croatia in the period between 1 October 2022 and 31 March 2024 and to sell it to gas distributors for the purpose of settling losses for gas distribution to heat energy customers from independent heating systems, household customers under the public service obligation and commercial customers from Article 2, Paragraph 3 of the Regulation.
- In addition to the indicators related to the distribution and gas supply, sector designations from chapter GRI 11: the Liquid Fuels and Gas chapter of the Consolidated GRI Standards 2021, which apply to this sector from 1 January 2023, have been added.
- In addition to the indicators related to electricity generation from a coal-fired thermal power plant, sector designations from chapter GRI 12: Coal from the Consolidated GRI Standards 2021, which apply to this sector from 1 January 2023, have been added.

3

OUR PRODUCTS, SERVICES, MARKETS AND VALUE CHAIN

This chapter describes HEP Group's products and services, markets we do business at and our value chain. Operating results for 2022 are stated for each product and service and compared to the results in 2021. In 2022 there were no legal actions taken for conduct against market competition, antitrust and monopolistic practice relating to HEP Group's products and services.

GRI 2-6
GRI 206-1

GRI 2-6

Electricity

The Croatian electric power system (EPS) consists of generation facilities and plants, transmission and distribution grid, electricity traders, suppliers and customers. Due to its size, it is one of the smallest systems in Europe. Electricity market in Croatia is supervised by the Croatian Energy Regulatory Agency (HERA), which also keeps a register of licences for performing energy activities of electricity generation, transmission, distribution, market organization, aggregation, trade, storage and it organizes citizens' energy communities.

All facilities for electricity generation are owned or co-owned by HEP d.d., and are located in Croatia, with the exception of the Nuclear power plant Krško, which is located in Slovenia and Buško Blato Pumping Station, which is located in Bosnia and Herzegovina. Plant operators are the following companies: *HEP Proizvodnja*, *NPP Krško*, Energy park Korlat, Solar power plant Vis and Plomin holding. They were issued a licence for performing said activity by the Croatian Energy Regulatory Agency (HERA). The transmission system is operated by the Croatian Transmission System (HOPS), whose activity is described in the chapter *Electricity transmission*, and the distribution grid is operated by HEP Operator distribucijskog sustava (HEP ODS), whose activity is described in the chapter *Electricity distribution*. HEP Opskrba and HEP Elektra are companies within HEP Group based in Croatia, which supply electricity to customers. HEP Group's supplier at the Slovenian market is HEP Energija d.o.o., the daughter company of HEP Opskrba. HEP Group's companies with the licence to perform supply activity at the markets of BiH, Serbia and Kosovo are HEP Energija d.o.o. Mostar, HEP Energija d.o.o. Beograd and HEP Energija sh.p.k. Priština. HEP Elektra provides the public service of electricity supply, i.e. universal service for household customers and guaranteed service for commercial customers. The activities of HEP Elektra and HEP Opskrba are described in the chapter *Electricity supply*. HEP Trgovina, together with its daughter companies in BiH, Serbia and Kosovo buys and sells electricity, and it purchases cross-border transmission capacities. HEP Trgovina also procures greenhouse gas emission units (EUA) for HEP's fossil fuel-fired power plants as part of the European Union Emissions Trading System (EU-ETS). The description of HEP's obligations within the EU-ETS is described in the chapter *Greenhouse gas emissions*.

GRI 2-6

Electricity generation and procurement

In 2022 electricity was generated from renewable energy sources owned by HEP: hydro power plants (HPP, RHPP, SHPP), wind power plants (WPP), biomass-fired cogeneration plants (BE-TO) as well as integrated and non-integrated photovoltaic solar power plants (SPP). Integrated photovoltaic solar power plants (SPP) installed on roofs of HEP's buildings generate electricity. As at 31 December 2022 62 SPP were in operation, 53 of which generated electricity for own consumption, and 9 of which were in the incentive system, i.e. the Croatian Energy Market Operator (HROTE) purchased generated electricity. Biomass-fired cogeneration plants are cogeneration facilities which generate electricity and heat energy.

Electricity was generated not only from renewable sources, but also from low-sulphur coal, gas oil, fuel oil, light fuel oil and natural gas in thermal power plants (TPP, CCGTP) and combined heat and power plants (TE-TO and EL-TO). TE-TO and EL-TO are cogeneration facilities which generate not only electricity, but also heat energy. Information about heat energy is shown in the chapter *Generation, distribution and supply of heat energy*. All HEP's thermal power plants and combined heat and power plants (TPP, CCGTP, TE-TO and EL-TO) have been included in the European Union Emissions Trading System (EU ETS) since 1 January 2013. Cogeneration plants (BE-TO) are also a part of the EU ETS, but in 2022 it was not necessary to procure greenhouse gas emission units (EUA).

Based on its 50-percent share in the ownership of Nuclear power plant Krško (HEP d.d. 50% and GEN Energijy 50%), a half of electricity generated in NPP Krško is taken over for the needs of HEP's customers. Nuclear fuel in NPP Krško is uranium dioxide, UO_2 (up to maximum 5% enriched uranium 235, and the rest is uranium 238). The information on the quantities of used fossil and nuclear fuel and woodchips for electricity and heat energy generation can be found in the chapter *Energy and energy fuels*.

Power plants for electricity generation from RES in 2022

Power plant	Number of power plants	Available capacity/ MWe
Hydro power plants (HPP, RHPP, SHE)[1]	28	2071.8 / 257.9[3]
Biomass-fired cogeneration plants (BE-TO)	2	5.4
Power plant	**Number of power plants**	**Connecting capacity[4] / MWe**
Non-integrated solar power plants (SPP) / integrated solar power plants (SPP)	7/62	20.7
Wind power plants (WPP)	1	58

[1] HPP=hydro power plants, RHE= reversible hydro power plants SHPP = small hydro power plants <10MWe
[2] Without aggregate B in HPP Dubrovnik, which is in operation for BiH
[3] Energy storage in RHPP
[4] The information on connecting, and not available capacity is shown for renewable energy sources, whose generation depends on weather conditions and it is impossible to control

Power plants for electricity generation from fossil fuels

Power plant	Fuel type	Available capacity MWe
	Thermal power plants (TPP)	
TPP Plomin 1	coal	0
TPP Plomin 2	coal	199
TPP Rijeka	Fuel oil	0
CCGT Jertovec	Natural gas/light fuel oil	76
TOTAL TPP		**275**
	Combined heat and power plant (TE-TO and EL-TO)	
TE-TO Zagreb	Natural gas/light fuel oil	300
EL-TO Zagreb	Natural gas	48
TE-TO Sisak	Natural gas/light fuel oil	235
TE-TO Osijek	Natural gas/light fuel oil	89
TOTAL TE-TO and EL-TO		**672**
TOTAL TPP, TE-TO and EL-TO		**947**

Power plant for electricity generation from nuclear fuel

Power plant	Fuel type	Available capacity
Nuclear power plant Krško (NEK)	Uranium dioxide UO_2 (up to maximum 5% enriched uranium 235, and the rest is uranium 238)	348

The difference between electricity necessary for customer supply and the one generated from own sources is compensated through off-system energy procurement – bilateral agreements, via broker platforms and at power exchanges in central and southeast Europe. Procured energy originates from Croatia, Hungary, Slovenia, Serbia and Bosnia and Herzegovina. A part of electricity procured at the market is intended for customers in Croatia, a part is for HEP's customers outside Croatia and the rest is used to cover losses in the grid and to sell energy surpluses as well as to export.

HEP Operator distribucijskog sustava (HEP ODS) procures and independently plans electricity to cover losses in the distribution grid. The application of agreed schedules for energy procurement to cover losses in the distribution grid is done on a daily basis, independently of weekends and holidays. Losses in the distribution grid in 2022 amounted to 7.13 percent of ingoing energy in the distribution grid, or 1.199 TWh.

Croatian Transmission System Operator (HOPS) is responsible for electricity procurement to cover losses in the transmission grid. It bears the costs of this procurement independently. Losses in the transmission grid in 2022 totalled at 0.463 TWh.

Structure of generated and available electricity in 2022

The total of 19.8 TWh (19,8 x 109kWh) of electricity was available in 2022. Power plants owned and co-owned by HEP generated 62.93 percent of the total available electricity and 37.37 percent was procured at the market. Generation from renewable energy sources totalled at 41.20 percent, from nuclear energy at 21.65 percent and from fossil fuels at 37.13 percent. Out of 7.4 TWh procured at the market, 1.5 TWh originates from obligatory energy purchase in the incentive system from HROTE. Out of the total available electricity in 2022, 15.3 TWh was sold to customers in Croatia, and 2.2 TWh to customers abroad. The difference between the total available energy and energy sold to HEP's customers (17.5 TWh), i.e. 2.3 TWh was used to cover losses in the transmission and distribution grid, to sell energy surpluses and for export.

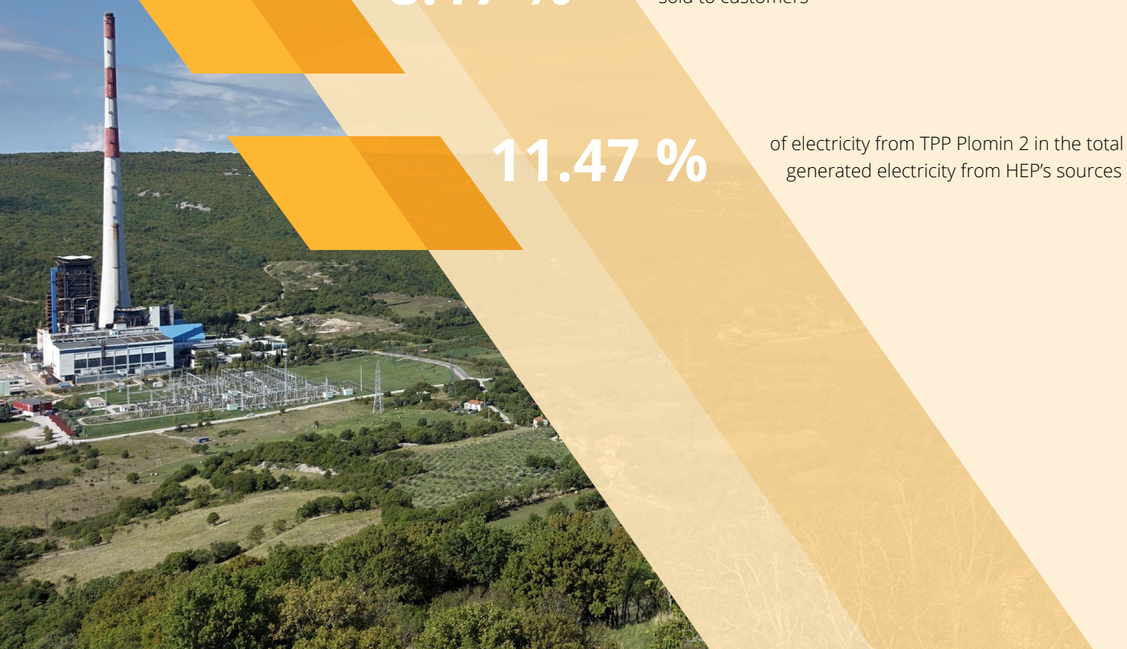
Hydro power plants owned by HEP generated 28.6 percent of electricity in the total available electricity in 2022. 13.6 percent was generated from nuclear energy for the Croatian EPS, and 23.2 percent was generated from fossil fuels owned by HEP.

TPP Plomin 2 uses coal as fuel, and its generation share in the total available electricity amounted to 7.22 percent, i.e. 8.17 percent in the total sold electricity to customers and 11.47 percent in the total generated electricity from sources owned or co-owned by HEP. The share of electricity generated from coal in the total energy generated from fossil fuels from sources in HEP's ownership amounted to 30.89 percent.

7.22 % of electricity from TPP Plomin 2 in the total available electricity in Croatia in 2022

8.17 % of electricity from TPP Plomin 2 in the total electricity sold to customers

11.47 % of electricity from TPP Plomin 2 in the total generated electricity from HEP's sources



Power plants with the status of eligible electricity producers from renewable energy sources and high-efficiency cogenerations generated 0.308 TWh, i.e. 1.56 percent in the total available energy and 2.47 percent in the total generated energy from HEP's sources. Total electricity generation from HEP's sources in 2022 decreased by 9.6 percent in comparison to the year before. Total off-system procured energy in 2022 increased by 12.78 percent in comparison to 2021. The reasons for lower generation lie in sources owned and co-owned by HEP: the year was marked by dry hydrology, so the generation from hydro power plants was reduced by 27.5 percent in comparison to 2021 and NPP Krško delivered 2 percent less energy as a result of a regular overhaul, which was prolonged for 6 days.

Shares of energy sources in total available and generated electricity in 2022

	Generation/ TWh[1]	Share in generated electricity / %	Share in available electricity / %
Energy from renewable sources (RES)			
Hydro power plants	4.935	39.747	24.907
Biomass-fired cogeneration plants	0.027	0.217	0.136
Non-integrated solar power plants and 9 integrated solar power plants (purchase frin HROTE)[2]	0.022	0.177	0.111
Wind power plant	0.149	1.200	0.752
TOTAL generated from RES from HEP's sources	**5.132**	**41.334**	**25.901**
Nuclear energy			
Nuclear power plant Krško	2.655	21.384	13.400
Fossil fuel sources			
Thermal power plants and thermal power plants – heating plants	4.629	37.283	23.362
TOTAL generated electricity	**12.416**	**100**	**62.663**
Procured at the market			
Obligatory purchase from HROTE of energy from incentive system	1.509	NP	7.616
Procurement at the market out of incentive system and guarantee of origins	5.889	NP	29.721
TOTAL procured energy at the market	**7.398**	**NP**	**37.337**
TOTAL available electricity	**19.814**	**100**	**100**

[1] TWh = 10^9 kWh
[2] The total of 53 SPP on roofs of HEP's buildings generate electricity for own consumption and are not shown in the energy available and generated for customers

Shares of energy sources in the total generated energy from HEP Group's sources in 2022

37.283% Fossil-fuel sources

41.334% Energy from RES

21.384% Nuclear energy

41.334 %

of electricity produced from HEP's sources in 2022 comes from renewable energy sources

39.000 %

of electricity generated in the EU in 2022 comes from renewable energy sources

Shares of energy sources in the total available electricity in 2022

37.337 %	25.901 %	23.362 %	13.4 %
Off-system procurement	Energy from RES	Fossil-fuel sources	Nuclear energy

The share of electricity from sources with the emission intensity of 0 tCO_2/ TWh (0 gCO_2/kWh) in the total available electricity in 2022 amounted to 39.301 percent, i.e. 62.718 percent of the share in the total generated electricity from sources owned and co-owned by HEP. The sources with the emission intensity of 0 gCO_2/kWh in the 2022 electricity generation process include: hydro power plants, wind power plants, photovoltaic solar power plants and a nuclear power plant. The greenhouse gas emission intensity as well as the breakdown according to Scope 1, 2 and 3 are described in the chapter *Greenhouse gas emissions*.

39.301 %

of the total available electricity in 2022 with the emission intensity of 0 gCO_2/kWh

62.718 %

of the total generated electricity in 2022 with the emission intensity of 0 gCO_2/kWh

Investments in sources for electricity generation and high-efficiency cogenerations in 2022

In order to increase generation from renewable energy sources and high-efficiency cogenerations, to continue generation from NPP Krško, to increase energy efficiency of generation processes and to reduce the impact on the environment emphasising the impact on climate by 2030 as well as to achieve climate neutrality of energy sector by 2050, HEP Group invested in such projects. Investments in low-carbon renewable sources and energy-efficient sources with a low intensity of greenhouse gas emissions contribute to fulfilling the UN Sustainable Development Goals by 2030, the provisions of the European Green Deal and the Integrated National Energy and Climate Plan for the Republic of Croatia (NECP), which is being reviewed and adjusted to new EU goals.

HEP Group was one of the biggest investors in Croatia in 2022, with the investments of HRK 3.41 billion. The most significant investments were the ones in solar power plants, HPS Kosinj, EL-TO Zagreb CCPP and the investment in NPP Krško. It was not necessary to contract new long-term loans for financing investments in 2022. Investments were financed from own funds, the EU Funds and EBRD and EIB loans for the construction of combined-cycle cogeneration unit EL-TO Zagreb.

The activities of equipment replacement, reconstruction and revitalization of existing generation facilities, as well as of transmission and distribution grid were conducted in 2022. Producers and contractors from Croatia were mostly hired for these projects.

The most significant investments in facilities for electricity generation in 2022

Solar photovoltaic power plants (SPP)

Became operational:
- SPP Stankovci (2.5 MW)
- SPP Obrovac (7.35 MW)

Start of construction:
- SPP Donja Dubrava (9.9 MW)
- SPP Radosavci (9.9 MW)
- SPP Jambrek (5 MW)

Project development and preparation:
- SPP Črnkovci (8.5 MW) in cooperation with local government units
- SPP Korlat (75 MW) – on site of the existing WPP Korlat

Electricity storage:
- SPP Vis was upgraded with a battery storage

High-efficiency cogeneration (CHP)

Construction and construction preparation of CHP:
- combined-cycle cogeneration unit - EL-TO Zagreb CCPP (150 MWe and 114 MWt, efficiency level 90%, 25% of gas saving, reduction of CO_2 by 150,000 t/g)
  - by 2022, more than 90 percent of planned construction works was completed, and construction completion is expected by the end of 2023

Hydro power plants (HPP)

Construction and construction preparation of new HPPs:
- The Croatian Government adopted a decision declaring hydropower system Kosinj (HPS Kosinj) a strategic investment project in 2021 and with HPP Senj 2 it presents an upgrade of the existing hydropower system Senj (HPS Senj), which increases the total installed capacity by 412 MW
  - o Works on the construction of the first hydrotechnical facility, tunnel and Bakovac-Lika canal
  - o Preparation of documentation for contracting main works (dams, engine rooms, accumulation)

Nuclear power plant Krško

Implementation of activities for long-term insurance of power plant's availability, capacity and generation increase.

GRI 2-6

Electricity transmisson

Croatian Transmission System Operator (HOPS) is the only operator of electric power transmission system in Croatia and it owns the whole Croatian transmission network of 400kV, 220kV and 110kV voltage levels. It also owns the licence to perform the energy activity of electricity transmission as a regulated public service. To enable safe and good electricity supply to customers as well as electricity exchange, the Croatian EPS is connected to EPSs of neighbouring countries and other systems of the members of the European network of Transmission System Operators, ENTSO-E, which make up a synchronized network of continental Europe. HOPS operates under the independent transmission operator model, which implies its functional independence from the parent company, HEP d.d. and its affiliated companies, as well as non-discriminatory behaviour towards all transmission system users. Among other things, HOPS publishes special annual and sustainability reports and HEP Group Annual and Sustainability Report 2022 states it, where necessary, for the clarity of shown data.

Length of constructed overhead lines and transmission grid cables

Transmission area	400 kV/ km	220 kV/ km	110 kV/ km	m.v./ km	TOTAL[1]/ km
Osijek	289.76	53.65	917.80	10.80	1,272.01
Rijeka	259.29	371.06	1,207.85	0.0	1,838.2
Split	169.40	427.71	1,293.06	0.0	1,890.17
Zagreb	527.83	415.60	1,830.52	0.00	2,773.95
Total[2]	**1,246.28**	**1,268.02**	**5,249.23**	**10.80**	**7,774.33**

[1] Length of each individual line has been double counted in the total length of lines
[2] Condition as at 31 December 2022

Number of substations and transformers in the transmission grid

Transmission area	Number of substations (pcs.)				Number of fields with switches (pcs.)			
	4400/ x	220/ x	110/ x	TOTAL	400	220	110	TOTAL
Osijek	1	1	21	23	9	5	150	164
Rijeka	1	5	42	48	7	42	233	282
Split	1	6	49	57	11	45	287	343
Zagreb	1	3	54	59	18	27	381	426
TOTAL	**6**	**15**	**166**	**187**	**45**	**119**	**1,051**	**1,215**
Transmission area	**Number of transformers (pcs.)**				**Installed capacity (MVA)**			
	4400/ x	220/ x	110/ x	TOTAL	400/	220/	110/	TOTAL
Osijek	2	2	32	36	600	300	1,082	1,982
Rijeka	2	9	29	40	800	1,270	820	2,890
Split	3	9	40	52	1,100	1,450	1,648	4,198
Zagreb	6	5	45	56	1,900	750	1,583.5	4,233.5
TOTAL[1]	**13**	**25**	**146**	**184**	**4.400**	**3,770**	**5,133.5**	**13,303.5**

[1] Condition as at 31 December 2022

GRI 2-6

Ancillary services

The increase of renewable energy sources' share in the structure of electricity generation as well as the introduction of new technologies in energy generation and storage, results in higher demand for ancillary services of the transmission system operator. In line with the Grid Code of the Transmission System in Croatia the following ancillary services have been defined: frequency maintenance (primary regulation as well as secondary and tertiary frequency regulation and the exchange capacity), regulation of voltage and reactive power, independent start of power plants (the so-called 'black start') and island operation. Pursuant to technical rules of ENTSO-E and legal regulation, HEP Proizvodnja and HOPS individually contract obligatory provision of ancillary services at a regulated price. HOPS pays fees to HEP Proizvodnja, as the obligatory provider of ancillary services, as stated in the document entitled Methodology for determining prices of ancillary service provision.

In 2022 HEP Proizvodnja had at its disposal sufficient regulatory capacities to manage the electric power system. In addition, HEP power plants' structure and features enable HEP's competitive position at the regional market of ancillary services. Along with contractual mediation of HOPS, HEP Proizvodnja offers foreign grid operators the remaining part of available regulatory capacities for the needs of system safety in the European interconnection, which was the case in 2022 as well.

GRI 2-6

Electricity distribution

HEP Operator distribucijskog sustava (HEP ODS) is the only energy entity in Croatia performing regulated electricity distribution and it is responsible for managing, maintaining, constructing and developing the distribution grid, from transmission grid to all billing metering points of grid users. HEP ODS is obliged to enable all customers and electricity producers the access to the grid and its use under the same conditions. In this respect electricity producers are natural or legal persons that generate electricity in line with conditions under the Electricity Market Act.

Grid users are divided into household and commercial category. For grid users from household and commercial category HEP ODS performs the activity of electricity distribution, i.e. grid access through the procedure of connection to the distribution grid and grid use. Grid user is the prosumer, which uses connected power plant for own needs, and delivers electricity surplus in the grid. In the procedure of connection HEP ODS examines the option of connecting, it determines optimal technical solution of the connection and defines technical, economical and other conditions of connecting the building to the grid, as well as the conditions of constructing the connection and creating conditions in the grid. HEP ODS also provides support to all suppliers and other subjects at the electricity market.

Electricity distribution in 2022

Systematic long-term planning of distribution grid is based on 10-year development plans. In 2022 HEP ODS continued to improve the quality of supply, which is made up of voltage quality, reliability of electricity supply and service quality. The year was also marked by the adaptation of HEP ODS to the adoption of new legal regulations as well as amendments thereto connected to electricity market and the promotion of using energy from renewable sources.

Activities connected to the increase of efficiency and safety of electricity supply were conducted in HEP ODS during 2022. They were accompanied by reconstructions, expansion and increase of transformation power in substations. Activites connected to business digitalization, increase of a number of users for providing ancillary services, personal data protection and increase of cyber security of information-communication system in line with the recommendations of ISO 27002 norm were also implemented. Losses in the distribution grid were reduced in 2022 from 7.21 percent of incoming energy in the distribution grid in 2021 to 7.13 percent in 2022, i.e. from 1.212 TWh to 1.199 TWh. In 2022 there was the total of 27,028 substations of a higher voltage level 110/ 35 (20) and 10 (20) kV.

Length of constructed underground and overhead lines of distribution grid in regulated activity

Voltage level	Overhead lines/ km	Cables / km	Submarine cables / km	Total[1] / km
Lines 35(30) kV	2,97.,5	1,417.6	144.7	4,535.8
Lines 20 kV	4,914.4	6,379.8	-	11,294.2
Lines 10 kV	15,179.7	11,736.6	256.3	27,172.6
Grid 0.4 kV	43,139.2	18,628.7	-	61,767.8
Home connections (0.4 kV)	23,257.1	13,909.4	-	37,166.5
Total[1]	**89,463.8**	**52,072.1**	**401.0**	**141,936.9**

[1] Condition as at 31 December 2022

Number of billing metering points (BMP) in the distribution grid at high and medium voltage in 2022 increased by 2 percent and at low voltage by around 1 percent in comparison to 2021.

Number of BMPs in the distribution grid by voltage levels and tariff models

Users	Number of users
HV1 - 110 kV	4
MV1 - 35 (30) kV	104
MV - 10 (20) kV	2,418
Total HV and MV[1]	**2,526**
LV1 – commercial (blue)	39,230
LV – commercial (white)	125,524
LV – commercial (red)	32,675
LV – commercial (yellow)	22,255
LV – household (blue)	691,515
LV – household (white)	1,595,131
LV – household (red)	2,335
LV – household (black)	2,857
Total LV[1]	**2,511,522**

[1] HV = high voltage; MV = medium voltage, LV = low voltage

Status of users of self-service facilities in 2022

Number of users of self-service facilities[1]	3,804
Number of users that lost the status of a user of a self-service facility	210

[1] Prosumer

Installation of smart meters with remote reading

A multi-annual project of distribution grid modernization continued in 2022. Its aim was to equip all billing grid users with smart meters by the end of 2030. The installation of smart meters results in the improvement of the following: billing process, temporary discontinuation and resumption of electricity delivery, control of exceeding connecting power, consumption asymmetry, control of billing metering point operation and determining unauthorized energy consumption.

Number of installed smart meters in 2022	111,140
Total number of installed smart meters from the beginning of installation to the end of 2022	470,000
Share of installed smart meters in the total number of meters in the distribution grid	18.7 %

Almost all 44,769 (99%) billing metering points with the connecting power exceeding 20 kW (industry and small entrepreneurship), which measure slightly more than a half of the total energy consumption, is equipped with smart meters.

Reliability of electricity supply

In 2022 there were more (SAIFI) planned supply outages, with a lower indicator (CAIDI), which reflects a shorter average duration of supply outage, thus indicating a more effective implementation of planned works. Weather conditions in 2022 were slightly more favourable in comparison to 2021, so they did not cause an increased number of unplanned power outages. HEP ODS pays special attention to the organization and coordination of works as well as to the improvement of program support for supervising the reliability of supply (DISPO application). Deviations from trend are of stochastic nature and they are possible in the years of highly unfavourable weather conditions, as well as in years marked by a higher number of breakdowns resulting from deteriorated equipment.

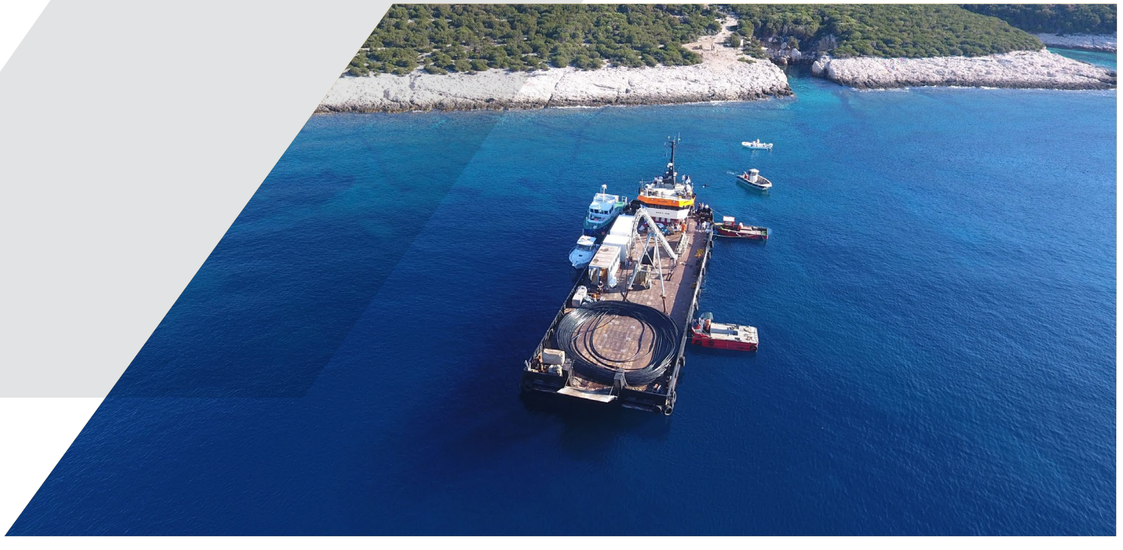
Year	Planned outages – all voltages			Unplanned outages – all voltages with force majeure			Unplanned outages – all voltages without force majeure			Total outages – all voltages		
	SAIFI	SAIDI (min)	CAIDI (min)	SAIFI	SAIDI (min)	CAIDI (min)	SAIFI	SAIDI (min)	CAIDI (min)	SAIFI	SAIDI (min)	CAIDI (min)
2022	0.89	135.76	152.42	1.57	122.54	78.07	1.19	75.95	63.97	2.46	258.30	104.99

Investments in the distribution grid

The development of distribution grid in 2022 was financed from own funds, but it was also financed and co-financed by the EU funds.

Status of EU projects for distribution grid development

Name and status of EU project in 2022	Project aim
Project Sincro.Grid, co-financed from CEF • completed in 2022	Optimization of voltage conditions in the transmission system, voltage stabilization in the distribution grid and the increase of capacity for connecting renewable energy sources to the distribution system.
Smart Grid Pilot Project from the European Regional Development Fund • ongoing	The increase of automation level of medium-voltage overhead and underground grid, the increase of flexibility in grid management, elimination of malfunctions and restoration of electricity supply to grid users.
ATTEST project, co-financed from the Horizon 2020 program • ongoing	Development of open and modular program platform with tools for optimum management, data exchange, planning and development as well as advanced management of transmission and distribution grid assets, with the purpose of transmission and distribution system operators' work optimization.
Project Modernization of Croatian distribution electric power grid from the National recovery and resilience plan • ongoing preparation of application documents • HEP ODS began preparatory investment from own funds until the publication of tender	Development of advanced grid, installation of submarine cables in the distribution grid for island power supply, modernization of the grid in Natura 2000 areas and the construction of microenergy grid in the areas with special developmental features.



GRI 2-6

Electricity supply

Electricity supply of custmers in Croatia is a public service and a market activity. The activity of electricity supply in HEP Group is performed by HEP Elektra and HEP Opskrba in Croatia, by HEP Energija in Slovenia, Serbia and BiH. All HEP Elektra customers are customers from Croatia. In 2022 HEP's market share in electricity supply of customers in Croatia amounted to 92.7 percent.

Communication with the customers of HEP Elektra and HEP Opskrba customers, information on the number of received and resolved complaints, the description of activities for improving service and communication with customers as well as benefits for HEP Opskrba customers are described in the chapter *Our customers and grid users*. Economic performance indicators in the part referring to electricity sale are described in the chapter *Business performance indicators* and in *Annex - Abridged Consolidated Financial Report of HEP Group business operations in 2022*. The obligation and status of HEP Elektra and HEP Opskrba regarding fulfilling the obligation of achieving energy savings are described in the chapter *Energy and energy fuels*.

Electricity supply in 2022

In 2022 HEP sold 15.3 TWh of electricity to customers in Croatia, marking an increase of 0.6 TWh in comparison to 2021. Customers abroad were sold the total of 2.2 TWh of electricity, which is a decrease of 0.5 TWh in comparison to 2021. Out of 15.3 TWh HEP Elektra sold to its customers the total of 6.85 TWh of electricity, and HEP Opskrba 8.45 TWh. The information on electricity generation and procurement is stated in the chapter *Electricity generation and procurement*.

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Public service of electricity supply – HEP Elektra 2022

HEP Elektra is the only energy entity in Croatia authorized to provide the public service of electricity supply and it is obliged to provide universal service for household customers and guaranteed service for commercial customers.

Universal service ensures household customer the right to the public service of electricity supply under same conditions on the whole territory of Croatia. HEP Elektra as the holder of public service has no option of free contracting of service with customers, and the price list is publicly available and the same for all customers, depending on the category and tariff model. Guaranteed service is the service of electricity supply for commercial customers, provided by a guaranteed supplier, under the same conditions on the whole territory of Croatia to end customer which remains without a supplier under certain circumstances. Tariff items determined under the Methodology for determining tariff item amounts for guaranteed electricity supply and the Decision on tariff item amounts for guaranteed electricity supply are applied to commercial customers, users of public service as part of guaranteed service. The Croatian Energy Regulatory Agency (HERA) defines the Methodology and tariff item amounts for customers within guaranteed supply.

In 2022 the number of HEP Elektra customers increased by 2 percent in comparison to 2021, and the number of customers in the household category rose by 2.18 percent, while it fell by 6.59 percent in the commercial category. The amount of sold electricity to HEP Elektra customers in 2022 increased in total by 3.52 percent and it amounted to 6.85 TWh (6,854 GWh).

Number of billing metering points of HEP Elektra customers by categories

Customer category	Number of BMP[1] customers	2022/2021 %
Household	2,087,229	2.18
Commercial	83,340	-6.59
Total	**2,170,569**	**1.81**

[1] BMP=billing metering point

Sale of electricity by BMPs[1] of HEP Elektra customers and voltage levels

Customer category	Number of BMPs	2022/2021 %	Sale / GWh	2022/2021 %
High voltage	1	/	0	-100.00
Medium voltage	351	8.67	283	131.97
Low voltage - commercial	79,042	-6.94	823	12.74
Low voltage – public lighting	3,946	-0.35	59	210.53
Total commercial category	**83,340**	**-6.59**	**1,164**	**33.03**
Low voltage - household	2,087,229	2.18	5,690	-0.99
Total low voltage	**2,170,217**	**1.81**	**6,571**	**1.17**
Total	**2,170,569**	**1.81**	**6,854**	**3.52**

[1] BMP=billing metering point

Structure of electricity sold to HEP Elektra customers

HEP Elektra publishes information about the *structure of electricity* sold to customers on its websites. The information is published after the Croatian Energy Market Operator (HROTE) reports on the structure of electricity at the market (in July of the current year for the previous calendar year).

Restoration of electricity supply following a temporary discontinuation

In 2022 HEP Elektra filed the total of 12,927 requests to HEP ODS for the restoration of electricity supply to the end customer, following the cessation of reasons, due to which electricity supply was temporarily discontinued. Within one day 12,704 requests for restoration of electricity supply were resolved, or 98.27 percent.

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Electricity supply at the market – HEP Opskrba 2022

HEP Opskrba's electricity price consists of two parts, market and regulated part. Regulated part is the same for all suppliers and no supplier affects the regulated part of the price.

The customers of HEP Opskrba are divided in household customers and commercial customers. Electricity for customers from the commercial category is calculated by *tariff models*, depending on the size of the customer and the type of consumption.

Tariff models for HEP Opskrba customers from the commercial category

Name of tariff model	Customer category it is intended for
HEP PRO	Key customers – big plants, shipyards, big buildings, hospitals etc.
HEP OPTI	Small entrepreneurs working in more shifts
HEP MAX	Small entrepreneurs working in one shift
HEP LUX	For public lighting

The total number of HEP Opskrba customers in 2022 increased by 21.8 percent in comparison to the year before. The number of household customers increased by 20.6 percent and of commercial customers by 24.4 percent.

Number of HEP Opskrba customers by categories

Customer category	Number of customers	2022/2021 %
Household	72,866	20.6
Commercial	33,128	24.4
TOTAL	**105,993**	**21.8**

Electricity sale by BMP of HEP Opskrba customers and voltage levels

Customer category	BMP[1] number	2022/2021 %	Sale / GWh	2022/2021 %
High voltage	145	-1.4	997	95.0
Medium voltage	1,847	12.8	3,644	103.0
Low voltage - entrepreneurship	107,225	19.2	3,281	111.8
Low voltage – public lighting	17,956	11.3	258	88.4
Total commercial	**127,173**	**17.9**	**8,180**	**104.7**
Low voltage - households	87,868	20.6	306	109.6
Total low voltage	**213,049**	**19.0**	**3,845**	**9.7**
Total	**215,041**	**19.0**	**8,486**	**104.9**

[1] BMP=billing metering point

Number of HEP Opskrba customers with tariff models including energy from RES

Customer category - commercial	Zelen 100%	Zelen 76%	Zelen 50%	Zelen 20%	Zelen 10%	Zelen 31%	Zelen 25%	TOTAL
Number of customers	2,295	1	10	1	4	1	1	2,313
MWh	2,607,962	148	2,532	1,152	78,913	5,094	55	2,695,856

Energy from renewable energy soures (RES) is sold by tariff models including energy from renewable energy sources in a certain percentage, i.e. 100%, 76%, 50%, 20%, 10%, 31% and 25%.

ZelEn – energy from renewable energy sources

HEP Opskrba was the first at the electricity market in Croatia to offer a unique product– ZelEn. This is green energy generated exclusively from renewable sources. In 2022 energy for ZelEn was generated in HEP's hydro power plants and its wind power plant.

All the proceeds from the sale of ZelEn are collected in the fund, from which we realize projects from the field of renewable energy sources and energy efficiency in institutions taking care of socially vulnerable category of public sector service users, such as kindergartens, schools, nursing homes and similar institutions. *The results of the tender* for financing projects from the ZelEn fund are published on our websites.

Structure of electricity sold to HEP Opskrba customers

HEP Opskrba publishes at its website *reports on the structure of electricity* sold to customers. The information is published after the Croatian Energy Market Operator (HROTE) reports on the structure of electricity at the market (in July of the current year for the previous calendar year).

GRI 2-6

Heat energy generation, distribution and supply

Heat energy generated in HEP is heat for heating and process steam for industry. Heat energy is generated from renewable energy sources, i.e. wood chips and fossil fuels – natural gas, extra light and light fuel oil in the facilities operated by HEP Proizvodnja and HEP Toplinarstvo. HEP Toplinarstvo distributes and supplies heat energy. All heat energy generation plants are located in Croatia.

The data on the amount and type of used fossil fuel and wood chips for heat energy generation is shown in the chapter *Energy and energy fuels*, and the information on emissions in the air resulting from heat energy generation is shown in the chapter *Emissions into the air*. The obligations of heat energy supplier, HEP Toplinarstvo in achieving energy savings are described in the chapter *Reducing energy consumption among customers*. Economic indicators connected to heat energy are described in the chapter *Business results* and in *Annex - Abridged Consolidated Financial Report of HEP Group business operations in 2022*.

GRI 2-6

Heat energy generation

Heat energy is generated in four combined heat and power plants (TE-TO Zagreb, EL-TO Zagreb, TE-TO Sisak and TE-TO Osijek) and in two biomass-fired cogeneration plants (BE-TO Sisak and BE-TO Osijek). Heat energy is generated for the district heating systems (DHS) of the cities of Zagreb, Sisak and Osijek and the operator of combined heat and power plants and biomass-fired cogeneration plants is HEP Proizvodnja. Energy activity of heat energy generation in district heating systems of the cities of Zagreb, Osijek and Sisak is performed as a public service. The prices for it, i.e. tariff items are regulated and determined by HERA, pursuant to the Methodology for determining tariff item amounts for heat energy generation. All four combined heat and power plants are a part of the EU-ETS, but as opposed to electricity, where for each emitted tonne of CO_2 one has to buy a greenhouse gas emission unit (EUA) and put it on the account of the plant opened in the EU registry, for a part of CO_2 emissions from heat energy generation HEP Proizvodnja is entitled to get free EUA. The description of HEP's obligations connected to EU ETS can be found in the chapter *Greenhouse gas emissions*.

During 2022 heat energy was generated in 27 individual boiler rooms (special heating plants) in the towns of Velika Gorica, Samobor and Zaprešić and in a smaller part of the city of Zagreb. The operator of these facilities is HEP Toplinarstvo. Boiler rooms for heating towns are not a part of EU ETS, since their capacity is lower than 20 MWt. The boiler rooms of HEP Toplinarstvo, which emitted more than 450 tonnes of CO_2 in 2022 pay the fee to the Environmental Protection and Energy Efficiency Fund (FZOEU).

Plants, types of fuels and capacities for heat energy consumption in 2022

Number and type of plant	Type of fuel	Heat – nominal capacity [MWt]	Process steam – Nominal capacity [t/h]/[MWt]
Renewable energy sources			
Two biomass-fired cogeneration plants (BE-TO)	Wood chips	2x10	2x 12/10
TOTAL BE-TO		**20**	**24/20**
Fossil fuel sources			
Combined heat and power plants (TE-TO and EL-TO)			
TE-TO Zagreb	Natural gas/light fuel oil	508	334/272
EL-TO Zagreb	Natural gas	257.5	245/191
TE-TO Sisak	Natural gas/light fuel oil	0	133,5/100
TE-TO Osijek	Natural gas/light fuel oil	167	160/127
TOTAL TE-TO and EL-TO		**932.5**	**872.5/690**
Boiler rooms for heating towns			
The total of 27 boiler rooms for heating the cities/towns of Zagreb, Velika Gorica, Zaprešić, Samobor and Osijek	Natural gas/ extra light fuel oil	130.89	-
TOTAL boiler rooms		**130.89**	**0**

Heat energy generation in 2022

In 2022 the total of 2.27 TWh of heat energy was generated, marking a decrease of 0.18 TWh, i.e. 7.2 percent in comparison to the year before. The plants of HEP Toplinarstvo generated 0.098 TWh, and cogeneration plants of HEP Proizvodnja generated 2.17 TWh of heat energy. In total generated amounts 25.9 percent refers to the generation of process steam, and 74.1 percent to heat generation. In the total heat energy generated in 2022, BE-TO Osijek and BE-TO Sisak generated 4 percent, i.e. 0.09 TWh from renewable energy sources.

GRI 2-6

Heat energy distribution and supply

HEP-Toplinarstvo performs energy activity of heat energy distribution in line with the licence obtained from HERA and concluded concession agreements for heat energy distribution. The distribution grid of HEP Toplinarstvo contains around 300 km of hot water pipeline network and 65 km of steam pipeline network. Heat energy distribution is a regulated activity, and the prices, i.e. tariff items are determined by HERA based on the Methodology for determining tariff item amounts for heat energy distribution. HEP-Toplinarstvo also performs the energy activity of heat energy supply in line with HERA's licence.

As part of the stated activities it purchases heat energy in the district heating system (DHS) from heat energy producers and sells heat energy to customers, and in the closed heating system it purchases ingoing energy fuel volumes for their transformation in heat energy and delivers heat energy to customers. The activity of heat energy supply is a market activity, for which the price is determined according to market principles. HEP Toplinarstvo has a licence from HERA for the activity of heat energy buyer. This is a market activity and the price is determined by market principles.

Heat energy distribution and supply in 2022

The number of customers of HEP Toplinarstvo increased by 1.1 percent, i.e. by 1,378 customers in comparison to 2021 as a result of connecting new buildings to the distribution grid. Customers in Zagreb, Osijek, Sisak, Velika Gorica, Samobor and Zaprešić are ensured continuous and safe heat energy supply.

Number of heat energy customers in 2022

Customer categories	2022	2022/ 2021 %
Household	125,513	1.1
Industry and business premises	6,399	0.9
TOTAL	**131,912**	**1.1**

Restoration of heat energy supply following a temporary discontinuation

As a result of debts for delivered heat energy, HEP Toplinarstvo temporarily discontinued its supply to 21 customers. Upon settling their obligations, heat energy delivery was restored to customers.

Investments in the revitalization of heat energy distribution grid in 2022

Name and status of EU project in 2022	Objectives
Revitalization of hot water pipeline network in the City of Zagreb • ongoing, but the project implementation process was affected by extraordinary events, i.e. the influence of previous pandemic years and Ukrainian – Russian crisis (disruption in supply chains, increase of prices of transport, goods, works and services) • the total value of the project exceeds EUR 92 million, and the eligible project cost is EUR 73.8 million. EUR 55.9 million of that amount is financed through non-refundable grants from the European Regional Development Fund, which presents more than 75 percent of eligible cost • Steps have been taken towards the City of Zagreb, as the intermediary body of integrated territorial investments and towards the Mnistry of Regional Development and EU Funds for procedure implementation, for the so-called project phasing • So far 30 kilometers of the network has been revitalized	• Revitalization of 68.5 km out of 227.3 km of Zagreb's hot water pipeline network • Increase of reliability and safety of the district heating system of the City of Zagreb • Reduction of heat losses by approximately 28 percent, of process water replenishment losses by around 47 percent and of a number of emergency interventions in the parts of reconstructed hot water pipeline by 90 percent • CO_2 emission reductions after the completion of revitalization by 11,104 tonnes in comparison to the condition before revitalization
Replacement of connecting pipeline from TE-TO to Osijek heating plant • Implemented in the period from 2021 to 2023 • The total value of the project is EUR 12.3 million, EUR 6.2 million being non-reimbursable grant from the European Regional Development Fund allocated as part of the Operational programme "Competitiveness and Cohesion 2014 – 2022" • All planned works were completed during 2022 and so far 70 percent, i.e. a bit more than two thirds of the connecting hot water pipeline route has been replaced (3,076 meters out of 4,350 meters) • in 2023 the remaining 1,274 meters of the route need to be replaced	• revitalization of 4.4-kilometer deteriorated hot water pipeline network 4 • increase of energy efficiency of the hot water pipeline system and continuation of safe and reliable heat energy delivery • creating preconditions for further development of heat energy system and its transformation in a modern and efficient system of remote heating of the fourth generation • reduction of losses in heat energy distribution and thus achieving savings in heat energy generation in Osijek as well as the reduction of carbon dioxide emissions. All planned works were completed in 2022, and so far 70 percent, i.e. a bit more than two thirds of the connecting hot water pipeline has been replaced (3,076 meters out of 4,350 meters), so in the final year of the project 1,274 meters of the route need to be replaced.

GRI 2-6

Gas distribution and supply

HEP Plin with its headquarters in Osijek performs the activity of distribution of natural gas and its supply to customers, wherby it is obliged to provide standard and non-standard services. Standard services are all those whose costs are contained in the fee for *grid use or the price of gas*. The description of non-standard services, which contains the name and unit price for each service can be found in the *price lists of non-standard services* for gas distribution and supply.

Customers from the household category use the service of supply as public service or guaranteed supply pursuant to *contractual relations with the supplier*. Customers that cannot be put in the household category belong to the non-household category. These are legal persons registered to perform certain activities prescribed for supplying to legal persons, in line with market operating principles, i.e. free contracting of mutual relations. *Grid access*, i.e. connecting a building to the distribution grid is done by submitting a request, obtaining energy consent and signing the connection agreement and the construction of gas connection.

Gas distribution and supply in 2022

The number of HEP Plin customers increased by 30.53 percent, i.e. by 42,201 customers in comparison to 2021. This increase is a result of the takeover of gas supply companies and of appointing HEP Plin guaranteed supplier in line with the Regulation amending the Regulation on the elimination of distortions at the domestic energy market as at 14 September 2022. Under the stated Regulation HEP Plin started providing the service of guaranteed gas supplier as at 1 October 2022 to all commercial customers, whose gas supply agreement expired during the period of validity of Regulation.

Number of gas customers in 2022

Customer category[1]	2022	2022/2021 %
Household TM1-TM4	117,695	24.62
Commercial TM1-TM8	20,522	64.37
Commercial TM9-TM12	31	32.26
TOTAL	**138,248**	**30.53**

[1] TM = tariff model

Investments in the gas distribution grid in 2022

Gas pipeline location	Status
Osijek-Baranja County • gas pipeline in the industrial zone of Donji Miholjac	Construction of 2.3 kilometers of gas pipeline • completed in 2022 • financed from own funds
Osijek-Baranja County • gas pipeline for the neighbourhood of Gašinci	30% of works realized as planned • financed from own funds
Virovitica-Podravina County • gas pipeline for the neighbourhoods of Kapinci and Vaška	Construction of 12.8 kilometers of gas pipeline • completed in 2022 • financed from own funds
Vukovar-Srijem County • gas pipeline for the neighbourhood of Lipovac	Construction of 5.2 kilometers of gas pipeline • completed in 2022 • financed from own funds

Gas quality

HEP Plin regularly publishes its monthly or semimonthly *reports on gas quality* on its website.

GRI 2-6

Liquefied natural gas business

LNG Hrvatska performs a regulated energy activity of managing the liquefied natural gas (LNG) terminal, and is responsible for its work, maintenance and development. The aim of LNG terminal on the island of Krk is to ensure energy demands and to increase the safety of supply via new natural gas supply route for the countries of Central and Southeast Europe. *LNG Hrvatska d.o.o.* is a company co-owned by HEP d.d. (75%) and Plinacro d.o.o. (25%), and it publishes information on its website, which also refers to managing the impact on the environment, society, human rights and economy.

Liquefied natural gas business in 2022

LNG Hrvatska publishes separate annual reports on business operations, and in HEP Group Annual and Sustainability Report for 2022 there is information on carbon dioxide CO_2 emissions (eq), which are a consequence of LNG terminal operation, and refer to HEP. Greenhouse gas emissions are shown in the chapter *Greenhouse gas emissions*.

GRI 2-6

Central chemical-technological laboratory for fuel testing

Central chemical-technological laboratory (CKTL) of HEP Proizvodnja has been accredited as a testing laboratory for fuel and waste oil, coal, coke and solid biofuels. It is the only accredited laboratory for the complete testing of solid fuels in Croatia. Accreditation procedure was conducted by the Croatian Accreditation Agency (HAA) in line with the provisions of the internationally recognized standard HRN EN ISO/IEC 17025. The laboratory works as independent, impartial and complete and permanently provides a good service to its clients. Testing in CKTL is conducted using cutting-edge equipment under Croatian, European and international norms, and if necessary, the laboratory develops own methods. Due to its recognition and work quality, it became a testing body for the certification procedure of pellets under EN Plus® standard in 2019. CKTL is a member of the Croatian Association of Laboratories – CROLAB and works actively as part of the Club of analytical laboratories.

Central chemical-technological laboratory for fuel testing in 2022

In 2022 CKTL performed oil testing for clients within HEP Group, but also for external customers both in Croatia and in Europe. In 2022 the laboratory continued to cooperate with faculties of the University of Zagreb through implementation of exercises and expert visits. Due to the scope of testing conducted in line with accredited methods, students came to the Laboratory to get educated, both in the field of analytical examinations and of implementing quality assurance in the laboratory.

GRI 2-6

Managing and financing energy efficiency projects

HEP ESCO develops, implements and finances energy efficiency projects in line with market principles and it provides complete service in energy field with repayment through savings. Its service encompasses project development, implementation and financing, in such a manner that savings are achieved in energy and maintenance costs, which leads to investment return. Projects include modernization, reconstruction and restoration of existing plants and facilities. So far HEP ESCO has implemented a series of projects from the field of public lighting, building management, industry and energy supply system, which lead to energy savings and reductions of greenhouse gas emissions. Upon investment return, HEP ESCO exits the project and leaves all benefits of the project to the client, particularly the reduction of costs for energy and maintenance. Energy management for bigger clients includes supervision and management of energy systems, on-line monitoring of energy consumption and saving through energy system optimization. From the beginning of its operation HEP ESCO has been connected to international organizations, such as the World Bank (WB), Global environment facility (GEF), the German KfW Development Bank (KfW) and United Nations Development Programme (UNDP).

HEP ESCO coordinates companies on HEP Group level with an aim of fulfilling obligations under the Energy Efficiency Law and the Energy Efficiency Obligation Scheme. HEP Group obligations and coordination of all obligations are described in the chapter *Energy and energy fuels*. HEP ESCO also implements the Benefit scheme in cooperation with HEP Opskrba and activities connected to HEP ZelEn plus program.

Managing and financing energy efficiency projects in 2022

Activities in the field of sale and implementation of projects financed by *ESCO model* continued in 2022. The implementation of the *Benefit scheme in cooperation with HEP Opskrba* and HEP ZelEn plus program continued, as well as the implementation of energy efficiency and renewable energy source projects through ZelEn donation. HEP ESCO also continued with the sale and implementation of *SGE services* at the market.

GRI 2-6

Telecom-munication services

HEP Telekomunikacije provides telecommunication support to HEP Group business operations, i.e. it manages telecommunication infrastructure and system. Its founders are HEP d.d., HOPS and HEP Operator distribucijskog sustava. Telecommunication infrastructure includes all passive telecommunication equipment and systems (optical infrastructure, antenna poles etc.), and telecommunication system includes all active network equipment, related systems and equipment (software for management and supervision etc.). HEP Telekomunikacije has exclusive jurisdiction to define general telecommunication rules, standards and procedures when developing and exploiting HEP Group telecommunication infrastructure and system, as well as to plan, start, develop, construct and maintain stated telecommunication infrastructure and system.

Users of services of HEP Telekomunikacije outside HEP Group are producers of energy from renewable energy sources, telecom companies in Croatia, foreign energy companies, state institutions and companies in state or private ownership.

Telecommunication services in 2022

The use of system for providing the service of public cloud continued in 2022, which created preconditions for expanding services and making a step forward in the ongoing 5G era. The supervision and maintenance of all HEP Group and HOPS members important for the management of HEP's electric power system, continued. HEP Telekomunikacije is the owner of optical grid, which stretches all over Croatia and is the basis of the telecommunication system.

GRI 2-6

Nastavno obrazovni centar (NOC)

HEP Nastavno obrazovni centar is a regional institution for education of adults in the field of energy and is a place where experts from the field of electric power meet and cooperate. It is also a place of co-operation in education for the technology of live-line working with secondary vocational schools and faculties of electrical engineering. Along with education we offer the service of testing personal protective equipment and resources used for the maintenance of electric power facilities. The founder of this institution is HEP Operator distribucijskog sustava.

Nastavno obrazovni centar (NOC) in 2022

Programs for *professional development and training as well as courses and seminars* for taking professional examinations were implemented in 2022. HEP NOC laboratory for control and testing provided services of periodical examination of insulation and review of tools as well as personal protective equipment in line with *standardized test methods*.

GRI 2-6

Managing non-operating assets

HEP Upravljanje imovinom manages leisure facilities at 33 locations in Croatia and it performs the activity of managing and maintaining non-operating assets of HEP d.d. and business premises in HEP Group headquarters. Employees have at their disposal 185 accommodation units (apartments, studio apartments, hostels) with the total of 593 beds.

GRI 2-6

Managing non-operating assets in 2022

The construction of multi-purpose operating building of ELTO Zagreb continued in 2022, and HEP Upravljanje imovinom continued to coordinate construction works. Also, the activities connected to the renovation of leisure facilities in Rogoznica, Preko and Biograd continued in 2022, while the activities on leisure facilities in Mali Lošinj, Opatija and Biograd were completed. In 2022, like every year, there was an internal competition for the use of leisure facilities of HEP Group companies' employees, and the total number of overnight stays was 34,048.

4

HEP GROUP EMPLOYEES AND SUPPLIER'S EMPLOYEES

HEP Group operates in all Croatian counties and in the countries where it has its subsidiaries – Slovenia, Bosnia and Herzegovina and Kosovo. HEP Opskrba operates at the Slovenian market via its daughter company HEP Energija d.o.o. Ljubljana, and HEP – Trgovina d.o.o. operates via its daughter companies HEP Energija d.o.o. Mostar, HEP Energija d.o.o. Beograd and HEP Energija sh.p.k Priština. HEP Proizvodnja d.o.o. is the founder of the company CS Buško Blato. Nuclear power plant Krško d.o.o. is co-owned by HEP d.d. and GEN Energija. The information about employees is kept for the companies with headquarters in Croatia, which are fully owned by HEP Group and for the employees of CS Buško Blato in BiH.

The information on HEP Group employees, which is significant for annual and sustainability report, is kept by the type of employment contract, gender, professional qualification, age, number of hours of training, by employees' managerial and operative function, by employees with disabilities, employees who used parental leave and so on. Fixed-term employment contract and permanent employment contract are defined by the Labour Act. The information on employees according to GRI standards 401 – 407, i.e. from 11.10.2 to 11.10.3 is described as part of our material topic *Our employees*.

HEP Group supply chain in 2022 comprised the total of 8,555 suppliers. There were 153 foreign suppliers and 8,402 national suppliers. Employees of HEP's important suppliers were engaged in jobs connected to transport and fuel manipulation, construction of new generation facilities and electric power plants as well as reconstruction and maintenance of the existing ones.

GRI 2-7
GRI 2-8

GRI 2-7
GRI 202-2

HEP Group employees

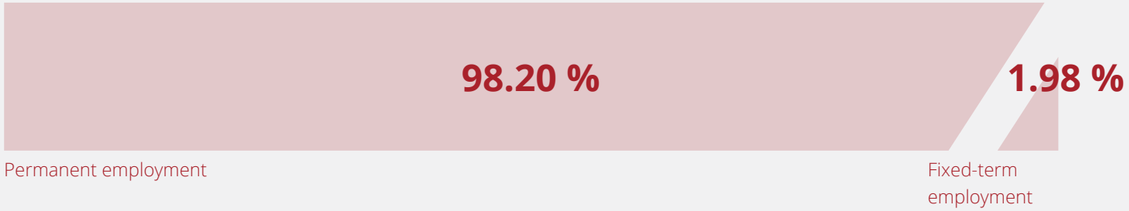
As at 31 December 2022 the total number of HEP Group employees was 10,578, which is 18 employees more than the year before, when there were 10,560 employees. The number of employees with permanent employment contract in 2022 totalled at 10,369, which is 62 more than in 2021, when this number totalled at 10,307. There were 209 employees with fixed-term contract in 2022, which is 44 less than in 2021, when this number totalled at 253. Fixed-term contracts are concluded with employees pursuant to the Labour Act, i.e. in case of replacing a temporarily absent employee or for the job, the duration of which is limited by a deadline or the occurrence of a certain event.

389 new employees were hired in 2022, which is 50 more than in 2021, when this number amounted to 339. The total number of employees who stopped working in 2022 was 412, which is an increase of 97 employees in comparison to 2021, when 315 employees stopped working. The main reason of their stopping working were retirement and further professional development outside HEP Group.

Our employees by gender and type of employment contract in 2022

Type of employment contract / gender	Women	Men	Total
With permanent contract	2,372	7,997	10,369
With fixed-term contract	36	173	209
Total	**2,408**	**8,170**	**10,578**

Employees by employment contract duration in 2022



GRI 2-8

Supplier's employees

HEP Group does not keep record on the number, fluctuations and reasons of employees' fluctuations among their suppliers. As part of public procurement procedure HEP Group companies define, on the basis of ESPD form (European single procurement document), among others, mandatory grounds for excluding economic entities from procedures that are not related to employees. Economic entities are excluded from the procurement procedure, if the economic entity is either a member of a governing, or a supervisory body or is a member with the power of representation, decision making or supervision convicted for child labour or other forms of human trafficking or if the economic entity has not fulfilled obligations to pay taxes or obligations for retirement or health insurance. When conducting the public procurement procedures, the grounds for excluding economc entities are determined based on the certificate of good conduct and tax administration office certificate on tax debt, which economic entity shall deliver as athe integral part of the bid.

In order to collect data for 2022 on the number of employees, their fluctuations and reasons of their fluctuation, we sent questionnaires to suppliers, which were compiled pursuant to Consolidated GRI standards for 2021. The questionnaires were sent to important suppliers, and their importance was defined according to the amount of paid financial means for services, goods and works as well as their engagement in an important project. Out of 113 suppliers, to which the questionnaire was sent, 16 suppliers answered and all 16 delivered the information on the number and fluctuation of employees in 2022. The results of information collected on suppliers' influence on the society and human rights are described in the chapter *Influence of supply chain on the society and human rights*.

CORPORATE GOVERNANCE

This chapter describes HEP Group's management structure, its power and responsibilities, delegation of responsibilities of managing influences on the middle management level and the role of mangement structure in sustainability reporting.

Management structure, appointments, responsibilities and composition

Management structure consists of the General Assembly of HEP d.d., Supervisory Board of HEP d.d., Audit Committee of the Supervisory Board, Internal Audit Department of HEP d.d. and Management Board of HEP d.d.

GRI 2-9

General Assembly of HEP d.d

General Assembly of HEP d.d. consists of one shareholder of the Republic of Croatia, i.e. its proxy. The General Assembly decides on issues set by the Companies Act and the Articles of Association. The General Assembly passes the Articles of Association and its amendments. It appoints and revokes Supervisory Board members, it makes a decision on the use of profit, it revokes members of the Management and Supervisory Boards, it appoints the auditor, it decides on the increase or decrease of equity capital, it decides on status changes and dissolution of the company and it performs other work in line with the law and the Articles of Association.

Members of the General Assembly of HEP d.d. in 2022

- Tomislav Ćorić from 15 February 2018 to 5 May 2022
- Davor Filipović from 6 May 2022

GRI 2-9

Supervisory Board of HEP d.d. and Audit Committee of the Supervisory Board

Pursuant to the Articles of Association of HEP d.d., the Supervisory Board may have 7 members at the most, one being the President. The Supervisory Board of HEP d.d. in 2022 had 4 members, one being the President and as of 15 June 2023, the Supervisory Board has 5 members. One member is appointed and revoked by the Works Council under the provisions of the Labour Law, and other members are appointed and revoked by the General Assembly of HEP d.d. The Decision of the General Assembly on the appointment and revoking of Supervisory Board members becomes effective on the day of its adoption. The term of office of Supervisory Board members lasts four years and upon its expiry Supervisory Board members may be reelected. Members of the Supervisory Board choose the President and Vice President from their own ranks. The provisions of the Anti-discirimination Act and the General Data Protection Regulation (GDPR) are followed in the process of appointing members.

The Supervisory Board supervises business management: it appoints and revokes the Management Board of HEP d.d., it examines and reviews business records, documentation, treasury, securities and other documents related to HEP's d.d. operations. It gives consent to annual financial reports drawn up by the management board, gives prior consent to Management Board's decisions when set under the Articles of Association, it submits reports to the General Assembly on implemented supervision, especially financial operations and their adaptation to business records, and it performs other activities set by the law and internal rules of HEP d.d.

Members of the Supervisory Board are people whose knowledge and experience guarantee good, neat and conscientious performing of said function. When doing the job of supervising HEP's d.d. operations, the Supervisory Board may perform said supervision independently or may hire special experts. The Supervisory Board and its each member shall protect the interests of HEP d.d.. In 2022 50 percent of the members of the Supervisory Board were women, and currently women make up 40 percent of Supervisory Board membership.

Members of the Supervisory Board of HEP d.d. in 2022 until 28 March 2023

- Goran Granić, President
- Jelena Zrinski Berger, member
- Lukša Lulić, member
- Meri Uvodić, member, employee representative

The term of office of the 11th convocation of the Supervisory Board expired as at 28 March 2023. Pursuant to the Decision of the General Assembly as at 9 June 2023, the 12th convocation of the Supervisory Board was elected and it was constituted at the meeting of the Supervisory Board as at 15 June 2023.

Members of the Supervisory Board of HEP-a d.d.

- Anton Kovačev, President
- Mladen Zeljko, member
- Jelena Zrinski Berger, member
- Lukša Lulić, member
- Meri Uvodić, member, employee representative

Members of the Audit Committee of the Supervisory Board of HEP d.d. as at 15 June 2023

- Goran Granić, President
- Boris Cota, independent member – external member
- Boris Tušek, independent member – external member

At the constituent session of the Supervisory Board held on 15 June 2023, pursuant to provisions stipulated by law and the Rules on Audit Committee operations adopted by the 8th convocation of the Supervisory Board, the Audit Committee of the Supervisory Board of Hrvatska elektropriveda d.d. was appointed.

Members of the Audit Committee of the Supervisory Board of HEP d.d. on 15 June 2023.

- Anton Kovačev, President
- Boris Cota, independent member – external member
- Boris Tušek, independent member – external member

GRI 2-9

Evaluation of Supervisory Board's work

Since 2018, as part of the project of corporate governance improvement, the work of Supervisory Board has been evaluated. Evaluation has been done by using an online questionnaire to assess the general pattern of work and functioning of supervisory boards as well as the list of competences of their members. Based on previous personal experience of participating in the work of the Company's Supervisory Board, its members have been asked to evaluate the representations of practices described in the statements in the work of the Company's Supervisory Board. The statements covered four aspects of functioning of the Supervisory Board: its efficiency, manner of work, engagement and cooperation of the Supervisory and the Management Board. Due to the expiration of Supervisory Board members' term of office as at 28 March 2023, the evaluation for 2022 was not completed.

GRI 2-9

Internal audit

Internal Audit Department is responsible for the corporate function of internal audit and is a part of HEP Group internal audit. The operation of internal audit is defined by the Act on the Internal Control System in the Public Sector, the Rules on organization and systematization of HEP d.d., Internal Audit Rules, which have been adapted to the International Professional Practices Framework (IPPF). The Rules are based on the principles of internal audit (integrity, objectivity, confidentiality, expertise) and it offers a good normative framework essential for the professional function of internal revision. The International Professional Practices Framework is an overview of professional rules and guidelines for the work of internal audit structured and integrated in a document published by the international professional association, the Institute of Internal Auditors – IIA Global. Internal Audit Department conducts internal audits in line with the Annual and Strategic plan of the Department adopted by the Management Board of HEP d.d. with the consent of the Audit Committee. The purpose of conducting internal audits is providing a reasonable guarantee to the Supervisory Board and Audit Committee as well as HEP's d.d. Management Board regarding efficiency, efficacy and the security of business system and processes, reliability and accuracy of information, adaptation of operations to laws, regulations and HEP's d.d. bylaws as well as HEP Group's plans and business policies. Also, with its recommendations for the improvement of business processes, Internal Audit Department helps HEP's d.d. Management Board and HEP Group's responsible management to improve the system of interal control and to reduce business risks. Pursuant to the Audit Act and the Act on the Internal Control System in the Public Sector, the Audit Committee is functionally in charge of the Internal Audit Department.

GRI 2-9
GRI 2-10
GRI 2-11

Management Board of HEP d.d.

Management Board of HEP d.d. consists of four members, one of whom is the President of the Management Board. Supervisory Board of HEP d.d. appoints and revokes the President and the members of the Management Board. The decision on the appointment and revoking of the President and the members of the Management Board becomes effective on the day of its adoption. The term of office of the President and the members of the Management Board lasts four years and a special agreement is concluded with them, stipulating their rights and obligations (salary, fees, contract termination, notice period etc.), and the decision on appointment, i.e. revoking is made by the Supervisory Board of HEP d.d., which also concludes the agreement with them. When making decisions on annual financial reports, General Assembly makes a decision on granting a discharge to Board members. General Assembly may make a decision on giving a vote of no confidence to Management Board members. If the General Assembly refuses to grant discharge or gives vote of no confidence to all or some Management Board members, the Supervisory Board may consider whether these Management Board members should be revoked. The provisions of the Anti-discirimination Act and the General Data Protection Regulation (GDPR) are followed in the process of appointing members.

HEP's d.d. Management Board represents and manages operations of HEP d.d. in line with the Corporations Law, the Articles of Association, the Rules on the work of Management Board and other internal acts and decisions. The Management Board makes decisions in order to achieve business strategy, business plans and programs and it conducts activities resulting from a mutual aim and it works legally within and for the benefit of HEP d.d. The Management Board is obliged and authorized to undertake all activities and make decisions it finds necessary to successfully manage those operations.

For the purpose of executing managerial tasks and powers, the Management Board carries out the following activities:

- It manages business activities of HEP d.d.,
- It defines and implements the business policy and takes care of fulfilling mid- and long-term plans,
- It carries out the decisions of the Supervisory Board and General Assembly and it undertakes measures and gives instructions for their implementation,
- It adopts general acts and organizational regulations,
- It represents and acts in the name of HEP d.d. and it signs contracts as part of the law and Articles of Association,
- It proposes decisions from the scope of work of the Supervisory Board and General Assembly,
- It reports to the Supervisory Board on business policy and other principle issues of future ooerations as well as deviations from earlier predictions while providing reasons for those; on business profitability, particularly profitability of own capital use; business flow, income and condition of HEP d.d.; operations that may be highly significant for business profitability and liquidity of HEP d.d.,
- It submits annual financial reports to the Supervisory Board,
- Once a year it submits a written report on the state of affairs in HEP d.d. to the General Assembly,
- It submits a written consolidated annual report to the General Assembly,
- It appoints members of assembleys, i.e. supervisory boards of companies which are under HEP's d.d. supervision or which it has significant influence,
- It appoints and revokes the employees of HEP d.d. with special authorities and responsibilities,
- It adopts staff and employment plans,
- it proposes and takes necessary measures and issues direct orders to ensure operations of the Company, especially the safety and the operation of the electric power system;
- It performs other work-related tasks in line with the law and rules of HEP d.d.

Management Board members are obliged to direct, coordinate and monitor operations from the activities they are responsible for and in charge of and to report to the Management Board on the conditions of the operations from said activities as well as to propose making decisions at the Management Board sessions.

At its session on 30 December 2022 the Supervisory Board of HEP d.d. appointed HEP's Management Board on the proposal of the Croatian Government, for the term of office of four years commencing as at 1 January 2023. The appointed President of the Management Board is Frane Barbarić and the members are: Tomislav Šambić, Petar Sprčić and Vice Oršulić.

Memebers of the Management Board of HEP d.d.

- Frane Barbarić, President as at 1 January 2018, term of office prolonged as at 1 January 2023
- Petar Sprčić, member as at 1 January 2018, term of office prolonged as at 1 January 2023
- Tomislav Šambić, member as at 1 January 2018, term of office prolonged as at 1 January 2023
- Vice Oršulić, member as at 1 January 2023

GRI 2-12
GRI 2-13
GRI 2-17

The role of Management Board in sustainability issues and responsibility delegation

In line with the corporate governance model of HEP Group, HEP d.d. manages operations and performs a part of operations in the field of corporate functions and it directs, coordinates and monitors activities in affiliated companies. Each Management Board member is an executive in charge of certain corporate functions, and the Management Board makes a decision on the responsibility of each member and reports about it to department heads of HEP d.d. and HEP Group companies.

Since sustainability goals refer to society, human rights, economy and environment, each Management Board member directs, coordinates and monitors the achievement of goals set under HEP2030 strategy, through the operations from activities they are responsible for and in charge of. They report about it to other Management Board members and propose decision-making at Management Board sessions. The Management Board delegates responsibilities for fulfilling operational goals, as well as goals set under HEP2030 strategy, to department heads of HEP d.d. and HEP Group companies. Department heads of HEP d.d. and HEP Group companies formally report on the achievement of business goals to the Management Board at their sessions, regularly once a week. Departments of HEP d.d. and HEP Group companies submit to HEP's d.d. Controlling Department a report on the work of the Department at least once a year, and if necessary more often. The Controlling Department integrates this data for the Management Board. The reports contain information on achieved goals for the previous period, the information on the realization of procurement plan, on employees and salaries, operational expenses and set goals for the forthcoming period, which include goals from the field of sustainability – society and human rights, ecology and economy.

The responsibilities for achieving operational goals are delegated on employees based on the description of jobs in rules on organization and systematization and by setting up teams at HEP Group level and/or at the level of each company. The team is appointed by the President of the Management Board of HEP d.d. or directors of companies, depending on the business goal and members. Team leaders and/or their deputies report to the directors of companies on the results of team work.

Achieving sustainability goals is integrated in the systems of managing quality, energy, environment, occupational health and safety as well as information security in line with ISO standards described in the chapter *Strategies, policies and business practices*.

GRI 2-14
GRI 2-17

The role of Management Board in sustainability reporting

HEP Group Annual and sustainability report for 2022 is the ninth one and from the very beginning employees of HEP d.d. departments and HEP Group companies have been included in its making. Based on businesss analyses, employees participate every year in defining and revising material topics, each in their own responsibility and taking into account positive and negative influences of business operations on sustainability goals. Previous years external experts also participated in the making of this report, and they helped us in structuring collected information, so we would fulfil the requirements of GRI standards. Before the Management Board, each report was reviewed and approved by department heads of HEP d.d. and directors of HEP Group companies, each within their purview. Before its publication, the Management Board approved the report at its sessions. After six published reports, in 2020 the Management Board of HEP d.d. formalized a working group which consisted of employees and it appointed a HEP Group team for creating non-financial sustainability reports and ESG rating (Team). External shareholders are also included in the evaluation of material topics, and the manner of including shareholders for 2022 and the methodology of determining important shareholders is described in the chapter *Material topics*. Revised and updated material topics for 2022, lists of shareholders and suppliers included in the evaluation of material topics and the evaluation of shareholders' influence on society, human rights and the enviromnet were adopted by the decision of the Management Board at their session.

Team members, like HEP Group's employees gain their knowledge, skills and experience by performing everyday work and on internal and external courses, seminars and congresses, the subject of which being business sustainability. The information on emploeyees' education is stated in the chapter *Our employees*.

GRI 2-15
GRI 205-1
GRI 205-2
GRI 11.20.1
GRI 11.20.2
GRI 11.20.3
GRI 12.20.1
GRI 12.20.2
GRI 12.20.3

Conflict of interest

Code of Ethics

New *Code of Ethics* was adopted in 2019 and it states the loyalty obligations of Management Board members, companies' directors and HEP employees and it forbids participation in any activity that may lead to the conflict of interest and have a negative effect on HEP's business operation and image. The Code of Ethics states activities which members of the Management Board, companies' directors and employees may not do. Apart from the conflict of interest, the Code of Ethics also defines the rules of good behaviour of all employees and members of the Management Board as well as of HEP Group companies' directors, and those are based on the Constitution, laws, the Code of Ethics of the Croatian Chamber of Commerce, valid Anti-corruption Strategy with the accompanying Action plan and other accompanying implementation documents and general acts of the companies within HEP Group. The Code of Ethics defines principles of business conduct and it contains provisions and ethical principles related to: confidentiality and business secrecy, data protection, taking and giving gifts, human rights, working in a safe way, environment protection, public relations, procedures of employment and transfer/promotion of employees etc. The ethics committee promotes and suggest measures for strengthening ethical standards in HEP.

In order to prevent conflict of interest, HEP Group also publishes and if necessary updates a *list of economic entities in conflict of interest with HEP d.d. and HEP Group companies* as contractors in public procurement procedures. HEP d.d. and HEP Group are not allowed to conclude contracts with the listed economic entities. The practice of procurement in HEP Group is described in the chapter *Public procurement*.

GRI 205-1
GRI 205-2
GRI 11.20.1
GRI 11.20.2
GRI 11.20.3
GRI 12.20.1
GRI 12.20.2
GRI 12.20.3

Action plan for the implementation of the Anti-corruption program of the Croatian Government

HEP has been implementing the Action plan for the implementation of the Anti-corruption program of the Croatian Government for predominantly state-owned companies. The aim is to strengthen responsibility and transparency, to create preconditions for preventing corruption on all levels and to affirm the attitude of zero tolerance of corruption. There were no events connected to corruption in HEP Group during 2022.

GRI 2-16
GRI 2-25
GRI 2-26

Reporting to the Management Board

Reporting to the Management Board of HEP d.d. and to directors of HEP Group companies refers to reporting on the complaints to ethics commissioner and to HEP Group Ethics committee about events connected to employees' rights in line with the Labour Act and security and other event reporting in HEP Group.

Ethics committee and ethics commissioner

The procedures of complaint examination by ethics commissioner as well as HEP Group Ethics committee include the declaration of the other side with relevant documents. If it is possible, there is a conversation with both sides, so as to gain better insight in the subject and to make an opinion more easily. In this process it is cooperated with all organizational units and individuals, and particular emphasis is put on collecting feedback from participants in the procedure about how the issue has been solved. Furthermore, among other jobs, Ethics committee analyses the violation of the Code of Ethics and supervises its application, under provisions of the Code of Ethics. It reports to the Management Board of HEP d.d. at least twice a year, and if necessary more often about the implementation of the Code of Ethics and its observations.

The report of Ethics committee on the structure of received complaints in 2022

	Total	Founded	Unfounded
Number of received complaints	148	66	82
Number of solved complaints	148	66	82
- Number of anonymous complaints	0	0	0
- Number of non-anonymous complaints	148	66	82
Number of non-anonymous complaints by HEP's employees	0	0	0
Number of non-anonymous complaints by suppliers	0	0	0
Number of non-anonymous complaints by other interested legal and natural persons	148	66	82
Number of complaints by topics/fields			
a) work relations	1	0	1
b) discrimination	0	0	0
c) corruption	1	0	1
d) conflict of interest	1	0	1
e) nepotism	0	0	0
f) public procurement	1	0	1
g) customer relation	9	2	7
h) calculation and billing	89	38	51
i) connection to LV network	36	25	11
j) unauthorized consumption	0	0	0
k) other	10	1	9
Total	**148**	**66**	**82**

Employees' rights

Pursuant to the provisions of the Labour Act, an employee believing the employer violated their right from work relations may require the exercise of that right from the employer, fifteen days upon submitting the decision which is considered to have violated their right, i.e. after their realization of right violation. The President of the Management Board makes a decision on the requests submitted by HEP's d.d. employees, and for other HEP Group companies this decision is made by their directors.

Security and Other Event Reporting

The rules on the manner of reporting about security and other events in HEP Group define the procedure of immediate and timely reporting to authorized persons in HEP d.d. and HEP Group companies about occurrences, incidents, extraordinary events, accidents, catastrophes and other negative events, which may have or have influence on business operations, security, protection of persons and property, complete infrastructure, environment and image of HEP d.d. and HEP Group companies. The centre for monitoring and operations has been set up as a unique communication centre on the level of HEP Group companies for receiving, collecting, processing and transferring data and information, for reporting to the Management Board of HEP d.d. and other authorized persons of HEP d.d. and HEP Group companies. The Rules are published in the internal newsletter in electronic form and are available to HEP Group employees.

GRI 2-18
GRI 2-19
GRI 2-20

Assessment of Management Board's efficiency, remuneration policy and setting fees

Pursuant to Article 22 of the Accounting Act (OG 78/15, 134/15 and 120/16) Hrvatska elektroprivreda d.d. makes a Statement on the implementation of the Corporate Governance Code. In 2022 the Corporate Governance Code was implemented in corporate governance of companies in which Croatia has shares and/or stocks (OG 132/17 and 52/18).

HEP d.d. adheres to the provisions of the Code with an exception of provisions whose implementation is not applicable and practical in a given moment. Said exceptions are as follows:

- Dividend policy was not adopted as it falls within the jurisdiction of HEP's d.d. owner i.e. the Republic of Croatia. Dividend is paid out in accordance with the Budget Act and the National Budget Execution Act
- HEP d.d. did not introduce an independent compliance officer, but is in the process of setting up said mechanism
- The Supervisory Board did not set up the employee reward and motivation system, in particular with reference to the Management Board, as the salaries and other remuneration made in favour of the President and members of the Management Board are defined under the Decision on determining salaries and other remuneration of the president and members of the Management Board (OG 83/2009, OG 77/2014)
- Remuneration paid to the members of the Supervisory Board is not defined according to the contribution to the company's performance as each member of the Supervisory Board receives a fixed and set remuneration amount in accordance with the Decision of the General Assembly of HEP d.d. as of 30 April 2009 adopted pursuant to the Decision of the Croatian Government class 120-02/09-01/14, file no.: 5030105-09-1 dated 2 April 2009
- The evaluation of the work of the Management Board, middle management and committees carried out by the Supervisory Board in terms of defined company targets during the previous period does not exist. However, some mechanisms acting as measures as defined in the Corporate Governance Action Plan are being set up. Said Plan also foresees the establishment of the Audit Committee competence for the selection, appointment and revocation of an internal auditor.

GRI 2-21

Total annual fee ratio

The information on the total annual fee for the best paid employee in the company is a business secret pursuant to Article 8 of the Rules on business secret and classification of information (HEP's Newsletter 534 as of 17 January 2023 and Newsletter 422 as of 2 June 2017, Article 6).

6

STRATEGIES, POLICIES AND BUSINESS PRACTICES

The chapter describes HEP Group's strategies and polices and business practices as well as the contribution of HEP Group's strategies, policies and business practices to sustainability goals on the global, EU and Croatian level.

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

Global and EU sustainability policies

Sustainable development is the basic principle of the Treaty on European Union and the primary goal of EU internal and external policies. The UN 2030 Agenda for Sustainable Development contains seventeen global sustainable development goals, which are expected to be used by the UN members when creating their development programs and policies by 2030. All the sectors within a country should direct their policies towards achieving sustainable development goals.

The 2019 European Green Deal continues the implementation of global and European policies for reducing the effect on the environment, emphasising the reduction of effect on climate as well as the adaptation to climate changes and protection of biological diversity, which started at the UN Conference on Environment and Development in Rio de Janeiro in 1992. The Kyoto Protocol ensued, and in 2016 the signatory states of the Paris Agreement obliged to implement policies and measures, so that the increase of average global temperature on Earth was reduced to 1.5° (2°) at the most by the end of 2100 in comparison to the pre-industrial era. Adoption of the "Fit for 55%" package marked the beginning of harmonizing legal regulations for greenhouse gas emissions by 55 percent until 2030, in comparison to 1990. When the European Climate Law became effective, this goal became obligatory on the EU level. In this respect the transition towards the EU climate neutral economy has to be socially just and it needs to promote innovations and competitiveness of EU members' industry, while it simultaneously ensures similar conditions, in comparison to the economy of the third countries. Furthermore, in May 2022 the European Commission adopted the REPowerEU Plan, as a reaction to distortions at the global energy market caused by the Russian invasion of Ukraine. The Plan defines goals of reducing dependence on Russian gas, the implementation of measures for additional reduction of consumption and energy savings as well as for accelerating the process of obtaining licences and construction of renewable energy sources. Apart from goals for achieving climate neutrality and adapting activities to climate changes as well as protecting biological diversity, EU adopted a series of regulations, directives and other bylaws, which have been transferred to national legal regulations of member countries and refer to the protection of water and sea, to prevention and control of pollution as well as to managing raw materials, products and materials under the principles of circular economy, so as to reduce waste generation and avoid landfilling.

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

Global and EU sustainability policies

The UN member countries shall also adapt their operations to the requirements connected to human rights' protection and occupational safety stated in the UN Guiding Principles on Business and Human Rights, including the principles and rights from the ILO Declaration of the Fundamental Principles and Rights at Work as well as the International Charter of Human Rights.

In order to direct investments into ecologically sustainable activities according to technical criteria for a significant contribution and 'do no significant harm' (DNSH) principle for six ecological goals as well as to fulfil minimum protective measures for human rights' protection and occupational safety, the European Commission adopted a package of legal regulations in 2020 referring to ecologically sustainable business, the so-called EU Taxonomy. Pursuant to the provisions of the EU Taxonomy, non-financial companies, property managers, credit institutions, investment companies and insurance and re-insurance companies shall report on key indicators of success, i.e. turnover, capital expenditure (CapEx) and operative expenditure (OpEx) related to ecologically sustainable activities.

Energy sector to which HEP Group belongs, i.e. electricity and heat energy production and distribution as well as gas distribution, is one of the sectors which can mostly influence the environment, so the goals, which HEP Group shall fulfil are within all the previously stated global and EU policies of sustainable development. HEP Group has also made a step forward in the sector of road traffic through the construction of infrastructure, i.e. charging stations for electric and hybrid vehicles, by which it contributes to the Croatian achievement of goals for road traffic decarbonisation.

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

Croatian sustainability policies and strategies

As a UN and EU member, Croatia adapts its strategies and policies to global and EU sustainability policies, and in energy sector these refer to: the Croatian Energy Development Strategy until 2030 with an outlook to 2050, the Croatian Low-Carbon Development Strategy until 2030 with an outlook to 2050, the Croatian Climate Change Adaptation Strategy until 2040 with an outlook to 2070 and the National Energy and Climate Plan for the Republic of Croatia (NECP) which are adapted to global and EU sustainability policies every five years, the first having been drawn up in 2019.

HEP Group's sustainability policies and strategies

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

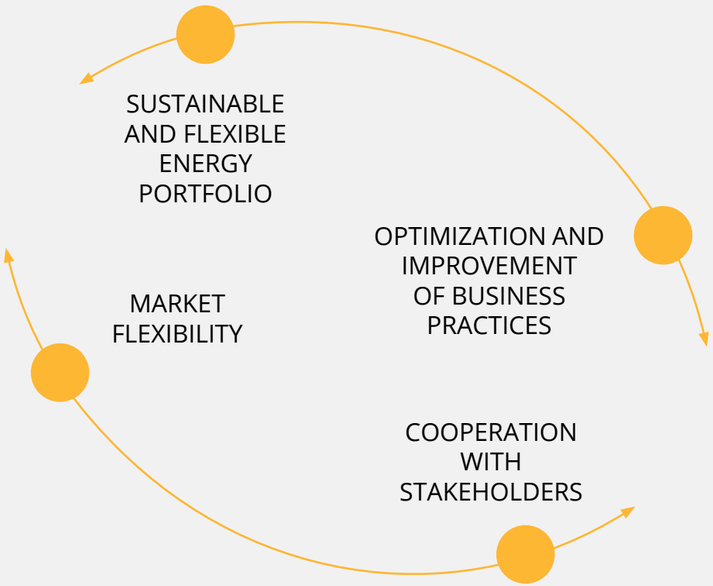
The chapter describes HEP Group's strategic goals by 2030, which are adapted to strategic goals on the global and EU level as well as integrated systems of managing quality, environment, energy, health protection and safety as well as information security in line with ISO standards.

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

HEP2030 Strategy

In its strategic document on development and business by 2030, HEP 2030, HEP Group defined its *strategic business goals*, which were published on our websites. Strategic business and development goals are connected to the sustainability goals from the field of society, human rights, ecology and economy. Global and EU policies, as well as Croatian policies are continuously adapted on the basis of analyses of fulfilling UN's 17 sustainable development goals as well as amended goals set by the European Green Deal and individual goals for EU member countries, so HEP2030 strategy is a document which is being continuously adapted to global and EU sustainability policies.

HEP Group's strategic business goals by 2030



GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 12.2.1

Management systems by ISO Standards

The following companies have *integrated and certified management systems according to ISO standards* 9001:2015, 14001:2015, 50001:2018 i 45001:2018: HEP d.d., HEP Upravljanje imovinom, and HEP Proizvodnja. HEP Toplinarstvo has introduced and certified integrated systems of quality, environment and energy management and HEP Operator distribucijskog sustava has introduced and certified systems of environment, quality, health protection and occupational safety management. HEP Opskrba has adopted and certified system of quality management. HEP d.d. has introduced and certified system of information security management in line with ISO 27001:2018 standard. HEP's d.d. Management Board adopted and published the Policy of quality, environment protection, energy, occupational health and safety management for HEP d.d. and HEP Upravljanje imovinom d.o.o. The Management Boards of HEP Proizvodnja, HEP Operater distribucijskog sustava and HEP Toplinarstvo adopted and published their policies for integrated systems in line with ISO standards and HEP Opskrba for quality management.

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

Contribution of HEP Group's business operations to global, EU and Croatian sustainability policies

Sustainability goals on the global, EU, Croatian and HEP Group level are shown below. Sustainability policies are continuously changing and adapting to set goals on the global level on the basis of *monitoring results of achieving set goals*. Although all measures and activities are conducted to achieve global sustainability goals, HEP's contribution was shown in the table, and we connected the goals on the global, EU, Croatian and HEP Group level with HEP Group's strategic goals, material topics, whose setting procedure we described in the chapter *Material topics* and indicators from the 2021 Consolidated GRI standards as well as HEP Group's business results in 2022.

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainable development goals

HEP Group contributes to the UN Sustainable Development Goals, and in order to determine them, we used the European Comission tool SDG Mapper. With the help of SDG Mapper three direct goals have been determined, together with the relevant UN subgoals of sustainable development to which HEP Group actively contributes:

- SDG 7: Affordable clean energy
- SDG 12: Responsible production and consumption
- SDG 13: Climate protection and adaptation to climate changes.

Taking into consideration that SDG Mapper uses a loaded document (HEP Group Annual and Sustainability Report for 2021 was loaded) to determine the appearance of key words in the document, and connects them to UN's 17 sustainable development goals, apart from 3 stated goals, we determined additional 4 goals, we contribute to:

- SDG 8: Decent work and economic growth
- SDG 15: Preservation of life on land
- SDG 6: Clean water and sanitation
- SDG 11: Sustainable cities and communities.

Sub-goals applicable to HEP Group and relevant indicators were added to UN Sustainable development goals. The list of UN Sustainable Development goals was made according to the contribution of HEP's business operations to stated goals on the basis of SDG Mapper tool, and not according to the ordinal number of each goal.

Information in the table should be observed combined with tables in the following chapters: *Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal* and *Contribution of HEP Group's business operations to Croatian sustainability policies*.

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals

UN Sustainability Goal	UN Sustainability Development Goals subgoals and indicators of goal achievement	HEP Group's strategic goals	HEP Group's material topics 2022	HEP Group's business results in 2022 and GRI indicators
Affordable and clean energy 	**7.1.** universal access to modern energy **7.1.1.** share of population with access to electricity	Owning various sources of electricity which may be included in generation, depending on the condition and prices of energy fuels at the market and in that manner provide sustainability and flexibility of the system Implementation of advanced grids focusing on the conventional grid development emphasising automation, advanced grid management and operation Defining and creating new products and services at the market, in all market segments at the wholesale and retail market, with an aim of keeping the current market share in Croatia and increasing the share at regional markets Establishment (setup, strengthening) of effective and user-friendly business operations	Our customers Energy and energy fuels Local communities	100% of the Croatian population has access to electricity, and HEP's market share in supplying electricity to customers in 2022 amounted to 92.7% SPP Črnkovci – construction began in 2022 based on the Agreement on cooperation on solar power plant projects between HEP and local government units 470,000 installed smart meters with remote reading by end 2022, i.e. 18.7% of the total number EU projects to modernize and improve the distribution grid – Sincro Grid, Smart Grid Pilot Project, ATTEST and Modernization of the Croatian distribution grid ZelEn product – 100% energy from RES for customers and tariff models including energy generated from renewable energy sources Implementation of projects under ESCO model, Benefit program for HEP Opskrba customers, HEP ZelEn plus program, SGE services HRK 165 million of solidarity allowance paid to combat energy poverty - SocialWatt **GRI 2-6/203-1/203-2/301-1/413-1**
	7.2. increase of global percentage of renewable energy **7.2.1.** share of energy from renewable energy sources in the total final energy consumption	45% energy from renewable energy sources in HEP's generation portfolio by 2030 Owning various sources of electricity which may be included in generation, depending on the condition and prices of energy fuels at the market and in that manner provide sustainability and flexibility Examining the options of other business expansion models through customer acquisition and/or generation capacities or partnership in realizing energy projects	Our customers Energy and energy fuels Local communities Business results	41.334% of energy generated from renewable energy sources (HPP, SPP, WPP, BE-TO), 21.384% from nuclear energy, 37.283% from fossil fuels SPP Stankovci and SPP Obrovac began to operate – in total 9.85 MWe Construction of SPP Donja Dubrava, SPP Radosavci and SPP Jambrek started – in total 24.8 MWe SPP projects in preparation– in total 83.5 MWe Reconstructions of existing hydro power plants with an aim of ensuring availability – GA HPP North, GA HPP West, GA HPP South Construction and construction preparation of HPS Kosinj and upgrade of HPS Senj to increase the total installed capacity by 412 MWe Energy storage in SPP Vis – installed battery Heat accumulators in TE-TO Zagreb and EL-TO Zagreb – in operation and in progress Conducted examination of HEP's suppliers about consumption and sources of consumed energy **GRI 2-6/201-1/201-2/203-1/203-2/301-1/308-1**

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals

UN Sustainability Goal	UN Sustainability Development Goals subgoals and indicators of goal achievement	HEP Group's strategic goals	HEP Group's material topics 2022	HEP Group's business results in 2022 and GRI indicators
Responsible consumption and production 	**12.4.** responsible chemical and waste management **12.4.2.** (a) dangerous waste generated by inhabitant; and (b) share of processed dangerous waste by type of processing	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Encouraging continuous improvement of employees' competence and innovation and effective knowledge management at a corporate level	Waste Education and training	All HEP's thermal power plants and combined heat and power plants have installed security management systems and policies of preventing major accidents - management of chemicals Employees working with dangerous chemicals and responsible persons are obliged to attend the Program of acquiring knowledge on protection from dangerous chemicals by the Croatian Institute of Public Health 91.7 % of the total generated waste was recovered – 67,231.48 t 8.3 % of the total generated waste was disposed of in landfills– 6,081.39 t 2.29 % of the total generated hazardous waste – 1,677.13 t and 97.71% i.e. 71,635.74 t of non-hazardous waste **GRI 303-1/306-1/306-2/306-3/306-4/306-5/404-2/11.6.2/12.6.2/12.6.4**
	12.5. significantly reduce waste generation **12.5.1.** national rates of recovery, the amount of recovered waste in tonnes		Waste Public procurement Education and training	Waste is managed by the waste management order of priority – priority is given to avoiding waste generation, reuse, material and energy recovery in order to avoid landfilling Almost all waste resulting from the electricity generation process in TPP Plomin 2 was taken over by surrounding cement plants, which used it in its generation process 8 procedures were implemented pursuant to green public procurement criteria HEP Akademija – education for employees on waste management Waste is managed as part of the Environmental management system in line with ISO 1004:2015 standard **GRI 204-1/306-1/306-2/306-3/306-4/306-5/404-2/11.5.4/11.5.5/11.5.6**
	12.6. encouraging companies to adopt sustainable practices and reporting on sustainability **12.6.1.** number of companies publishing sustainability reports		Responsible corporate governance Education and training	HEP Group has been reporting about influences on the environment and society since 2000 Consolidated non-financial reports have been published in line with GRI standards on HEP Group's websites since 2015 Under the Decision of HEP's Management Board in 2020 HEP Group's team for creating non-financial reports and ESG rating was formalized Employees participate in internal and external workshops on sustainability reporting **GRI 2-12/2-13/2-14/2-17/404-2**

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals

UN Sustainability Goal	UN Sustainability Development Goals subgoals and indicators of goal achievement	HEP Group's strategic goals	HEP Group's material topics 2022	HEP Group's business results in 2022 and GRI indicators
Climate action 	**13.2.** integrating measures against climate changes into national policies, strategies and planning **13.2.2.** total annual emissions of greenhouse gases	Owning various sources of electricity which may be included in generation, depending on the condition and prices of energy fuels at the market and in that manner provide sustainability and flexibility 45% of energy from renewable sources in HEP's generation portfolio by 2030	Energy and energy fuels Emissions into the air Influence of the supply chain on the environment	Scope 1 – 3,443,321 tonnes of CO_2 (eq) Scope 2 – not applicable for HEP Group Scope 3 – 2,058,884 tonnes of CO_2 (eq) 62.718% of the total electricity generated in 2022 with emission intensity of 0 gCO_2/kWh (HPP, RHPP, SHPP, SPP, VPP and NPP Krško) Construction of renewable sources for electricity generation - the list of projects can be found under Goal 7, Affordable and clean energy Reconstructions of existing hydro power plants to ensure the availability of the plants and electricity generation from renewable soures Construction and re-constructon of high-efficiency cogenerations for the production of electricity and thermal energy -– EL-TO Zagreb CCPP Reducing losses in distribution grid from 7.21 percent in 2021 to 7.13 percent of energy input in 2022 Increase of energy efficiency and reduction of CO_2 emissions by 11,104 tonnes following the revitalization of 68.5 km of hot-water pipeline network in the City of Zagreb Increase of energy efficiency and reduction of CO_2 emissions after the completion of the project Replacement of the connecting pipeline from TE-TO to the heating plant of Osijek Implemented activities for long-term insurance of NPP Krško availability – capacity and generation increase HEP Akademija – education of employees corporate governance according to ISO standards – environment and energy CapEx according to the EU taxonomy in taxonomy eligible and alignedactivities 32 % Income according to EU taxonomy from taxonomy eligible and aligned activities 37.9% OpEx – according to EU taxonomy in taxonomy eligible and aligned activities 30.4 % HEP Group started examining HEP's suppliers on greenhouse gas emissions in 2022 **GRI 2-6//201-1/201-2/301-1/302-5/305-1/305-2/305-3/305-4/305-5/11.1.6/11.2.2/306-1/306-2/308-1**

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals

UN Sustainability Goal	UN Sustainability Development Goals subgoals and indicators of goal achievement	HEP Group's strategic goals	HEP Group's material topics 2022	HEP Group's business results in 2022 and GRI indicators
Decent work and economic growth 	**8.8.** protection of labour rights and promotion of safe working environment **8.8.1.** fatal and non-fatal injuries per 100,000 workers, by gender and migrant status **8.8.2.** level of national compliance with labour rights (freedom of association and collective bargaining) based on textual sources of the International Labour Organization (ILO) and national legislation by gender and migrant status	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Encouraging continuous improvement of employees' competence and innovation and effective knowledge management at a corporate level	Our employees Health protection and security Responsible corporate governance Public procurement Education and training Local communities Influence of the supply chain on the environment	Managing health protection and occupational safety under certified Systems of managing health protection and occupational safety in line with ISO 45001:2018 Standard - HEP Proizvodnja, HEP ODS, HEP Toplinarstvo, HEP d.d. and HEP Upravljanje imovinom 125 occupational injuries, and 2 with fatal outcome HEP's Collective Agreement – extension signed as at 6 July 2021 and it is in effect until 31 December 2023 5 trade unions in HEP Group - Hrvatski elektrogospodarski sindikat (HES), Nezavisni sindikat radnika HEP-a (NSRHEP), Strukovni sindikat radnika HEP-a (TEHNOS), Sindikat energetike, kemije i nemetala (EKN) and Hrvatski elektrodistribucijski sindikat (HEDISS) Suppliers excluded from the public procurement procedures are the ones: in which there is a danger of child labour, forced labour as well as the ones that cannot prove regular salary payment or payment of benefits to workers 237 HEP Group employees used the right to parental leave HEP Group's supply chain consisted of the total of 8,555 suppliers, 153 of which were foreign and 8,402 were national, whereas there were 113 important suppliers (procurement of energy, energy fuels and equipment for electric power plants) HEP has an Action plan for promoting and establishing gender equality in HEP Group, Policy of diversity and non-discrimination, Rules on the procedure and measures of male and female employees' dignity and it conducts gender and family responsible management policy - Mamforce Company Standard HEP signed the Diversity Charter and adopted the Policy and action plan for implementing Policy of diversity and non-discrimination Business according to the principles of the Code of Ethics HEP Akademija – education of employees for managing health protection and occupational safety Completed examination of HEP's suppliers on the protection of workers at work and human rights protection **GRI 2-30/401-3/403-1/403-2/403-3/403-4/403-5/403-6/403-8/403-10/405-1/418-1/11.9.2/11.9.3/11.9.4/11.9.6/11.9.8./11.9.9./11.9.10**

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals

UN Sustainability Goal	UN Sustainability Development Goals subgoals and indicators of goal achievement	HEP Group's strategic goals	HEP Group's material topics 2022	HEP Group's business results in 2022 and GRI indicators
Life on land 	**15.1.** preservation and restoration of terrestrial and freshwater ecosystems **15.1.2.** share of important areas for terrestrial and freshwater biological diversity included in protected areas, by the type of ecosystem	Designed and continuous use of all available communication channels with stakeholders to achieve business goals of the Group Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Encouraging continuous improvement of employees' competence and innovation and effective knowledge managemet at a corporate level	Biodiversity Emissions into the air Waters and wastewaters Waste Responsible corporate governance Local communities Influence of the supply chain on the environment	Procedures on the assessment of influence and the decision on the acceptability of the project on the evnironment and NATURA 2000 ecological network were published on the websites of the Ministry of Economy and Sustainable Development as well as County offices competent for environment protection – the public and interested public were involved in the prcedures Procedures of obtaining decisions on environmental permits were published on the websites of the Ministry of Economy and Sustainable Development - the public and interested public were involved in the procedures Thermal power plant operation is in line with the conditions from the Decision on environmental permits, during inspection supervision no non-conformities were identified Limit values of emissions into the air from medium combustion plants (they are not obliged to obtain the environmental permit) were not exceeded Managing effects on biodiversity, water, air and waste management under ISO 14001:2015 Standard – HEP-Proizvodnja, HEP ODS, HEP Toplinarstvo, HEP d.d. and HEP Upravljanje imovinom Information on waste was described under Goal 12, Reasonable consumption and production Agreement on cooperation while implementing protective measures, monitoring population and ringing of strictly protected species of white stork, LIFE Danube Free Sky project, LIFE SUPort project Regular removal of invasive species in GA HPP North – bivalve *Dreissena polymorpha* and plant water plague *Elodea* Completed examination of HEP's suppliers on the influence on the environment **GRI 2-6/2-12/2-13//303-2/303-3/305-7/304-1/304-2/304-3/304-4/306-3/306-4/306-5/308-1/11.4.3**
	15.5. protection of biological diversity and natural habitats **15.5.1.** red list of protected species			Species on the IUCN Red List of threatened species: • Implementation of prescribed measures of HEP ODS for the field of energy for 17 bird species • Implementation of measures of HEP Proizvodnja for preservation of 30 bird species, 8 species of other vertebrate and 4 types of habitat **GRI 304-4**

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals

UN Sustainability Goal	UN Sustainability Development Goals subgoals and indicators of goal achievement	HEP Group's strategic goals	HEP Group's material topics 2022	HEP Group's business results in 2022 and GRI indicators
Clean water and sanitation 	**6.3.** improvement of water quality, water treatment and safe reuse **6.3.1.** share of communal and industrial wastewaters which are treated prior to discharge	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Encouraging continuous improvement of employees' competence and innovation and effective knowledge management at a corporate level Designed and continuous use of all available communication channels with stakeholders to achieve business goals of the Group	Waters and wastewaters Responsible corporate governance Local communities Influence of the supply chain on the environment	Operation of the plants for generation of electricity and heat energy is in line with the requirements set by concessions, concessional terms for water use and water permits for water use and discharge of waste waters The total volume of 159,538 m^3 of captured water for sanitary consumption in HEP Group from the public water supply system, 158,181 m^3 of waste sanitary water in the public drainage system and 726 m^3 in natural terrestrial waters with previous treatment and 631 m^3 in the sea with previous treatment The total volume of 434,065,883 m^3 of captured water for the generation of electricity and heat energy (process and cooling water) and 431,931,969 m^3 of discharged waste waters in natural terrestrial waters and sea and the public water drainage system with prevous treatement of oil-saturated process and storm waste waters The total volume of 2,133,914 m^3 of used water for the generation of electricity and heat energy, i.e. 0.5% of captured waters Completed examination of HEP's suppliers on the influence on the environment **GRI 303-2/303-3/303-4/11.6.3/11.6.4/11.6.5**
	6.5. integrated management of water resources **6.5.2.** share of basins in the cross-border areas, on which some type of mutual cooperation is realized			The resolution of property and legal issues between Hrvatske vode and HEP Proizvodnja is in process, in order to obtain the concession for using water power for electricity generation in HPP Golubić, HPP Jaruga and HPP Ozalj Activities of determining the borders of public water resources were undertaken in 2022 in line with the Guidelines for defining the coverage of water structures and criteria for determining the borders of water resources for said plants and for accumulations Dubrava, Lokve, Sabljaci and Peruća All activities from the Annual program of activities in 2022 were implemented, pursuant to the Agreement on cooperation in the area of protection from harmful water effects, use and protection of water and common interest in the period 2019-2022, signed by HEP Proizvodnja and Hrvatske vode. In June 2022, a new agreement with Hrvatske vode was signed for the period 2023-2027 Technical foundation of HEP Proizvodnja d.o.o. for the preparation of the Water Area Management Plan 2022-2027 was made and submitted in 2022. It is connected to the permanent declaration of significantly changed river water bodies as a result of the influence of existing HEP's hydro power plants and thermal power plants on the hydromorphological condition of waters **GRI 2-6/303-1/303-4/11.6.2/11.6.5**

Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals

UN Sustainability Goal	UN Sustainability Development Goals subgoals and indicators of goal achievement	HEP Group's strategic goals	HEP Group's material topics 2022	HEP Group's business results in 2022 and GRI indicators
Sustainable cities and communities 	**11.6.** reduce the influence of cities on the environment **11.6.2.** air pollution in cities	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Designed and continuous use of all available communication channels with stakeholders to achieve business goals of the Group	Emissions into the air Local communities Influence of the supply chain on the environment	Monitoring air quality around EL-TO Zagreb – no limit values of pollutants in the air were exceeded e - mobility – in the network in Croatia, 275 HEP's Elen charging stations of various types and charging powers for electric and hybrid vehicles are in operation, and in 2022 13 were put into operation Thermal power plant operation in 2022 was in line with the terms from the Decision on environmental permits, no non-conformities were identified during inspection supervisions HEP Group's vehicle fleet contains the total of 70 electric vehicles, 10 electric bicycles, 10 hybrid vehicles and electric heavy machinery (forklift) Write-off of receivables for energy to the households in the regions hit by earthquake in 2022 amounted to HRK 47.5 million, which is the total of HRK 126.6 million of written-off receivables since the measure had been applied **GRI 201-1/203-1/203-2/305-7**

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal

European sustainability policies for sectors that may have significant influence on environment are governed by the European Green Deal, which presents the strategy for modern, resourcefully effective and competitive economy, by the "Fit for 55%" measure package, the European Climate Law and REPowerEU plan. Goals connected to the following refer to energy sector, i.e. electricity and heat energy generation and distribution as well as gas distribution:

- Increase of renewable energy sources' share
- Reduction of greenhouse gas emissions
- Inrease of energy efficiency
- Integrated water management
- Integrated management and supervision of pollution
- Managing raw materials, materials and products in line with the principles of circular economy
- Preservation of biological diversity
- Electric power connection of EU member countries
- Social justice – human rights' protection, labour law and cooperation with stakeholders

By constructing charging stations for electric and hybrid vehicles, HEP Group made a step forward into the sector of road traffic and through the construction of low-carbon infrastructure for road traffic it contributes to the goals for reducing emissions from road traffic.

Furthermore, in line with the Action plan for financing sustainable development from 2018 to 2020, the EU adopted legal regulations governing sustainable financing i.e. the Sustainable Finance Disclosure Regulation (SFRD Regulation) and the Regulation on the establishment of a framework to facilitate sustainable investment (the EU Taxonomy Regulation). In its *Annual and Sustainability Report for 2021* HEP Group published the division of taxonomy eligible and taxonomy non-eligible activities as well as the evaluation of alignment of taxonomic activities with the technical criteria of examination for significant contribution and 'do no significant harm' (DNSH) principle to environmental goals and fulfilling minimum protective measures referring to the protection of labour rights and work safety. Key performance indicators were calculated for all activities – taxonomyeligible, taxonomy non-eligible and aligned – i.e. turnover, capital investment (CapEx) and operative expenses (OpEx) in line with said methodology.

Information in the table should be observed combined with tables in the following chapters: *Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal* and *Contribution of HEP Group's business operations to Croatian sustainability policies*.

Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal

EU Sustainability goals	HEP Group's strategic goal	HEP Group's material topics in 2022	HEP Group's business results in 2022 and GRI indicators
Increase of renewable energy sources' share ***Renewable energy directive (RED III)*** ***Fit for 55%*** ***Plan REPowerEU*** Binding goal for the share of renewable energy sources in the final gross consumption on the EU level in 2030 should be at least 40% REPowerEU suggests to increase the goal for the share of renewable energy sources in the final gross consumption on the EU level in 2030 by at least 45%	Owning various sources of electricity which may be included in generation, depending on the condition and prices of energy fuels at the market and in that manner provide sustainability and flexibility Implementation of advanced grids focusing on the conventional grid development emphasising automation, advanced grid management and operation Defining and creating new products and services at the market, in all market segments at the wholesale and retail market, with an aim of keeping current market share in Croatia and increasing the share at regional markets Establishment (setup, strengthening) of effective and user-friendly business	Our customers Energy and energy fuels Local communities	41.334% - share of renewable sources in electricity generated from HEP's sources in 2022 HEP's contribution to EU sustainability goals is described under UN's 7th SDG Affordable and clean energy **GRI 2-6/201-1/201-2/203-1/203-2/301-1**
Reduction of greenhouse gas emissions ***Fit for 55%*** ***European Climate Law*** ***EU Emissions Trading system Directive (EU-ETS)*** Binding goal of reducing greenhouse gas emissions on the EU level to 55% by 2030 in comparison to 2005 Review of the EU-ETS Directive resulted in the binding goal of reducing greenhouse gas emissions for plants included in EU-ETS being 62% by 2030 in comparison to 2005	Owning various sources of electricity which may be included in generation, depending on the condition and prices of energy fuels at the market and in that manner provide sustainability and flexibility 45% of renewable energy sources' share in HEP's generation portfolio by 2030	Energy and energy fuels Emissions into the air Influence of the supply chain on the environment	34.98% - reduction of greenhouse gas emissions from HEP's sources in EU-ETS in comparison to 2005 For all its plants in EU-ETS for 2022 HEP bought emission units EUA and submitted them into the EU Registry CO_2 emission reduction by 34.98 % from all HEP's plants in 2022 in comparison to 2005 0.24 % - CO_2 emission share (eq) of HEP's EU-ETS plants in EU ETS emissions EU-27 HEP's contribution to EU sustainability goals is described under UN's 13th SDG Climate action **GRI 2-6/301-1/ 302-5/305-1/305-2/305-3/305-4/305-5/308-1/11.1.5/11.1.6/11.1.7/11.1.8**

Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal

EU Sustainability goals	HEP Group's strategic goal	HEP Group's material topics in 2022	HEP Group's business results in 2022 and GRI indicators
Increase of energy efficiency ***Clean energy for all Europeans (so-called EED)*** Goal on the EU level – increase of energy efficiency, i.e. reduction of primary energy consumption by 38% and the total gross energy consumption of 40.5% by 2030 in comparison to European Commission's predictions from 2007	Owning various sources of electricity which may be included in generation, depending on the condition and prices of energy fuels at the market and in that manner provide sustainability and flexibility Defining and creating new products and services at the market, in all market segments at the wholesale and retail market, with an aim of keeping current market share in Croatia and increasing the share at regional markets	Energy and energy fuels Our customers Local communities Business results Education and training	Savings in energy consumption among customers, achieved by HEP Group's suppliers of electricity, heat energy and gas, by which they fulfilled the legal obligation of 121.28 GWh ISO 50001:2018 certified Energy management Systems in HEP Proizvodnja, HEP ODS, HEP Toplinarstvo, HEP d.d. and HEP Upravljanje imovinom, through which measures of energy consumption reduction are implemented inside and outside generation processes 53 integrated solar power plants on roofs of HEP's buildings for own consumption Construction of high-efficiency cogeneration, CHP Education of employees through HEP Akademija on energy savings – Green office HEP's contribution to EU sustainability goals is described under UN's 13th SDG Climate action **GRI 302-1/302-2/302-3/302-4/302-5**
Integrated water management ***Framework Directive on waters*** Good condition of natural water bodies, i.e. good ecological potential for significantly changed and artificial water bodies by 2027	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Encouraging continuous improvement of employees' competence and innovation and effective knowledge managemet at a corporate level Designed and continuous use of all available communication channels with stakeholders to achieve business goals of the Group	Waters and waste waters Responsible corporate governance Local communities Influence of the supply chain on the environment	HEP's generation plants in 2022 operatedi in line with concessions and water permits for capturing water and water permits for discharge of waste waters Shareholder cooperation with Hrvatske vode, Plan of managing water areas 2022-2027 is under preparation HEP's generation plants in 2022 operatedi in line with concessions and water permits for capturing water and water permits for discharge of waste waters Shareholder cooperation with Hrvatske vode, Plan of managing water areas 2022-2027 is under preparation Implementing activities from the Annual program for 2022 pursuant to the Agreement on cooperation in the field of harmful effects of water, use of water and space of mutual interest from 2019 to 2022 – cooperation between HEP Proizvodnja and Hrvatske vode Reduction of eneregy consumption by submitted kWh in 2022 from 0.02646 m^3/kWh to 0,02415 m^3/kWh in 2022 HEP's contribution to EU sustainability goals is described under UN's 6th SDG Clean water and sanitation **GRI 303-2/303-3/303-4/11.6.2/11.6.5**

Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal

EU Sustainability goals	HEP Group's strategic goal	HEP Group's material topics in 2022	HEP Group's business results in 2022 and GRI indicators
Integral management and pollution supervision ***Industrial Emissions Directive (IED)*** ***Medium Combustion Plant Directive*** Business harmonization with the Decisions on environmental permit for big combustion plants with nominal input capacity of ≥50 MWt Entry in the register of medium combustion plants and operation in line with prescribed terms for combustion plants with nominal input capacity from 1 to 50 MWt	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Encouraging continuous improvement of employees' competence and innovation and effective knowledge managemet at a corporate level Designed and continuous use of all available communication channels with stakeholders to achieve business goals of the Group	Emissions into the air Waters Biodiversity Local communities Responsible corporate governance Education and training	All HEP's thermal power plants and combined heat and power plants have obtained Decisions on environmental permits which are in line with the BAT conclusions of the European Commission from 2017 Measures prescribed by environmental permits in line with best available techniques (BAT) were implemented during 2022 Internal and external HEP Group's employees' trainings on conferences, seminars and professional meetings on influences of business operations on the environment **GRI 305-7**
Managing raw materials, materials and products in line with principles of circular economy ***Action plan for circular economy by 2030*** Use of sustainable products in the EU Customer empowerment – access to information for product repair and duration Directing to sectors using the most resources in which there is a big potential for the application of circular economy principles – electric and electronic products and ICT sector, batteries and vehicles, plastic, package, construction and buildings, textile industry and food products	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Encouraging continuous improvement of employees' competence and innovation and effective knowledge management at a corporate level	Responsible corporate governance Influence of the supply chain on the environment Public procurement Education and training	Public procurement procedures in 2022 were implemented in line with the criteria of green procurement – the total of 8 Waste was managed in line with the hierarchy of waste management Waste made during electricity generation process in TPP Plomin 2 was not disposed of, but was recovered in the surrounding cement plants HEP's contribution to EU sustainability goals is described under UN's 12th SDG Responsible consumption and production Systems of managing safety for working with dangerous chemicals in TPP, TE-TO and EL-TO were introduced and policies to prevent major accidents were adopted **GRI 204-1/306-1/306-2/306-3/306-4/306-5/404-2/11.5.4/11.5.5/11.5.6**

Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal

EU Sustainability goals	HEP Group's strategic goal	HEP Group's material topics in 2022	HEP Group's business results in 2022 and GRI indicators
Preserving biodiversity ***EU Biodiversity strategy for 2030*** It legally protects at least 30% of EU's land area and 30% of its sea area and integrates ecological corridors as a part of Trans-European Nature Network; it strictly protects at least 30% of EU's protected areas including all rainforests* and old growth forests* To effectively manage all protected areas, defining transparent goals and protection measures as well as their appropriate monitoring	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service Designed and continuous use of all available communication channels with stakeholders to achieve business goals of the Group	Biodiversity Waters Local communities Influence of the supply chain on the environment Responsible corporate governance Education and training	Procedures of assessing environmental and ecological network impact were implemented in 2022 referring to interventions from the Regulation on environmental impact assessment Procedure announcements, documentation and decisions of acceptability for the screening procedures of EIA, need for EIA and ENIA were made public on the websites of the competent body, the Ministry of Economy and Sustainable Development and County offices responsible for environment protection HEP's contribution to EU sustainability goals is described under UN 15th SDG Life on land **GRI 2-6/2-12/2-13//303-2/303-3/305-7/304-1/304-2/304-3/304-4/306-3/306-4/306-5/308-1/11.4.3**
Electricity interconnectivity ***Directive on the Governance of the Energy Union*** To connect 15% of EU's internal energy market by 2030	Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service	Responsible corporate governance Our customers	Croatia fulfilled the goal connected to internal connectivity of energy market **GRI 2-6**
Social justice ***The European Green Deal taking into account UN's leading principles of business and human rights,*** ***ILO Declaration on Fundamental Principles and Rights at Work and*** ***the International Charter of Human Rights*** To ensure that EU institutions take into account the standpoints of organized civil society and that initiatives within the European Green Deal are in line with economic, social and civil reality in the field	Designed and continuous use of all available communication channels with stakeholders to achieve business goals of the Group	Safety at work and security Our customers Our employees Local communities Responsible corporate governance Influence of supply chain on the environment	HEP's contribution to EU sustainability goals is described under UN 8th SDG Decent work and economic growth **GRI 2-30/401-3/403-1/403-2/403-3/403-4/403-5/403-6/403-8/403-10/405-1/418-1/11.9.2/11.9.3/11.9.4/11.9.6/40/11.9.8./11.9.9./11.9.10**

GRI 2-22
GRI 2-23
GRI 2-24
GRI 3-3
GRI 11.2.1
GRI 12.2.1

Contribution of HEP Group's business operations to Croatian sustainability policies

As a EU member Croatia is in compliance with the EU sustainability goals, which are adapted to global sustainability goals. This chapter stated goals referring to the Croatian contribution to mutual sustainability goals set on the EU level. Information in the table should be observed combined with the tables in the following chapters: *Contribution of HEP Group's business operations to global sustainability policies – UN Sustainability development goals* and *Contribution of HEP Group's business operations to EU sustainability policies – European Green Deal*.

Contribution of HEP Group's business operations to Croatian sustainability policies

Croatian sustainability goals	HEP Group's strategic goal	HEP Group's material topics in 2022	HEP Group's business results
Increase of renewable energy sources' share ***National Energy and Climate Plan for the Republic of Croatia (NECP) by 2022*** The share of renewable energy sources in the final gross consumption by 2030 should be 36.5% ***National Energy and Climate Plan for the Republic of Croatia (NECP) by 2023*** The share of renewable energy sources in the final gross consumption by 2030 should be 42.5%	45% of renewable energy sources' share in HEP's generation portfolio by 2030 Achieving business efficiency on the level of EU energy companies by improving and optimizing business processes, among others the domains of corporate and business development, IT development and integration, human potential management, asset management and improving the quality of customer service	Energy and energy fuels Emissions into the air Responsible corporate governance	41.334 % of electricity in 2022 generated from renewable energy sources owned by HEP Group **GRI 2-6**
Increase of energy efficiency ***National Energy and Climate Plan for the Republic of Croatia (NECP) by 2022*** Primary energy consumption of 344.38 PJ (8.23 Mtoe) by 2030 Direct energy consumption of 286.91 PJ (6.85 Mtoe) by 2023 ***National Energy and Climate Plan for the Republic of Croatia (NECP) by 2023*** Primary energy consumption of 340.9 PJ (8.14 Mtoe) by 2030 Direct energy consumption of 274.2 PJ (6.55 Mtoe) by 2030	Reduction of energy consumption is set by certified energy management systems under ISO 50001:2018 standard Encouraging continuous improvement of employees' competence and innovation and effective knowledge management at a corporate level	Energy and energy fuels Emissions into the air Responsible corporate governance	In 2022 saving in energy consumption among customers amounted to 121.28 GWh; it was achieved by HEP Group's electricity, heat energy and gas suppliers, which also fulfilled their legal obligations **GRI 302-5**
Reduction of greenhouse gas emissions ***National Energy and Climate Plan for the Republic of Croatia (NECP) by 2022*** Reduction of emissions from source in EU-ETS by the minimum of 43% by 2030 in comparison to 2005 Reduction of emissions from source outside EU-ETS by minimum 7% by 2030 in comparison to 2005 ***National Energy and Climate Plan for the Republic of Croatia (NECP) by 2023*** Reduction of emissions from source in EU-ETS by the minimum of 50.2% by 2030 in comparison to 2005 Reduction of emissions from source outside EU-ETS by minimum 16.7% by 2030 in comparison to 2005	45% of electricity share generated from renewable energy sources by 2030 Reduction of energy consumption is set by certified energy management systems under ISO 50001:2018 standard	Energy and energy fuels Emissions into the air Responsible corporate governance	Share of greenhouse gas emissions of HEP's EU-ETS plants in EU-27 emissions in 2022 amounted to 0.06%, and in Croatian emissions to 14.4% Intensity of greenhouse gas emissions from electricity generation from HEP's sources in 2022 amounted to 208 g CO_2/kWh, and to 131 g CO_2/kWh in available electricity, so it was lower than the EU members' average CO_2 emissions in HEP were reduced by 34.98% from 2005 to 2022 Share of HEP's CO_2 emissions outside EU-ETS in source emissions outside EU-ETS in Croatia amounted to 0.14% **GRI 305-1/305-2/305-3/305-4**

GRI 2-27

Compliance with legal regulations

In 2022 there were no significant cases of failure to comply with legal regulations, for which monetary and/or non-monetary penalties would be imposed. The description of marine pollution from TPP Rijeka in November 2022 and the procedure of marine sanation is in chapter *Managing marine pollution from TPP Rijeka*.

GRI 2-28

Membership in associations

During 2022 HEP d.d. and HEP Group companies, as well as individual experts from HEP participated in the work of numerous national and international organizations, institutions and associations:

- EURELECTRIC (Union of the Electricity Industry; European federation of power organizations), membership ended as at 1 February 2023
- CIGRE (International Council on Large Electric Systems) and the Croatian branch of CIGRE (HRO CIGRE)
- ICOLD (International Commission of Large Dams; International association for high dams, through the membership in the Croatian association for large dams)
- CIRED (Congres International des Réseaux Electriques de Distribution; International electric distribution conference)
- LWA (Live Working Association; International association for live working)
- EFET (European Federation of Energy Traders)
- IAEA (International Atomic Energy Agency)
- ENS (European Nuclear Society)
- UNICHAL (International Union of Heat Distributors; Union for heat energy and heat energy plants)
- EUROHEAT & POWER (international organization from the field of cogeneration, remote cooling and heating)
- IIA GLOBAL (Institute of Internal Auditors, Florida, SAD), via HIIR – Croatian Institute of Internal Auditors
- ISACA (Information Systems Audit and Control Association); via the Croatian branch, ISACA Chapter Croatia
- ECLA (European Company Lawyers Association)
- Croatian Academy of Technical Sciences
- Electric Engineering Society
- Croatian Energy Society
- Croatian Water Pollution Control Society
- Croatian Green Building Council
- Croatian Gas Association
- Croatian Association of Corporate Treasurers
- MIPRO Croatian Society
- Croatian Air Pollution Prevention Association
- Croatian Association of Experts in Nature and Environmental Protection
- Croatian Business Council for Sustainable Development
- Croatian Chamber of Commerce
- Croatian-Austrian Chamber of Commerce
- German-Croatian Industrial Chamber of Commerce
- CROMA – Croatian managers' & Entrepreneurs' Association

GRI 2-29

Our stakeholders

HEP Group performes a series of activities in Croatia, as well as the activities of customer supply and electricity trade in Slovenia, Bosnia and Herzegovina, Serbia and Kosovo. Therefore, we cooperate with a lot of stakeholders. We set the importance of stakeholders based on their influence on HEP Group's business operations, but also based on HEP Group's business influence on individual stakeholders.

We divided the stakeholders on internal and external. Internal stakeholders are our employees and five trade unions, which are active in HEP Group: Hrvatski elektrogospodarski sindikat (HES), Nezavisni sindikat radnika HEP-a (NSRHEP), Strukovni sindikat radnika HEP-a (TEHNOS), Sindikat energetike, kemije i nemetala (EKN), Hrvatski elektrodistribucijski sindikat (HEDISS). HEP Group's external stakeholders are the customers and users of our products and services, companies in the supply chain, local communities, financial institutions and investors, academic community and professional public, civil community associations, competent and regulatory bodies and the owner, i.e. the Croatian Government.

Communication with stakeholders takes place almost on a daily basis through various communication channels from direct communications, e-mail communicaton, over telephone, applications for customers and users, through social networks and HEP Group's Internet and intranet sites. Communication with HEP Group's customers and users of products and services is described in the chapter *Our customers and grid users*. Information connected to *procurement* procedure and information for *investors* are published on HEP Group's websites. External stakeholders are also included in the evaluation of material topics, and the stakholders included in the evaluation for 2022 are described in the chapter *Material topics*.

Information officer

The right to access information of HEP d.d. and all affiliated companies fully owned by HEP d.d. (apart from the Croatian Transmission System Operator) is exercised through submitting a Request to access information to *HEP Group's information officer*.

Hrvatska eletkroprivreda d.d. has the right of access to information under the Right of Access to Information Act (OG 25/13, OG 85/15 and OG 69/22). The Act also stipulates the principles of the rights of access, the exceptions to the right of access and the procedure for exercising and protecting the right of access to information. The goal of the Act is to enable and ensure information to natural and legal persons through open and public activity of public government bodies, pursuant to the Act. *The Report on the Enforcement of the Right of Access to Information Act for 2022*.

GRI 2-30

Collective agreement

Addendum to the 2019 Collective agreement was signed on 6 July 2021 and its application was prolonged by 31 December 2023. Collective agreement provisions are applied to all permanently employed workers in HEP Group companies in Croatia.

7

MATERIAL TOPICS

The chapter describes the procedure of determining HEP Group's material topics for 2022, the comparison with material topics in 2021, the procedure of including stakeholders in the evaluation of material topics and the supply chain in the evaluation of business influence on the society, human rights and environment, as well as the results of material topics' evaluation by internal and external stakeholders.

GRI 3-1

Determining material topics

We determined HEP Group's material topics for 2022 following the guidelines for determining material topics in chapter GRI 3: Material topics in Consolidated GRI Standards from 2021. Members of HEP's Team for creating non-financial reports and ESG rating (Team), which was appointed by the decision of the Management Board, participated in determining material topics for 2022. The Team consists of employees in HEP d.d. and in HEP Group companies.

Material topics for 2022 were determined pursuant to goals and obligations which result from the following for energy sector: strategies and plans on the global, EU and national level, from HEP Group's strategic goals by 2030, analysis of real and potential negative and positive effects of our business operations and business relations on the environment, society, human rights and economy, information we obtain on every-day basis from our stakeholders and extremely complex conditions, in which HEP Group did business during 2022. Doing business in complex, almost crisis conditions in 2022 was a consequence of energy demand recovery following the corona virus pandemic, constant geopolitical tensions and primarily Russian invasion of Ukraine, as well as drought and unfavourable hydrological conditions in Europe and Croatia, which directly affected electricity generation from our hydro power plants. Material topics for 2022 were confirmed and adopted by the decision of the Management Board at their meeting.

In comparison to 2021, we summarized 26 material topics into 16, in such a manner that certain material topics were combined into one, so that they are clearer, and the description complete. We included the analysis of our direct supply chain influence on the environment, society and human rights (the first level of suppliers) in the material topics for 2022.

GRI 2-29
GRI 3-1

Including significant external stakeholders in the evaluation of material topics

As is the case every year, we included our significant groups of external stakeholders in the evaluation of material topics: customers, suppliers, local community, financial institutions, civil society groups, associations, academic and scientific community and regulatory bodies. The significance of stakeholders was determined on the basis of the following: type of business relation with the stakeholder (e.g. multi-annual cooperation); stakeholders' participation in an important project (construction of new or reconstruction of existing power facilities), monetary value of payment for goods, services and work as well as the influence of HEP Group's business operations on stakeholders. The stakeholders evaluated our material topics for 2022 in a questionnaire sent to them by e-mail.

GRI 2-29
GRI 3-1

Including suppliers in the evaluation of material topics

Apart from the evaluation of material topics, this year we included significant direct suppliers in the analysis of their influence on the environment, society and human rights. In this respect, significant groups of direct suppliers are: supply chain of incoming goods, services, works and capital needed to generate our products and services (so-called upstream categories), then users and distributors of products and services, as well as proxies for the preparation of documents connected to the influence of business on the environment and companies authorized for waste management (so-called downstream categories). For the purpose of analysing our suppliers' influence on the environment, we asked for the information on the origin and consumption management of the material, goods and energy, the origin and quantity management of captured waters as well as types, quantities and receivers of waste waters, greenhouse gas emissions and other pollutants of air, as well as goals for their reduction. Results of analysis are described in the chapter *Influence of the supplier chain on the environment*.

In order to determine the influence of suppliers on the society and human rights, we asked for information on employees, according to the type of contractual relationship, gender as well as employees' fluctuations, education and courses, health protection and occupational safety, existing danger of child and forced labour as well as whether they take into consideration, when choosing own suppliers, criteria on the basis of which any kind of forced and child labour is prevented (the second and third level of suppliers). The analysis was conducted on the basis of a questionnaire sent to suppliers by e-mail and collected publicly available data. It should be emphasised that HEP Group's companies exclude from procedures of public and simple procurement the suppliers which were convicted for participating in a criminal organization, corruption, fraud, terrorism or any crime connected to terrorism, money laundering or financing terrorism, child labour or other kinds of human trafficking. During the procedures of public and simple procurement it is also determined whether the suppliers fulfilled the obligations of paying due tax liabilities as well as retirement and health insurance obligations for their employees. The results of the analysis are described in the chapter *Influence of the supplier chain on the society and human rights*.

GRI 3-2

List and evaluation of material topics

Upon determining material topics, the members of HEP's Team for the creation of non-financial reports and ESG rating evaluated the importance of each material topic in line with the risks they present for HEP Group's business operation, but also with the influence of HEP Group on our stakeholders: operational, reputational, regulatory, legal and political, strategic as well as risks from the field of ecology, occupational health and safety. 32 employees from HEP Group participated in determining and evaluating material topics for 2022, from HEP's d.d. offices and departments and from HEP Group companies.

Each of our significant stakeholders was given a chance to evaluate whether suggested material topics provide a complete overview of HEP Group's business operations on the environment, society and and to suggest the topics they consider important, but are not included in the 2022 list of topics. External stakeholders did not add new material topics to the suggested list of HEP Group's material topics. The total of 62 external stakeholders participated in the evaluation of material topics for 2022: competent bodies (10), suppliers (16), local communities (15), customers (10), academic community and professional public (6) and civil society groups (5).

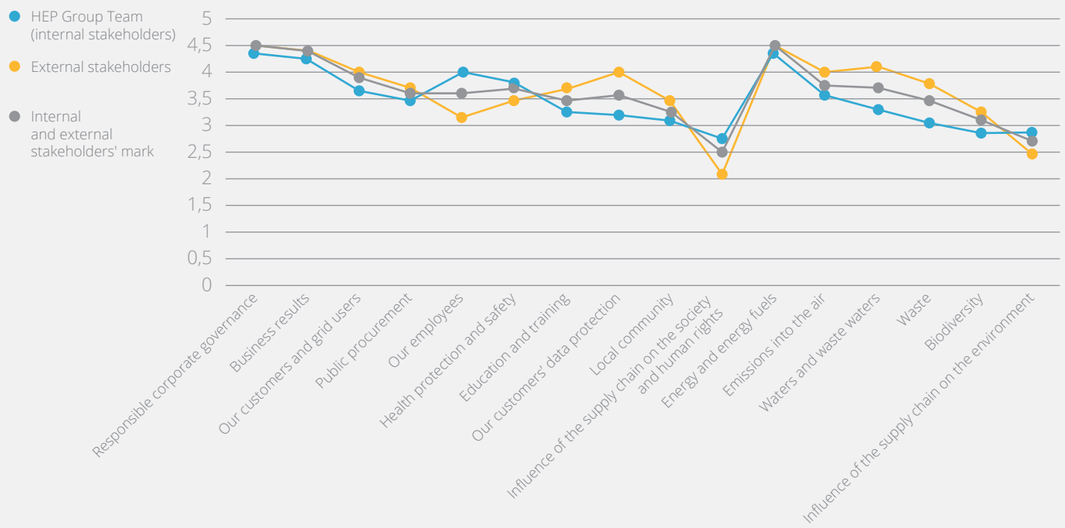
Internal stakeholders evaluated the total of 16 material topics according to the risks stated above, using marks from 1 to 5. External stakeholders used marks from 1 to 5 to evaluate the influence of HEP Group's business operations on their business operations. The table shows average marks of internal and external stakeholders, which participated in the evaluation of material topics, as well as average mutual mark of external and internal stakeholders for each material topic.

List of HEP Group's material topics for 2022 with the marks from internal and external stakeholders

	Material topics	HEP Group Team (internal stakeholders)	External stakeholders	External and internal stakeholders' mark
Governance	Responsible corporate governance	4.4	4.5	4.5
Economy	Business results	4.3	4.4	4.4
	Our customers and grid users	3.7	4.0	3.9
	Public procurement	3.5	3.7	3.6
Society and human rights	Our employees	4.0	3.2	3.6
	Health protection and safety	3.8	3.5	3.7
	Education and training	3.3	3.7	3.5
	Our customers' data protection	3.2	4.0	3.6
	Local community	3.1	3.5	3.3
	Influence of the supply chain on the society and human rights	2.8	2.1	2.5
Environment	Energy and energy fuels	4.4	4.5	4.5
	Emissions into the air	3.6	4.0	3.8
	Waters and waste waters	3.3	4.1	3.7
	Waste	3.1	3.8	3.5
	Biodiversity	2.9	3.3	3.1
	Influence of the supply chain on the environment	2.9	2.5	2.7

Internal and external stakeholders' average mark of each material topic as well as the total average mark of each material topic did not differ significantly.

Results of HEP Group's material topic evaluation for 2022

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BUSINESS PERFORMANCE INDICATORS

We presented HEP Group's business performance indicators in 2022 by sustainability fields i.e. the influence of business operations on economy, society, human rights and environment, but also the influence of economy, society and environment on our business operations in 2022 (double materiality). We described governance practices in the chapter Corporate governance, which was also one of 16 HEP Group's material topics for 2022.

GRI 2-29
GRI 3-3
GRI 201-1
GRI 201-2
GRI 201-3
GRI 201-4
GRI 204-1
GRI 11.14.2
GRI 11.14.3
GRI 11.14.4
GRI 12.14.2
GRI 12.14.3
GRI 12.14.4

Economy

For the purpose of presenting business performance results in 2022, three material topics were determined: Business results, Our customers and grid users and Public procurement. The procedure of determining and evaluating material topics is described in the chapter *Material topics*.

HEP's business operations in 2022 took place in extremely complex and even crisis circumstances. The energy sector in the whole Europe, including Croatia, was exposed to a high level of uncertainty, which was a consequence of a number of factors, most notably Russian invasion of Ukraine. Despite the crisis and significant financial burden, which HEP bore as part of the measures for mitigating the consequences of crisis on citizens and economy, HEP continued with the realization of the investment cycle, along with launching new projects with a high share of national participation. In comparison to 2021, the investments increased by 11 percent and amounted to HRK 3.4 billion. That had a strong positive effect on the unemployment rate, budget filling, increase of GNP and generally on stability and growth of the Croatian economy in the challenging 2022. Energy markets were faced with extreme volatility, on the one hand caused by the recovery of energy demand after a period of partial or total lockdown due to the coronavirus pandemic, and on the other by constant geopolitical tensions. Last year, Europe was hit by the worst drought in the last 500 years. Croatia was also exposed to extremely unfavourable hydrological conditions. Due to the reduced energy value of the water inflow, 1.9 TWh of electricity was produced in our hydropower plants, i.e. 27 percent less, compared to 2021. Lower hydro generation was replaced by the increased, and significantly more expensive production of thermal power plants and by electricity import. Compared to the previous year, the average prices of all energy fuels and European Unit Allowances – EUA increased enormously. The price of natural gas for the production of electricity and heat rose by 206 percent, coal by 188 percent, CO_2 emission units by 103 percent, and imported electricity by 219 percent.

In 2022 the Croatian Government recommended and adopted regulations in order to mitigate the consequences of price increase at the market and to ensure reliable energy supply for end customers. As part of the package of measures from February 2022, sale prices of electricity and gas increased minimally to household customers as of 1 April 2022. At its session on 8 September 2022 the Government adopted the Regulation on the elimination of distortions at the domestic energy market, under which special measures for electricity trade are set, as well as the manner and condition of forming prices for certain categories of electricity and heat energy customers in the period from 1 October 2022 to 31 March 2023. Under the stated Regulation, electricity prices were limited for commercial customers. As a result of abovementioned negative influences, HEP Group generated a pre-tax loss totalling at HRK 6.94 billion. Net loss amounted to HRK 5.7 billion.

GRI 3-3
GRI 201-1
GRI 201-2
GRI 201-3
GRI 201-4
GRI 11.14.2
GRI 11.14.3
GRI 11.14.4
GRI 12.14.2
GRI 12.14.3
GRI 12.14.4

Business results

Despite all challenges, HEP insured a safe and good supply of electricity, heat energy and gas in Croatia. In the circumstances of energy crisis and uncertainty regarding supply safety, HEP fulfilled all the needs of its customers for energy and achieved the increase of energy sale, both at the Croatian market, by 4.2 percent in comparison to 2021 and abroad, by 56.2 percent. HEP Group's market share in Croatia increased from 89 to 92.7 percent. In line with the conclusions of the Croatian government, the write-off of energy receivables continued to households in earthquake affected areas, so in 2022 HRK 47.5 million was written off. Since the beginning of implementation of stated measure the total of HRK 126.6 million was written off. At the end of October we successfully paid off Eurobonds issued at the international capital market in 2015 in the amount of USD 550 million.

GRI 3-3
GRI 201-1
GRI 11.14.1
GRI 11.14.2
GRI 12.14.1
GRI 12.14.2

Directly created and distributed economic value

In Annex to the Annual and Sustainability Report for 2022 there is *Abridged Consolidated Financial Report of HEP Group business operations in 2022*, and the table shows basic natural and financial indicators.

Basic indicators	Unit	2021	2022	2022/ 2021 %
Electricity sale[1]	TWh	17.4	17.5	0.9
Electricity generation	TWh	13.7	12.4	-9.6
Heat energy sale	TWh	2.0	1.8	-9.6
Gas sale at the retail market	TWh	2.4	2.5	5.4
Operating income[2]	HRK mil	15,970.7	25,315.8	58.5
Operating profit increased by amortization	HRK mil	3,439.5	-4,312.8	-225.4
HEP Group's net profit/ loss	HRK mil	1,019.5	-5,722.7	-661.3
Total assets	HRK mil	46,900.8	52,037.3	11.0
Investments	HRK mil	3,083.1	3,407.4	10.5

[1] HEP's sale at the national and international market
[2] In 2021, apart from data for HEP-Plin d.o.o., the data for companies GP Krapina d.o.o. (April – December 2021) and Darkom DP d.o.o. (July – December 2021) is also included. Their sole owner is HEP-Plin d.o.o. In 2022, apart from data for HEP-Plin d.o.o. the data for company Pakrac plin d.o.o. is included for the period from June to November, when the company was merged with HEP-Plin d.o.o.

GRI 3-3
GRI 201-2
GRI 11.2.1
GRI 11.2.2
GRI 12.2.1
GRI 12.2.2

Financial consequences, other risks and conditions due to climate changes

Significant recognized risks for HEP's business operations connected to climate changes and adaptation to climate changes are quick and sudden changes of weather conditions, which require quick and effective adaptations as well as significant financial investments. Redistribution of annual precipitation also presents a risk, because most of the rain falls in autumn and spring and least in summer, when energy demand is considerable, as a result of work of air conditioning systems. HEP manages these risks through investment in generation facilities, which use different energy sources, renovation of existing and construction of new high-efficiency cogenerations and renewables, the use of fuels with low carbon footprint, the increase of energy efficiency and energy savings inside and outside the generation process, as well as the application of technical solutions for preserving assets and investing in employees' education. The effects of extremely dry 2022 on electricity generation from hydro power plants on HEP Group's business operations are described in this chapter and in *Annex - Abridged Consolidated Financial Report of HEP Group business operations in 2022*.

GRI 201-3

Obligations from defined pension benefit scheme and other pension plans

Apart from regular obligatory payments of pension insurance contribution, HEP Group has organized a voluntary closed HEP's pension fund for employees open in Croatia osiguranje insurance company. The fund became operational in 2006, with an aim of encouraging employees to long-term pension savings. In 2022 the fund had 3,087 members, for whom HEP paid HRK 3.51 million in total.

GRI 201-4

Grants from EU funds

The total of EUR 15,870,891.73 of grants was paid to HEP Group companies from EU funds. The grants were intended for the rehabiliation of the consequences of earthquakes in Sisak and Zagreb, and the development of the distribution grid, revitalization of hot-water pipeline networks in Zagreb and Osijek as well as the development of e-mobility project referring to the construction of charging stations for electric and hybrid vehicles.

Grants from EU funds in 2022 by HEP Group companies

HEP Group company	Purpose	Sum /EUR
HEP d.d.	E-mobility project	693,783.29
HEP Proizvodnja	Rehabilitation of the consequences of earthquake in TE-TO Sisak	703,392.66
HEP Operator distribucijskog sustava	Projects connected to the distribution grid development	4,499,444.78
HEP Toplinarstvo	Revitalization of hot-water pipeline networks in Zagreb and Osijek and the rehabilitation of the consequences of earthquakes in Sisak and in Zagreb	9,974,271.00
Total/ EUR		**15.870.891,73**

Key performance indicators of HEP Group according to the EU Taxonomy

The foundation for the evaluation of HEP Group's activity by technical criteria for significant contribution and 'do not significant harm' – DNHS principle to ecological aims defined by the EU Regulation 2020/852 on the EU taxonomy is a consolidated version of the Commission Delegated Regulation EU 2021/2139 as of 1 January 2023. The basis for the calculation of financial key performance indicators i.e. income, capital investments (CapEx) as well as operating expenses (OpEx) for taxonomy eligible activities, activies in line with technical screening criteria and taxonomy non-eligible acitivies is the Commision Delegated Regulation EU 2021/2178.

Division of HEP Group's activities according to the EU Taxonomy in 2022

In its *Annual and Sustainability Report 2021* (from page 128) HEP Group published a division of activities in: taxonomy eligible, taxonomy activities aligned with technical screening criteria for significant contribution to climate goals and 'do no significant harm' – DNHS principle environmental goals set by the EU Regulation on the EU Taxonomy 2020/852 – sustainable use and protection of water and marine resources, transition to circular economy, pollution prevetion and control as well as protection and restoration of biodiversity and ecosystems and taxonomy non-eligible activities. As opposed to 2021, 2022 is based on the Commission Delegated Regulation EU 2022/1214, under which electricity generation from nuclear energy in existing facilities (4.28), electricity generation from gaseous fossil fules (4.29), electricity generation for heating/cooling and electricity genereation from high-efficiency cogenerations from gaseous fossil fuels (4.30) as well as electricity generation for heating/cooling from gaseous fossil fuels in an effective system of centralized heating/cooling (4.31) became taxonomy eligible activities. As of 1 January 2023 the Commission Delegated Regulation EU 2022/1214 was consolidated into the Commission Delegated Regulation EU 2021/2139. The difference also refers to the share of HPPs aligned with technical screening criteria under the EU Taxonomy as compared to 2021, i.e. out of the total of 28 hydro power plants, 27 were evaluated to significantly contribute to the mitigation of climate changes and to do no significant harm to other environmental goals.

Division of HEP Group activities under the EU Taxonomy 2022

Taxonomy eligible activities	Taxonomy activities aligned with technical screening criteria	Taxonomy non-eligible activities
Electricity generation through solar photovoltaic technology - PVPP (4.1)	Activity significantly contributes to the mitigation of climate changes and does not cause significant harm to other environmental goals – 100% - Integrated (7) and non-integrapted PVPP (53)	Electricity generation from coal
Electricity generation from wind power (4.3)	Activity significantly contributes to the mitigation of climate changes and does not cause significant harm to other environmental goals– 100% - Wind power plant (1)	Gas distribution
Electricity generation from hydro power (4.5)	Activity significantly contributes to the mitigation of climate changes and does not cause significant harm to other environmental goals– 94% - HPP, RHPP and SHP (27)	LNG lease services
Cogeneration of energy for heating / cooling and electricity from bioenergy (4.20)	Activity significantly contributes to the mitigation of climate changes and does not cause significant harm to other environmental goals– 100% - BE-TO (2)	Electricity import and export
Electricity generation from nuclear energy in existing facilities (4.28)	NO Commission Delegated Regulation 2022/1214 was put into effect in 2022 and ti requires extensive analyses for a significant contribution and 'do no significant harm' principle to ecological goals, so these activities in 2022 are considered taxonomy eligible acitivities.	Supply with electricity not in the system of guarantee of origin
Electricity generation from gaseous fossil fuels (4.29)		Trading greenhouse gas emission units (EUA)
Electricity generation for heating/cooling and electricity from high-efficiency cogenerations from gaseous fossil fuels (4.30)		Accommodation services in leisure facilities
Electricity generation for heating/cooling from gaseous fossil fuels in the effective system of centralized heating and cooling (4.31)		
Electricity transmission and distribution (4.9)	The activity of electricity transmission for 2022 was evaluated as taxonomy eligible and aligned with technical screening criteria. The activity is also classified as enabling. The activity of distribution was evaluated as taxonomy eligible and aligned with technical screening criteria in the part in which the distribution grid is connected to renewable energy sources, i.e. 13.94% of the share of new producers' power in the total power of distribution grid users. The activity in the above stated percentage is considered enabling.	
Electricity storage (4.5)	YES The activity for 2022 was evaluated as aligned with technical screening criteria for significant contribution to the reduction of effects on climate and 'do no significant harm' principle to environmental goals. Activity 6.15. is considered transitional.	
Heat energy storage (4.10)		
Transport by motocycles, passenger cars and commercial vehicles (6.5)		
Infrastructure for low-carbon and public transport (6.15)		
Installation, maintenance and repair of technologies for energy from renewable energy sources (7.6)		
Installation, maintenance and repair of equipment and instruments for energy efficiency (7.3)		
Education (11)		
Data processing, provider services and related activities (8.1)	NO Analysis of activity was not conducted for 2022	
Construction of new buildings, renovation of existing buildings (7.1 and 7.2)	YES Activity in 2022 was evaluated as aligned with technical screening criteria for a significant contribution to the reduction of effects on climate and 'do no significant harm' principle to other environmental goals.	
Collection and transport of non-hazardous waste in fractions separated at source	YES Activity in 2022 was evaluated as aligned with technical screening criteria for a significant contribution to the reduction of effects on climate and 'do no significant harm' principle to other environmental goals.	

Allignment of HEP's activities with minimum social safeguards

All of HEP's taxonomy eligible activities aligned with technical screening criteria are also aligned with minimum social safeguards, and its policies, business practices and indicators for 2022 are shown in the following chapters: *Corporate governance*, *Our employees*, *Occupational health and safety* and *Public procurement*.

Share of HEP Group revenue by activities according to the EU taxonomy in 2022

Below is the description of the calculation of revenue share from taxonomy eligible activities aligned with the criteria of the EU taxonomy, taxonomy eligible activities and taxonomy non-eligible activities. The share was calculated by dividing the revenue from individual activity (numerator) with HEP Group's total consolidated business revenue achieved in 2022, which totalled at HRK 25.32 billion (denominator). The share of revenue from taxonomy eligible activities aligned with the technical screening criteria in 2022 was 39.7 percent. HEP Group's total consolidated revenue in 2021 amounted to HRK 15.97 billion, and the share of revenue from taxonomy eligible activities aligned with the technical screening criteria was 42.7 percent.

Revenues generated in district heating, gas and other activities

Revenues generated in district heating, gas and other activities were taken over from the audit report (consolidated data). The revenue of HEP ESCO (income from energy efficiency projects) and the revenue of HEP NOC Velika (HEP Group employees' education and training for live working technology) are the revenues achieved at the market and they originate from taxonmy eligible activities and the ones aligned with the EU taxonomy. The revenue from providing telecommunication services by HEP Telekomunikacije is included in the revenue from taxonomy eligible activity.

Revenues generated from electricity

The activity of electricity generation and procurement is performed in the following companies: HEP d.d., HEP Proizvodnja, NPP Krško, Solar power plant Vis, Solar power plant Poreč and Energy park Korlat.

Electricity sources which make up the total available electricity sold by HEP are the following:

- Electricity generated in HEP's power plans (hydro power plants, thermal power plants, combined heat and power plants, biomass-fired cogeneration plants, wind power plants and solar power plants)
- Electricity purchased from NPP Krško (pursuant to long-term agreement)
- Electricity purchased from HROTE (eligible producers in the incentive system) and
- Electricity procured at the market (import and other procurement)

Revenues from electricity sale are realized by:

- The sale of electricity to customers within universal service and guaranteed supply – HEP Elektra
- The sale of electricity to commercial and household customers – HEP Opskrba
- Electricity export and
- The sale of electricity in the region - HEP Trgovina – daughter companies and HEP Energija Ljubljana

In order to evaluate HEP's activities according to the EU Taxonomy criteria, the following was taken into account:

- Needs for electricity sale (to customers within universal service and guaranteed supply and to HEP Opskrba customers) as well as the needs of the electric power system to cover losses in the grid are fulfilled from the same sources of electricity sale, i.e. electricity mix (generation in own power plants, purchase from partially-owned power plants, purchase from HROTE and supply at the market)
- Revenues from electricity to end customers are not stated by sources in consolidated data (e.g. power plants of HEP Proizvodnja)
- In accounting terms, revenues from electricity are not stated by electricity sources, but by billing elements, which include fee for energy, fee for transmission grid use, fee for distribution grid use, supply fee

When calculating the share of revenues from activities under the EU Taxonomy criteria, we subtracted the revenues below from the total revenues for electricity, and the remaining sum was HRK 1.1 billion:

- HEP Group consolidated business revenue for 2022 amounted to HRK 25.32 billion, from which HRK 22.78 billion referred to electricity (according to audit report)
- Total consolidated revenue of HOPS, which originates from taxonomy eligible activity and activity aligned with the EU taxonomy (HRK 2.5 billion)
- Revenue from taxonomy eligible activity and activity aligned with the EU taxonomy, i.e. revenue from HEP ODS, in the part referring to electricity distribution from renewable energy sources based on the information submitted from HEP ODS (HRK 1.7 billion), while the rest of their total consolidated revenue is evaluated as the revenue from taxonomy eligible activity
- Revenues that HEP Proizvodnja and SPP Poreč generate from electricity sale at the market, i.e. sale of eligible producers to HROTE (data from the general ledger)
- Revenues from electricity trade (data from the general ledger)
- Revenue from electricity sale generated in e-charging stations (data from the general ledger)

Revenues from electricity sale amounting to HRK 15.1 billion were allocated to individual source (HPP, TPP, SPP, WPP, NPP Krško, purchase from HROTE and imported electricity and other procurement) in the following manner:

- From the total electricity sources, power plant generation in the incentive system and electricity trading were excluded from energy balance, since the data from the main ledger (GWh) was used for their revenues
- The calculation of the share of individual electricity source in the total available electricity (%) was carried out
- Unallocated revenue (HRK 15.1 billion) by above stated sources was allocated on the basis of obtained shares
- Revenues obtained in this manner for CHPs were additionaly divided by types of fuels, based on the share of cost of individual type of fuel in the Total cost of fuel – gas/fuel oil of CHPs

HEP Group revenue share by activities under the EU taxonomy 2022

Revenue source	Total revenue/ x10³ HRK	Revenue from taxonomy eligible activities aligned to the EU taxonomy / %	Revenue from taxonomy eligible activities / %	Revenue from taxonomy non-eligible activities/ %
Electricity	22,776,839	37.7	27.9	24.3
Heat activitiy	929,566	0.0	0.8	2.9
Gas retail	1,141,087	0.0	0.0	4.5
Strategic reserves and gas reserves under the Regulation of the Croatian Government	119,408	0.0	0.0	0.5
LNG	296,007	0.0	0.0	1.2
Other activities	52,893	0.2	0.02	0.0
Total consolidated business revenues	**25,315,800**	**37.9**	**28.7**	**33.4**

Share of HEP Group operating expenses (OpEx) by activities according to the EU taxonomy

Below is the description of the calculation of operating expenses' share from taxonomy eligible activities aligned with the EU taxonomy criteria, taxonomy eligible activities and taxonomy non-eligible activities. The share was calculated by dividing the maintenance expenses of individual assets (numerator) with HEP Group total maintenance expenses in 2022, which totalled at HRK 1.08 billion (denominator). The share of operating expenses from taxonomy eligible activities aligned with the EU taxonomy criteria in 2022 was 30.4 percent. HEP Group total consolidated operating expenses (OpEx) in 2021 amounted to HRK 3.07 billion, and the share of operating expenses from taxonomy eligible activities aligned with the EU taxonomy criteria was 28.4 percent.

Operating expenses of taxonomy eligible activities aligned with the EU taxonomy criteria

The following expenses were used in calculating operating expenses of taxonomy eligible activities aligned with the EU taxonomy technical screening criteria: maintenance expenses of HEP's renewable energy sources (HPP, RHPP, SPP except HPP Peruća, integrated and non-integrated photovoltaic solar power plants, wind power plants and biomass-fired CHPs), maintenance expenses of assets for electricity distribution of 13.94 percent share of new producers' power in the total power of users, as well as maintenance expense of heating accumulator for heat energy storage.

Operating expenses of taxonomy eligible activities

Asset maintenance expenses of HPP Peruća, CCGT Jertovec, TE-TO Sisak, TE-TO Zagreb, TE-TO Osijek, EL-TO Zagreb in HEP Proizvodnja, the cost of maintenance expenses of HEP ODS amounting to 87.06 percent of the share in the total power of users, which are not connected to renewable energy sources, HEP Toplinarstvo and NPP Krško, were used in the calculation of operating expenses of taxonomy eligible activities.

Operating expenses of taxonomy non-eligible activities

For the calculation of operating expenses of taxonomy non-eligible activitites, the following asset maintenance expenses were used: TPP Plomin and TPP Rijeka in HEP Proizvodnja as well as asset maintenance expenses of HEP Plin and LNG Hrvatska.

HEP Group share of operating expenses (OpEx) by activities under the EU taxonomy in 2022

Activity	Total operating expense (OpEx)/ x10³ HRK	Operating expenses (OpEx) for taxonomy eligible activities aligned to the EU taxonomy / %	Operating expenses (OpEx) for taxonomy eligible activities/ %	Operating expenses (OpEx) for taxonomy non-eligible activities/ %
Electricity from RES	133,497.7	12.3	0.3	0.0
Electricity and heat energy from cogenerations	115,001.2	0.0	10.6	0.0
Electricity from gas-fired thermal power plants	3,271.4	0.0	0.3	0.0
Electricity from liquid fuel-fired thermal power plants	10,657.1	0.0	0.0	1.0
Electricity from coal-fired thermal power plants	36,833.8	0.0	0.0	3.4
Electricity from NPP Krško	58,931.1	0.0	5.5	0.0
Electricity transmission	129,992.6	12.0	0.0	0.0
Electricity distribution	471,610.8	6.1	37.5	0.0
Energy storage	1,064.8	0.1	0.0	0.0
Heating	33,414.6	0.0	3.1	0.0
Gas distribution	6,718.1	0.0	0.0	0.6
Liquefied natural gas (LNG)	76,121.3	0.0	0.0	70
Laboratory for fuel analysis	512.2	0.0	0.0	0.04
Total consolidated operating expenses (OpEx)	**1,081,143.0**	**30.4**	**59.3**	**11.4**

Share of HEP Group capital investments (CapEx) by activities under the EU taxonomy in 2022

Investment plan

The share was calculated by dividing capital investments in individual activities (numerator) with HEP Group total capital investment in 2022, which amounted to HRK 3.4 billion (denominator). HEP Group investment activities are included in the investment plan by priorities, taking into consideration the contribution to the basic activity and system security as well as expected financial effects.

Activities from the currently valid five-year HEP Group Consolidated financial plan 2021 – 2025 are included in the annual Investment plan. Capital investment express expenditure for investments in development and construction of new as well as reconstruction of existing plants and facilities, replacement and renovation of plant parts, equipment and devices as well as other tangible and intangible assets. HEP Group capital investments are planned on the basis of Strategy and the Implementation Program of the Energy Development Strategy of the Republic of Croatia, Strategic document HEP 2030 and HEP Group companies' multi-annual plans of development and construction (three-year, five-year). Investment plans are also aligned with sustainability policies on the global and EU level. HEP Group companies' investment plans are based on techno-economic validity, multi-annual plans of development and construction, the elaboration of macro process of capital investment in generation facilities as well as projections of possible financial sources for each planning period. In the period by 2025 HEP Group investment acitivies are directed towards the construction of new hydro power plants (HPS Kosinj/Senj II) as well as modernization and reconstruction of existing ones, since they make up an important share of the Croatian electric power system, the construction and acquisition of facilities for electricity generation from renewable sources (solar power plants, wind power plants) and energy storages, the construction of new high-efficiency cogenerations (EL-TO Zagreb CCPP) for electricity and heat energy generation with the analysis of options of using low-carbon fuels (synthetic gas, hydrogen etc.). Planned investments in the forthcoming five-year period are also directed to the continuation of the advanced grid introduction project in HEP ODS as well as to the revitalization of heat networks of HEP Toplinarstvo.

HEP Group total consolidated capital investments (CapEx) in 2022 amounted to HRK 3.4 billion, and the share of capital investments in taxonomy eligible activities aligned with the EU taxonomy criteria totalled at 32.0 percent. HEP Group total consolidated capital investments (CapEx) in 2021 amounted to HRK 3.1 billion and the share of capital investments in taxonomy eligible activities aligned with the EU taxonomy criteria was 28.4 percent.

Share of HEP Group capital investments (CapEx) by activities under the EU taxonomy in 2022

Activity	Total capital investments (CapEx)/ x10³ HRK	Total capital investments (CapEx) in taxonomy eligible activities aligned to the EU taxonomy/ %	Total capital investments (CapEx) in taxonomy eligible activities/ %	Total capital investments (CapEx) in taxonomy non-eligible activities/ %
Electricity from RES	289,529.20	8.5	0.0	0.0
Electricity and heat energy from cogenerations	369,328.40	0.0	10.9	
Electricity from liquid fuel-fired thermal power plants	99.9	0.0	0.0	0.0
Electricity from coal-fired thermal power plants	10,707.80	0.0	0,0	0.3
Electricity from NPP Krško	212,200.00	0.0	6.2	0.0
Electricity transmission	610,817.40	18.0	0.0	0.0
Electricity distribution	1,288,010.80	5.3	32.6	0.0
Heating	268,606.20	0.0	7.9	0.0
Gas distribution	21,609.40	0.0	0.0	0.6
Liquefied natural gas (LNG)	9,372.40	0.0	0.0	
Equipment for information and communications technology (ICT)	193,249.90	0.0	5.7	0.0
E-mobility	2,421.8	0.1	0.0	0.0
Energy efficiency projects	3,073.1	0.1	0.0	0.0
Other activities	120,020.5	0.0	0.0	3.5
Total consolidated capital investments (CapEx)	**3,399,046.8**	**32.0**	**64.3**	**4.4**

Our customers and grid users

HEP Group customers are household and commercial customers. Customers from both categories are offered supply with electricity, heat energy as well as natural gas. The information on the number of customers in 2022 by categories, products and services is stated in the following chapthers: *Electricity supply*, *Heat energy distribution and supply* and *Gas distribution and supply*. Grid users are from household and commercial category. The information on the number of billing metering points (BMP) by voltage levels and tariff models, as well as the status of self-service facility user (prosumer) is in the chapter *Electricity distribution*.

GRI 2-29
GRI 3-3

Communication with electricity customers and grid users

Electricity customers

Communication with electricity customers within public service of electricity supply (HEP Elektra) and electricity supply within market service (HEP Opskrba) takes place on a daily basis via:

- Telephone and e-mail - *HEP Elektra* and *HEP Opskrba*
- Personal arrivals of customers on the locations of units for public supply of electricity (*HEP Elektra*) and units for electricity supply (*HEP Opskrba*)
- Customer meetings of HEP Opskrba in Croatia and customer meetings of HEP Energija in Slovenia
- Webistes, which among other, contain the following information:
  - *on the structure and formation of electricity prices* (HEP Opskrba)
  - Tariff models for commercial categories *big customers*, *small entrepreneurs working in shifts*, *small entrepreneurs working in one shift* and tariff models *for public lighting* (HEP Opskrba)
  - Tariff models and tariff items (prices) for customers from *household category* and *commercial category* (HEP Elektra)
  - Information for prosumers (*HEP Elektra*) and (*HEP Opskrba*) from household category
  - Information *on guaranteed electricity purchase* from commercial category
  - Structure of particular electricity sources in electricity sold to customers (*HEP Elektra* and *HEP Opskrba*),
  - Information *on supplier switching*
  - Information on *ZelEn*, i.e. energy from renewable energy sources for the customers of HEP Opskrba
  - electricity saving tips (*HEP Elektra*; *Hepi*)
  - *recommendations for safe use of electrical devices*
- HEP ESCO websites on *the benefit scheme program for commercial customers of HEP Opskrba* on energy service packages:
  - Systematic energy management (establishment of remote consumption monitoring system and ESCO Monitor® system among customers)
  - Free counselling in the field of preparation of energy efficiency projects as well as energy management projects and
  - Education of employees among customers (“Course for energy managers”, “Green business”, e-course “Green office”)
- social networks - HEP Opskrba (*facebook*, *LinkedIn*)
- *My network* application of HEP Operator distribucijskog sustava for household and commercial customers
- *My account* application of HEP Elektra – for household electricity customers
- *My Hepi account* application of HEP Opskrba – for household electricity customers
- *My account* application of HEP Opskrba in Croatian and Slovenian language – for commercial customers
- *mHepi* application of HEP Opskrba – a free mobile application for paying bills
- *Hepi trader* application of HEP Opskrba in Croatian, Slovenian, Serbian and English – for commercial customers

Applications of HEP Elektra, My account and of HEP Opskrba My Hepi account and My account, enable customers to view and enter readings, consumption in previous period, bills and payments, to view bills for the chosen account, information on the date of next regular meter reading, use of consumption calculator and the creation of informative calculation. Application My network of HEP Operator distribucijskog sustava enables the delivery of read meter without logging in in the application and the checking of consumption for the previous year. Free mobile applicaton m-hepi offers the same options as the application My Hepi account, and bills can be paid by credit or debit cards. HEPI Trader application enables independent management of electricity procurement, comparison of prices at the market, monitoring electricity price trends at the market, optimization of costs and improvement of business operations.

In order to improve the process of providing information to its customers, in 2021 HEP Opskrba adapted its website to blind and partially-sighted people. The adaptation of *Hepi* website was a part of the project of the Association of the Blind Zagreb “Network for everyone”, the aim of which was to provide professional assistance to organizations which decide to adapt their websites to the blind and partially-sighted.

Grid users

HEP Operator distribucijskog sustava communicates with grid users, and communication takes place on a daily basis via: *free info-phone and e-mail* and personal arrivals of grid users to counters. On HEP ODS websites are:

- Information and forms necessary for *grid access*
- Information and forms necessary for the realization of *services on existing metering points*
- Information for *prosumers*
- Information on the *procedure of supplier switching*
- Information on planned grid works, which may result in temporary interruptions in electricity supply – *No electricity*
- Electricity saving *tips for customers* and recommendations for safe use of electric devices

Communication also takes place over *My network* application for household customers and over the portal *Metering data* with grid users from household category with connecting capacity (in the direction of consumption) of 20 kW, all commercial users with installed interval meter and all electricity producers on the distribution grid.

Application My network of HEP ODS enables its users, which register via e-Građani system, the delivery of meter reading, the overview of reading and consumption (kWh) in previous periods, information on the expected date of the following regular billing, information on temporary electricity supply interruptions and submitting requests. Meter reading can be delivered via application without registration.

GRI 2-29
GRI 3-3

Inquiries, requests and complaints by electricity customers and grid users

HEP Elektra

All HEP Elektra customers may contact HEP Elektra regarding any inquiry, request or complaint by *free phone, e-mail*, in person at customer center or in written form by regular mail. Depending on the type of inquiry and the chosen communication channel, inquiries are processed in the first step (the point of reception) or are sent for further processing in the corresponding public supply service. Depending on the type of inquiry and legal regulations, time of response to customers is also taken into account. In the event that household customers find the reponse unsatisfactory, they are entitled to address *HEP Elektra Consumer Protection Commission*. In the event that commercial customers find the response unsatisfactory, they are entitled to addres the *Croatian Energy Regulatory Agency*.

HEP Opskrba

The customers of HEP Opskrba may contact it for any type of inquiry, request or complaint by free phone, e-mail, in person at customer center or in written form by regular mail. Bill complaint shall be submitted within 15 days from the day of issuance, in written form at the address of HEP Group headquarters or by *e-mail*. The complaint shall contain all the information suitable for identifying the customer and the agreement, the explanation of the reason for the complaint, documents and other evidence, on which the complaint is based. If the complaint does not contain said information, nor it is signed by the customer (unless submitted by e-mail), the complaint is deemed incomplete to be processed. HEP Opskrba makes a decision on the complaint within 15 days at the latest from the day of receiving the complaint. If the customer delivers certain information necessary to resolve the complaint, the 15-day deadline is counted from the day of submitting the last piece of information.

HEP-Operator distribucijskog sustava

All grid users that ask for information or services, or would like to submit a complaint, may contact HEP ODS by free phone, e-mail, in written form (by sending regular mail) at the address of the competent distribution area or directly, in person at counters. Grid user and/or electricity producer may file objections to the procedure of HEP ODS as well as complaints about the Rules on general conditions for grid use and electricity supply as well as the Consumer Protection Act to the competent *distribution area*, either in writing or in person at counters. HEP ODS is obliged to respond to the written complaint within 15 days from the day of reception. If the grid user is not satisfied with the response to the written objection, they may address the Commission for customer complaints (which consists of representatives of consumer protection associations and HEP ODS representatives). The Commission shall make a decision on the complaint within 30 days. A natural person not satisfied with the decision of the Commission for customer complaints may request protection of their rights from competent court, while a legal entity may do the same through court and from HERA.

A grid user may submit requests relating to the Rules on the electricity supply quality conditions by the end of current calendar month for the previous calendar month, in which the level of guaranteed quality standard of services was not achieved, and the distribution system operator is obliged to make a decision within 30 days from the day of receiving a neat request. In case the request for the payment of monetary compensation is justified, distribution system operator shall within 30 days from the day of making a decision pay to the end customer prescribed monetary compensation. A grid user may submit requests related to the Conditions of electricity supply quality by e-mail on the address: *ods-uvjeti.kvalitete@hep.hr* or to the competent *distribution area* – in person at the counter or by mail.

GRI 2-29
GRI 3-3

Status of resolved inquiries, requests and complaints– HEP Elektra

During 2022, HEP Elektra received 418,683 inquiries by e-mail and 454,218 by free phone. The majority of inquiries referred to bill complaints, requests to conclude supply agreements i.e. to switch the supplier, to transfer or refund overpaid funds, to repay debts through installments, requests connected to debt and payment, to "My Account" application and general information. Data management and data protection as well as indicators for 2022 are described in the chapter *Our customers' data protection*. All inquiries, complaints and requests were resolved within the stipulated legal deadline. There were 155 complaints, which were not resolved in the first step, because the customers directly addressed the Commission for customer protection, 19 complaints were accepted, 2 were partially accepted and 134 were rejected because they were unfounded. In 2022 HEP Elektra submitted the total of 12,927 requests to HEP Operator distribucijskog sustava for the resumption of electricity delivery to customers, upon the termination of the reason for which temporary discontinuation was implemented. Out of 12,927 requests within one day the total of 12,704 requests were resolved, or 98.27 percent.

Service improvement – HEP Elektra

New customer centres

HEP Elektra continued opening new customer centres in 2022. 17 new customer centres were set up in the following towns: Sisak, Vukovar, Poreč, Hvar, Vinkovci, Varaždin, Pula, Velika Gorica, Zaprešić, Zabok, Čakovec, Krk, Slavonski Brod, Bjelovar, Koprivnica, Šibenik and Zadar. Customer centres are a unique place for providing information, resolving inquiries, requests and complaints of existing and potential customers. Provision of this kind of service presents additional value of HEP Elektra, which is in this manner more available to its customers for support, inquiry and/or help as well as request delivery, so customers have additional confidence in the supplier. By additional presence in smaller regional areas, personal contact with customers is achieved. Customers' habits imply availability by counties, which particularly refers to pensioners and customers that find communication by electronic mail unacceptable.

Service for household category customers– My account

In order to improve its relation with customers, HEP Elektra continuously analyses existing procedures and improves them. The service of sending bills exclusively by e-mail was realized in 2022. The service may be activated and deactivated via My account application. This leads to increased effectiveness of the process of bill issuance and delivery, energy savings and reduction of paper consumption.

GRI 2-29
GRI 3-3

Status of resolved inquiries, requests and complaints – HEP Opskrba

HEP Opskrba customer service recorded the total of 153,372 incoming calls in 2022, marking an increase of 72.3 percent in comparison to the year before. Within one minute 108,691 calls were answered, i.e. 70.9 percent. From the total number of calls, 67.3 percent referred to household customer category. ISO certificate 9001:2015 for Customer service was renewed for the sixth time at the end of 2022, which confirms a high quality of service, particularly considering customer relations. Managing data and data protection as well as indicators for 2022 are described in the chapter *Our customers' data protection*. The total number of complaints addressed to HEP Opskrba in 2022 amounted to 192 and all were resolved within the legal deadline of 15 days. In 2022 HEP Opskrba filed the total of 302 requests to HEP Operator distribucijskog sustava for resumption of electricity delivery to customers, upon the termination of the reason for which temporary discontinuation was conducted. Out of 302 requests, the total of 301 were resolved within one day, i.e. 99.7 percent.

Improving customer relations – HEP Opskrba

Meetings, workshops and sports events with customers in Croatia and Slovenia

HEP Opskrba pays special attention to maintaining close relations with customers by organizing Customer meetings in Croatia and Customer meetings of daughter company, HEP Energija in Slovenia.

The biggest electricity customers in Croatia gathered for the eleventh year in a row at the Customer meeting of HEP Opskrba in Zagreb. As a result of challenging 2022, in order to reduce organizational costs, the 11th customer meeting was held in one city, and HEP Opskrba customers form all Croatia were invited to the Meeting. As part of the 32nd Blue Lagoon Croatia Open tour in Umag, HEP Opskrba organized the fifth in a row Hepi tour of tennis doubles.

GRI 2-29
GRI 3-3

Status of received inquiries and requests of grid users – HEP ODS

In 2022 HEP ODS Customer service received the total of 459,926 calls in its call center, 518,957 inquiries and 428,071 requests through other communication channels. The Croatian Energy Regulatory Agency (HERA) adopted the Rules on electricity supply quality conditions regarding supply quality in the fields of supply quality, power reliability and voltage quality, which regulate the indicators of electricity supply quality. Supply conditions stipulate the obligation of the distribution system operator to keep electronic records with all the information and documents on the quality of service necessary for the calculation and check of service quality indicators as well as the information on the complaints about service quality, requests for payment of monetary compensation and paid monetary compensations resulting from non-achieving the level of guaranteed quality service standard. Once a year, by the 30 April of the current calendar year HEP ODS is obliged to publish at its websites *the report on electricity supply quality* for the previous calendar year. The report on electricity supply quality for 2022 contains information referring to the number of total and timely resolved complaints, answered calls and resolved requests for services within HEP ODS competence, as well as other statistical indicators stipulated by the Rules. Managing data and data protection as well as indicators for 2022 are described in the chapter *Our customers' data protection*.

GRI 2-29
GRI 3-3

Communication with heat energy customers

Communication with heat energy customers takes place on a daily basis by:

- Telephone and e-mail – *HEP Toplinarstvo*
- Websites, which among other contain:
  - *information on heat energy price formation* depending on the category of heat energy customer (household and commercial), type of heating system (central, closed or independent heating system), distribution area (Zagreb, Osijek, Sisak, Velika Gorica, Samobor or Zaprešić) and agreed scope of services (services from the agreement with end customers)
  - Information on the method of concluding *consumption agreements* (end customers within multi-apartment buildings and/or private houses connected to mutual heat energy billing meters) and *agreements on heat energy supply* (end customers with own, individual metering point that independently manage their internal heating installations)
  - Information on neighbourhoods/addresses of end customers with dates of o *temporary discontinuation of heat energy supply* due to works on heating systems and unplanned outages
  - Information on *measuring consumption and division and billing costs* for delivered heat energy
  - Information on the role, installation, financing, contacts, tips and legal framework for the installation of *separators*
  - Tips for *heat energy savings*
- application *My account*, which enables the overview and download of heat energy bills, the overview of annual heat energy consumption calculation and the overview of annual report on business operations of HEP Toplinarstvo to its heat energy customer.

GRI 2-29
GRI 3-3

Inquiries, requests and complaints of heat energy customers

The customers of HEP Toplinarstvo may contact HEP Toplinarstvo for any inquiry, request or complaint. Bill or service complaints shall be sent in written form (by e-mail or mail). If our customers are not satisfied with the given reply and they believe to have been shafted in any way, they are entitled to address the Commission for customer complaints. The commissions consist of the representatives of local consumer protection assoications and representatives of HEP Toplinarstvo and they are located in Zagreb, Osijek and Sisak. The commissions are to be contacted exclusively in written form (by mail) with the reference: "For the Commision for customer complaints". Managing data and data protection as well as indicators for 2022 are described in the chapter *Our customers' data protection*.

GRI 2-29
GRI 3-3

Status of resolved inquiries, requests and complaints - HEP Toplinarstvo

In 2022 HEP Toplinarstvo received 28,290 written inquiries (by e-mail and by mail) from customers, as well as 23,345 inquiries by free phone. The majority of inquiries refered to the transcript of heat energy bill, debt information, requests for end customer change, bill complaints and general information. All inquiries, complaints and requests were resolved within the legal deadline. The Commision for complaints of HEP Toplinarstvo received 12 complaints in 2022. The Commission adopted the decision not do discuss 4 complaints, since end customers addressed the Commission directly, not having sent the complaint to HEP Toplinarstvo, so complaints were sent for processing to competent units of the company. The Commission concluded that end customer rights were not violated by HEP Toplinarstvo in 8 complaints, so they were rejected.

As a result of debt for delivered heat energy in 2022 HEP Toplinarstvo temporarily discontinued heat energy delivery to 21 end customers. Following the fulfilment of their obligations, heat energy delivery was resumed.

GRI 2-29
GRI 3-3

Communication with gas customers

Communication with gas customers takes place on a daily basis by:

- free customer phone
- e-mail (*kontakt.hepplin@hep.hr*; *info.plin@hep.hr*)
- arrival of customers in person
- websites with information:
  - *for customers* (market service, public service for household customers and guaranteed supply for customers under special protection)
  - *for grid access* (gas connection, gas installation, gas delivery terminations...)
  - *about prices of gas and services*
- HEP-Plin application intended for private and business users
- written communication

GRI 2-29
GRI 3-3

Inquiries, requests and complaints of gas customers

All customers of HEP Plin may contact the contact centre of HEP Plin for any inquiry, request or complaint via stated communication channels. The majority of calls and requests referred to the delivery of gas meter reading, debt inquiries, bill correction, forced collection (notices and enforcements) and other services. Customers that were not satisfied with the reply to the written complaint may submit a complaint to the Customer Protection Commission of HEP Plin, which shall reply to the customer within 30 (thirty) days from the day of receiving the complaint, and state the written complaint to HERA. Managing data and data protection as well as indicators for 2022 are described in the chapter *Our customers' data protection*.

Status of resolved inquiries, requests and complaints – HEP Plin

The number of incoming calls in 2022 amounted to 138,314, marking an increase of 2.66 times more calls in comparison to the year before. 47,841 e-mails were received in 2022, which is 2.67 times more than in 2021. The amount of communication activities rose due to changes at the gas market (Regulation on the elimination of distortions at the domestic energy market), new customers, adaptation to legal requirements, adaptation of the operating system and the changeover to euro.

GRI 2-29
GRI 204-1
GRI 3-3

Public procurement

The chapter describes the procedures of managing public procurement in HEP Group, the supply chain and procurement procedures implemented in 2022.

Managing procurement procedures

Procurement of goods, services and works in HEP Group companies is conducted in line with the Public Procurement Act (OG 120/16) and by-laws, internal Rules on procurement and contracting as well as other internal documents. In the procedures of so-called simple procurement of goods and services with an estimated value less than HRK 200,000.00 (VAT excluded) and of works with an estimated value less than HRK 500,000.00 (VAT excluded), HEP Group companies apply the Rules on simple procurement. In order to prepare procurement and to inform economic entities on their plans and requirements regarding procurement, HEP Group companies conduct a market analysis. The market analysis consists of collecting information on procurement subject, economic entities at the market and other significant conditions affecting procurement conditions.

Prior to initiating the public procurement procedure for the procurement of high-value works, goods or services, HEP Group Companies are obliged to initiate the procedure of prior consulting with interested economic entities for the duration of at least five days describing procurement subject, technical specifications, criteria and special conditions for executing the contract. All interested economic entities are invited to participate in the prior consulting, so as to exchange information, observations, suggestions and advice, which may be important when planning and conducting procurement procedures, taking into consideration principles of market competitions, prohibiton of discrimination and transparency of public procurement procedures.

When conducting public procurement procedures, HEP Group companies define, on the basis of ESPD form (European single procurement document), among others, mandatory grounds for excluding economic entities from the procedures if:

- if the economic entity is either a member of a governing, or a supervisory body or is a member with the power of representation, decision making or supervision convicted for participiation in criminal organization, for corruption, fraud, terrorism or offences connected to terrorist activities, money laundering or financing terrorism, child labour or other forms of human trafficking
- if the economic entity has not fulfilled obligations to pay taxes or obligations for retirement or health insurance

When conducting simple public procurement procedures, the grounds for excluding economc entities are determined based on the certificate of good conduct and tax administration office certificate on tax debt, which economic entity shall deliver as the integral part of the bid. When conducting procurement procedures, economic entities shall also deliver a signed Integrity declaration, by which they guarantee correctness in the procurement procedure, absence of any forbidden practice connected to the bidding procedure, such as corruption or fraud, offering, giving or promising any inappropriate advantage, which may affect the activity of the employee included in the procurement procedure. Economic entity shall also deliver the consent with the audit of the whole procurement procedure by independent experts, hold responsibility and accept sanctions (contractual penalties, unconditional contract termination), if they violate prescribed rules.

Public procurement procedures which are not categorized as simple public procurement are published in the *electronic Public Procurement Classifieds of the Republic of Croatia* since 2014. Information on the *public procurement procedures in HEP Group* is published on our website and it includes basic information on the procedures of public procurement and simple procurement in line with the Rules on simple procurement, procedures excluded from public procurement, decision on the selection and annulment, as well as information on prior counselling with interested economic subjects..

Pursuant to the Law on Electronic invoices in public procurement, all HEP Group companies receive e-bills under the EU Directive (2014/55/EU) as of 1 December 2018. Information on HEP Group companies is published in the *Register of e-bill users* on the websites of the Financial Agency (FINA).

Supplier chain and procurement procedures in 2022

HEP Group supplier chain in 2022 consisted of 8,549 suppliers, 153 of which were foreign, and 8,396 were national. The majority of foreign suppliers came from the EU member countries, European countries which are not EU members, and several came from North America and Asia. National suppliers came from all Croatian counties, and a half of suppliers in 2022 came from: the City of Zagreb, Osijek-Baranja County, Primorje-Gorski Ist County, Split-Dalmatia County and Zagreb County.

The most important procedures in 2022 referred to the procurement of energy and energy fuels, for which HRK 19,049.8 million was paid and their share in HEP Group total expenses amounted to almost 60 percent.

In 2022 758 public procurement procedures were conducted in HEP Group, 57.7 percent of which referred to procurement of goods, 30.5 percent to services and 11.9 percent to works. Also, 173 procedures were conducted based on the exemption of application of Public Procurement Law, 24 of which referred to electricity procurement, 8 to gas procurement, 7 to energy coal procurement, 1 to liquefied natural gas procurement and 20 to liquid energy fuel procurement. Apart from stated procedures, a share of electricity, gas, emission units and green certificates were procured via broker platforms and at power exchanges in Central and South-East Europe.

Economic entities filed 69 complaints to the State Commission for Supervision of Public Procurement Procedures (DKOM) in 2022. 38 complaints were upheld, 9 of which referred to procurement documentation and 29 to the decision on selection or annulment. Three appeal procedures were terminated, 5 complaints were rejected and 23 were rejected as unfounded. The average duration of appeal procedures was 33 days, from the minimum of 1 day for incomplete and untimely complaints to the maximum of 81 days, which significantly affected the prolongation of public procurement procedures, and thus the procurement of goods, services and works essential for the implementation of business processes in HEP Group companies.

9

SOCIETY AND HUMAN RIGHTS

Six material topics were defined in the sustainability field of Society and human rights for 2022 – Our employees, Health protection and safety, Education and training, Our customers' data protection, Local communities and the Influence of the supply chain on the society and human rights. The procedure of defining and assessing material topics is described in the chapter Material topics.

GRI 3-3
GRI 401-1
GRI 401-2
GRI 401-3
GRI 404-1
GRI 405-1
GRI 11.10.1
GRI 11.10.3
GRI 11.10.4
GRI 12.10.1
GRI 12.10.3
GRI 12.10.4

Our employees

HEP Group long-term strategy of human resources' development for the period from 2017 to 2030 defines guidelines connected to the sustainability of managing human resources. When drawing up the Plan of employment, the time necessary to pass on knowledge from an employee to an employee, the time necessary to introduce one into business operations, age structure of employees as well as employees leaving from key positions (managers, experienced professionals) are taken into consideration. Continuous and targeted education and training present priority measures of sustainable management of HEP Group working structure, which ensure timely transmission and maintenance of specific knowledge, important for implementing business operations.

The risk connected to HEP Group employees is the extremely unfavourable age structure of HEP Group employees, which is managed in such a manner that when creating the Plans of employment it is taken into consideration to express the essential needs for employment on time (depending on the time necessary to pass on knowledge from an employee to an employee and the time necessary to introduce an employee into business operations). Moreover, the lack of interest of young labour from the field of technical professions to work in HEP Group presents another risk. Therefore, we are trying to draw them through scholarships for regular students of graduate studies and regular students of secondary schools, who become HEP Group employees upon graduation. Due to specific activities, in the long run there may arise a risk of inability to set up a more flexible work organization and implementation of business processes (flexible working arrangement), which is a result of keeping new and highly competitive labour at the labour market. Flexible working arrangement has become an increasingly common motivational factor when choosing an employer.

The information on the Total number of HEP Group employees in 2022 by gender and employment contract duration as well as comparison with 2021, is shown in the chapter *HEP Group employees*.

GRI 401-1
GRI 11.10.1
GRI 12.10.1

New employees and fluctuation of employees

Employees' satisfaction is regulary monitored through conducting standard examination of organization climate and employee satisfaction, as well as an outgoing questionnaire. Collected feedback is used as the basis for planning future activities of managing human resources and maintaining a high level of employee satisfaction, and thus low fluctuation rates.

In 2022 the total of 389 new employees was hired, which is an increase of 50 employees in comparison to 2021, and the total of 339 employees stopped working, which is an increase of 24 employees in comparison to 2021.

New employees and employees who stopped working in 2022

Number of new employees by age	Women	Men	TOTAL
< 30 years old	37	170	207
30 -50 years old	50	111	167
> 50 years old	3	12	15
Total	**90**	**299**	**389**
Number of employees who stopped working	**Women**	**Men**	**TOTAL**
< 30 years old	1	21	22
30 -50 years old	17	50	67
> 50 years old	48	275	323
Total	**66**	**346**	**339**

GRI 3-3
GRI 401-2
GRI 11.10.1
GRI 11.10.3
GRI 12.10.1
GRI 12.10.3

Benefits for employees with permanent contract

In the 2022 report we included information on benefits for employees with permanent contract in comparison to employees with fixed-term contract. We presented the data for employees in Croatia and in companies in Slovenia, Bosnia and Herzegovina, Serbia and Kosovo.

Benefits for employees with permanent contract

Type of benefit	Employees				
	Croatia	Slovenia	BiH	Serbia	Kosovo
Medical examinations	yes	no	yes	no	no
Supplementary health insurence	yes	no	yes	no	no
Compensation for disabilitiy and reduced ability to work	yes	no	yes	no	no
Allowance for birth / adoption of a child	yes	no	yes	no	no
Incentives for the third pillar pension insurance	yes	no	no	no	no

GRI 3-3
GRI 401-3
GRI 11.11.1
GRI 11.11.3
GRI 12.11.1
GRI 12.11.3

Parental leave

All the employees who exercised their right to parental leave in 2022, used that right as well. The number of women that used parental leave in 2022 remained at the same level as in 2021, and the number of men increased by 36 percent in comparison to 2021. In 2022 we showed the information on the number of employees, who came back to work at the end of parental leave and on the number of employees who continued working in HEP Group 12 months after returning from parental leave.

Use of parental leave in 2022

	Women	Men	Total
Employees who exercised the right to parental leave	154	83	237
Employees who used the right to parental leave	154	83	237
Employees who returned to work in 2022	150	75	225
Employees who continued to work in HEP Group companies 12 months after returning from parental leave	150	75	225
Share of return to work after parental leave %	97	90	95
Share of keeping employees in HEP Group 12 months after returning from parental leave	97	90	95

237 Number of employees that exercised the right to parental leave and used it in 2022

GRI 2-29
GRI 3-3
GRI 404-1
GRI 11.1.1
GRI 11.11.4
GRI 12.1.1
GRI 12.11.4

Education and training

There were 10,578 employees in HEP Group in 2022 and 511,815 hours of training. In 2021 there were 10,559 employees, and the number of hours of training was 406,825. The average number of hours of training per employee in 2022 totalled at 48.38, and in 2021 at 38.53. This training included internal trainings in line with HEP Akademija programs and other specialized internal treinings as well as external trainings referring to improving existing specific knowledge and skills connected to business operations and acquiring new ones.

During 2022 HEP Group's Education centre, i.e. HEP Akademija as internal training centre continued to work through monitoring global trends and needs of HEP Group employers for trainings. Emphasis was put on employee development, in a business sense, but also considering analysis on our employees' expressed needs and world trends caused by external crisis events. We worked on creating, organizing and implementing trainings through internal and external LMS system, i.e. our own e-learning system and on the organization of live trainings, when preconditions for those were created. HEP Group pays great attention to occupational safety, due to activities it performs, so trainings within HEP Akademija in 2022 were mostly directed to occupational safety and fire protection.

Average number of training hours by gender and type of workplace

Average annual number of hours of training per employee	48.38
Average annual number of hours of training – women management level[1]	292. 10
Average annual number of hours of training – women operational level[2]	30.15
Average annual number of hours of training – men management level[1]	97.21
Average annual number of hours of training – men operational level[2]	52.57

[1] Management level includes high, medium management
[2] Lower management is included in the data for operational level

511,815 Total number of hours of training for HEP Group employees in 2022

48.38 Average number of hours of training per employee in 2022

HEP Group invested HRK 10,816,151 (HOPS excluded) in their employees' education in 2022, which on average amounts to HRK 1,019 per employee, and 28.61 percent of employees were included in some kind of education. Needs for employee education are defined on the level of HEP Group companies or organizational units and are implemented in line with the education plan for the current year, which is adopted by HEP d.d. as part of consolidated business plan.

In 2022, 27 employees were sent to continuing education with an aim of acquiring new expert knowledge and/or a higher level of education. Employees attending post-graduation specialist or doctorate studies had their contractual obligations continuously monitored and upon their graduation presentations of post-graduation theses were organized, in order to share knowledge and exchange opinions and professional experience. Employees were sent to retraining, professional trainings (specialist programs of trainings in line with the needs on the work place, meetings of CIGRE, MIPRO CIRED, Air protection, congresses, counseling, courses and foreign language courses) and professional trainings in line with the requirements from legal regulations, along with specialist education and training by HEP NOC programs. In cooperation with the IT Department, we continued improving application support for managing education data.

Scolarships for pupils and students and financial support for employees' children

In 2022 we continued following up on contractual obligations and hiring scholars, our future employees, who achieved the right to a scholarship in the academic, i.e. school year 2021/2022 and ensuring monthly financial support or scholarship for the children of dead or perished HEP employees.

Cooperation with scientific and educational community

We have successful cooperation with scientific and educational community by participating at carreer fairs organized by institutions of higher education and "Career speed dating" events. We enable students and pupils of primarily technical orientation to gain practical experience through completing professional practice. In 2022 the total of 273 apprentices completed professional practice in HEP Group companies.

At the initiative of institutions of higher education we signed agreements with the Faculty of Economics in Zagreb and Rijeka for students to complete professional practice in HEP. Upon graduating, apprentices do not get hired directly in HEP, but have an option to apply for vacancies and/or for external competitions in line with their qualifications and preferences, like other potential candidates when applying for a job under similar conditions.

GRI 3-3
GRI 405-1
GRI 11.11.1
GRI 11.11.5
GRI 12.1.1
GRI 12.11.5

Diversity and inclusion

Pursuant to the Guidelines of the Croatian Government and the Office for gender equality and in line with the Gender Equality Act, HEP d.d. creates an Action plan for promoting and establishing gender equality in HEP Group every four years. The Plan includes the analysis of the position of men and women in HEP Group, special measures, goals and the manner of implementing measures as well as the supervision of their implementation. HEP introduced *Mamforce Company Standard*, which implements gender and family friendly management policies as well as the Rules on the procedure and measures for the protection of dignity of male and female workers. HEP d.d. also signed the Diversity Charter, which aim is the promotion of diversity policy in the business sector. The Charter is based on a group of principles which the employer voluntarily accepts for the purpose of promoting diversity, non-discrimination, inclusion and equal options in the work place. Therefore the Team for adopting the *Policy* and Action plan for the implementation of diversity and non-discriminatrion policy was founded.

Employees by gender and type of work place

In 2022 there were 22.76 percent of women employed in HEP Group. The total of 105 employees worked in management positions, 15.23 percent of which were women, including jobs of high and medium management, for which management contracts were concluded. Lower management is included in operational level.

Number of employees by gender and type of workplace

	Total number of employees	Women	Men	< 30	30 – 50	>50
Management level	105	16	89	0	42	63
Operational level	10,473	2,392	8,081	946	4,776	4,751
Total	**10,578**	**2,408**	**8,170**	**946**	**4,818**	**4,814**

Employees with disabilities

HEP Group companies fulfil their obligation of employing people with disabilities in a different way, in line with the provisions of the Ordinance on setting the quota for the employment of persons with disabilities. The obligation is fulfilled on the basis of concluded contract on business cooperation with protective workshop and integrative wokshop. Some companies employ persons with disabilities, and a majority of companies pay monetary compensation, since they do not fulfil the quota of employing persons with disabilities, for which records are kept. In 2022 there was the total of 495 employees with disabilities in HEP Group, i.e. 4.68 percent of the total number of employees. There were 96 women and 399 men. In 2021 there were 501 employees with disabilities, 406 were men and 95 were women.

Number of employees with disabilities in 2022 by gender and age

	Women	Men	Total
<30 years old	1	5	6
30-50 years old	25	72	97
>50 years old	70	322	392
Total	**96**	**399**	**495**

Occupational health and safety

The chapter describes the system of occupational health and safety of HEP Group employees through GRI indicators from 403-1 to 403-9, as well as safety measures implemented for gas customers of HEP Plin, which were described through the application of sector designations for gas and liquid fuel sector.

GRI 3-3
GRI 403-1
GRI 403-4
GRI 403-8
GRI 11.9.1
GRI 11.9.2
GRI 11.9.4
GRI 12.9.1
GRI 12.9.2
GRI 12.9.4

Managing occupational health and safety

Law on Work Safety and by-laws arising from the Law regulate the management of occupational safety in HEP Group. Hrvatska elektroprivreda d.d. and the following companies: HEP Proizvodnja, HEP ODS, and HEP Upravljanje imovinom have integrated certified systems of health protection and occupational safety in line with ISO 45001:2018 standard. *Policies and certificates* are publicly available on our websites. The compliance with requirements of legal regulations and with other requirements HEP Group companies are obliged to fulfil, is analysed and evaluated on the basis of set procedure for the application of legal and other requirements. Set systems refer to the overview of employees, activities and conditions at a workplace. Systems of occupational health and safety under ISO 45001:2018 Standard cover more than 90 percent of HEP Group employees, and provisions of the Law on Safety at Work refer to all HEP Group employees, as well as other requirements the companies are obliged to. Pursuant to the decision of the President of the Management Board, the Team for supervising activities of occupational safety and fire protection in HEP Group was appointed. It consists of a work protection specialist and internal auditor, whose task is to supervise all companies within HEP Group. In 2022 supervision was conducted in HEP ODS distribution areas.

Meetings of the Committee for occupational safety were held in HEP Group companies during 2022. The Committee for occupational safety determines policy and goals, plans activities and suggests the plan of measures for improvement, it encourages the implementation of policies of preventing occupational injuries and professional illnesses, it encourages constant improvement of the system, submits reports to the director of the company on the condition of occupational safety and occupational injuries for the previous year as well as other jobs. The Committee holds meetings at least twice a year and in the event of serious or fatal injuries, more often. Employees are included in the work of the Committee through chosen coordinator commissioners, who are also mebers of the Committeee for occupational safety. Experts for occupational safety prepare drafts of internal regulations from the field of occupational safety, they follow legal regulations at the national and EU level, implement decisions of company directors, prepare and consider suggestions of instructions for work in a safe way and for system improvement and they preform other jobs significant for occupational safety, which are discussed at the meetings of the Committee.

GRI 3-3
GRI 403-2
GRI 403-7
GRI 11.9.1
GRI 11.9.3
GRI 11.9.8
GRI 12.9.1
GRI 12.9.3
GRI 12.9.4

Hazard identification, risk assessment and incident investigation

Hazard identification, risk assessment and incident investigation is the procedure of anayzing various aspects of unfavourable work conditions with the purpose of identifying the level of risk from possible damage to the health of an employee (occupational injuries, professional illnesses and illnesses connected to work) as well as distrotions in the work process, which may cause harmful consequences for employees' health and safety.

The purpose of hazard identification and creation of risk assessment is to determine dangers, harms and effort and to assess the level of risk for the occurrence of occupational injuries, professional illnesses and illnesses connected to work, to determine corrective and preventive measures for employees' health protection. Those are created by professionals for occupational safety in companies they are employed, in cooperation with employees and their proxies for occupational safety. Risk assessment is a permanent procedure which is adapted to changes in the work process and while performing work tasks. It reduces the possibility of injuries at work and/or other unwanted events and improves the system of managing occupational health and safety.

GRI 3-3
GRI 403-3
GRI 403-7
GRI 11.9.1
GRI 11.9.4
GRI 11.9.8
GRI 12.9.1
GRI 12.9.4
GRI 12.9.8

Employees' medical examinations

In line with the type of work they do, employees were sent to medical examinations by occupational medical practicioners in 2022. Medical examinations were conducted for the purpose of determining and removing, i.e. reducing employees' health risks to a minimum. In 2022 HEP also bore the cost of supplementary health insurance for employees.

GRI 3-3
GRI 403-5
GRI 403-4
GRI 11.9.1
GRI 11.9.6
GRI 11.9.5

Education of employees for occupational health and safety

On the basis of risk assessment for work places as well as constant improvement of the set system, employees are educated about health protection and fire protection, as well as evacuation and rescue. Certain trainings use e-learning programs, such as HEP Akademija, depending on the type of workplace.

GRI 403-6

Promotion of employees' health

In 2022 lectures and consultations with nutritionists as well as weighing were held in HEP Group. The purpose was to determine mass, BMI, the proportion of muscles and water in the body as well as metabolic age. The total of 150 employees participated in lectures and consultations. In 2022 HEP continued with subsidies to the program of employees' recreation, for programs accessed via Multisport card in many sport centres in Coratia. Employees cover the cost of program totalling at EUR 20.25, and HEP covers the rest to the full sum.

GRI 3-3
GRI 403-9
GRI 11.9.10
GRI 12.9.10

Occupational injuries

By consolidating and coordinating jobs of occupational afety and fire protection, as well as rules, measures and work instructions prescribed by occupational safety professionals and employer proxies working in HEP Group companies and by supervising their application, the reduction of occupational injuries was directly affected, leading to lower costs for the employer. In 2022 there was the total of 127 occupational injuries, 2 with the lethal outcome. The share of the total number of injuries in the total number of HEP Group employees in 2022 amounted to 1.2 percent, whereas in 2021 this share totalled at 1.1 percent.

Occupational injuries in HEP Group in 2022

Company	Number of injured persons	Number of killed persons	Total
HEP d.d.	4		4
HEP Proizvodnja	12		12
HEP ODS	98	2	100
HEP Toplinarstvo	8		8
HEP Plin	1		1
HEP Elektra	2		2
Total	**125**	**2**	**127**

GRI 3-3
GRI 417-1
GRI 13.10.2

Safety measures for gas users and customers

Safety measures for gas users and customers of HEP Plin are created by an external contractor as part of the main project for gas installations, which consists of the program of control, quality assurance and environmental rehabilitation. Quality assurance of gas installation construction is achieved through the installation under norms and rules of engineering practice as well as the installation of the best devices and equipment, in line with project requirements and technical solutions.

All materials and products for installation, which are installed at take-over, have to be delivered with the compliance mark and have documents on compliance with technical instructions for installation and use in Croatian, have the characteristics similar to characteristics and features defined by the project, and all previously stated data on installed material or products delivered are archived with the evidence on the compliance of the product and are kept by the investor. Therefore, during installation each element needs to be checked, and only the equipment with the appropriate certificate and compliance (attest, certificate) may be installed. Norms and regulations applied in technical documentation to assure control and quality of installed material and equipment refer to seamless steel pipes, copper pipes, gas measuring-reduction stations, binding elements, ball valves and fittings, corrosion testing and protection.

GRI 3-3
GRI 418-1

Our customers' data protection

Managing personal data in HEP Group

Under the Directive EU 2016/679 on the protection of natural persons with regard to personal data processing and to the free movement of such data, which has been in effect since 25 May 2018, obligations of legal persons regarding personal data processing have been significantly extended and natural persons' protection has been defined, regarding such personal data processing as the basic right. HEP Group rules on personal data protection are in line with the provisions of the Directive. Thus, the purpose of personal data protection has been defined as the protection of private life and other human rights and fundamental freedoms when collecting, processing and using personal data, while collection and processing of personal data may be conducted exclusively under strict and controlled processes, pursuant to the Directive. Parent company HEP d.d. and companies which are a part of HEP Group take into account that the data of the subject, with which the processing manager comes into contact are safe and protected, for the purpose of protecting subject's privacy. In this respect, HEP Group companies are considered the companies founded by HEP d.d. with mutually regulated relations, which among others regulate relations considering the processing of subjects' personal data. The list of HEP Group companies is in the table HEP Group companies as at 31 December 2022.

Subjects' personal data is treated with special care, and it is used only for the purpose of processing on the legal basis. In order to protect subjects' personal data and privacy, we pay attention to following the principles stated by the Directive.

The structure of organization and responsibility for managing compliance and personal data protection in HEP Group is formed by appointed Data Protection Officers in HEP d.d. and Data Protection Officers in those HEP Group companies which sell products or services to natural persons or in their work systematically process bigger amounts of personal data – HEP Elektra, HEP Opskrba, HEP ODS, HEP NOC, HEP Toplinarstvo and HEP Plin.

The Data Protection Officer must be independent regarding the execution of their tasks, and for that they directly report to the highest management level of the processing manager or the processor in their company, so they are accountable to the Management Board of HEP d.d. or the director of the company. Operational part of the role of the Data Protection Officer consists of the obligation to receive, channel and resolve subject rights considering their personal data, to keep records within the system (analysis of subjects' inquiries, monthly reports, annual reports), revision of documentation as well as communication with the supervisory body, the Personal Data Protection Agency. In the event of unauthorized management of data from HEP Group companies, the incident is reported to the Data Protection Officer from HEP d.d., who has to report the incident to the Personal Data Protection Agency within 72 hours. To be able to fulfil their tasks regularly, the Data Protection Officer shall get data and/or the list of processings from other organizational units of HEP d.d. and HEP Group companies in a timely and transparent manner. These include personal data and the manner of managing these processings in order to monitor compliances of personal data management with legal regulations.

On HEP Group websites is the general *Privacy statement* referring to all HEP Group companies. The Statement describes the principles of data processing, the process of collecting and processing personal data, subjects' rights, the process of repoting to the supervisory body, and the procedure upon violation and e-mail addresses of data protection officers in HEP Group. In order to gain knowledge and raise awareness of the impotance of data protection, HEP Akademija and data protection officerss set up an educational module for GDPR, for employees who sell their products or services to natural persons or systematically process bigger amounts of personal data. The project of adapting corporate website in the part referring to the personal data processing has been conducted at HEP Group level, through cookies, pursuant to applicable judicial practice of the EU court, the European Data Protection Board and supervisory national bodies of EU member countries as well as pursuant to legal regulations of the EU and Croatia.

There were no violations of personal data or supervisory activities of the national body for personal data protection in 2022 in any HEP Group company. Subjects' rights in the field of data protection in each company were resolved within legally prescribed deadlines pursuant to the Directive.

GRI 3-3
GRI 413-1
GRI 413-2

Local community

HEP Group preforms its activities in the City of Zagreb and all 20 Croatian counties, so we continuously, on a daily basis communicate with local and regional government units in line with legal obligations and a series of different mutual actitivities and projects we carry out with local communities described below.

Local suppliers and participation of the public in the procedures of environmental impact assessment

Information on the supply chain in Croatia is stated in the chapter *Public procurement*, and the procedures carried out as part of obtaining the decision on the acceptability of the procedure for the environment, NATURA 2000 ecological network and environmental permits are described in the chapter *Environment*.

Fees for the use of premises

In 2022 HEP paid the fee of HRK 89,865,051 to local government units for the use of premises for electricity generation plants.

Solar power plants and cooperation with the local community

In line with public invitations in the period from 2019 to 2021 HEP concluded agreements on cooperation with several units of local government for the development of solar power plant projects. Owing to such cooperation, municipalities and cities have an opportunity for stronger engagement in developing sustainable energy infrastructure in their area, which is going to contribute to their economic and overall development. In 2022 the first solar power plant from that program was prepared for construction, namely SPP Črnkovci on the territory of Marijanci Municipality.

Improving local communal infrastructure

As part of HES Kosinj project, in cooperation with Perušić Municipality in 2022, the realization of the projects continued, improving communal infrastructure on the broader area of the intervention. The construction of an apartment building in Perušić intended to take care of a part of the population from the future accumulation area entered its final phase in 2022.

Information on operating mode, water inflow and water levels for water users

HEP Proizvodnja launched the website and mobile application for *HPP Lešće* before its switch to summer operating mode, which is adapted to citizens, i.e. swimmers, rowers, fishermen and hikers, who spend more time in the area downstream the hydro power plant in that period. The goal is to provide available information to the visitors of the Dobra River on operating mode and expected water flows for the forthcoming 12 hours on the locations downstream the hydro power plant. Along the Dobra River there are warning sings with QR codes which show the flow of water in the forthcoming 12 hours.

During 2022 GA HPP Sjever used the local media and websites of HEP Proizvodnja to regularly and on time announce and inform the local population on planned lowering of water levels in accumulation lakes of HPP Varaždin, Čakovec and Dubrava for the purpose of maintaining the facilities of HPP.

Computer equipment for „Za naše male genijalce“

Project *Za naše male genijalce* (“For our little geniuses”) of donating computer equipment to primary schools in Croatia continues. According to the results of the competition carried out at the end of 2021, a public ceremony of awarding computers was held in February 2022. The main event included awarding computers to schools in areas hit by the earthquake, namely Ivan Kukuljević Primary School from Sisak and Dragutin Tadijanović Primary School from Petrinja. At the end of 2022 a new cycle of this action took place. With it, HEP wants to improve teaching and learning conditions in primary schools and encourage the development of creative thinking among pupils. Between 2015 and 2022 HEP donated 650 computers for students in 198 primary schools around Croatia. The total value of donated computers amounted to HRK 4.2 million.

650 COMPUTERS donated to primary scool pupils from 2015 to 2022

HRK 4.2 MILLION is the total value of computers donated to primary school pupils from 2015 to 2022

ZelEn project

As part of the ZelEn project in 2022 a new public call was conducted and two agreements were concluded, on the donation of implementing energy sustainability measures and renewable energy source projects for the project of installing heat energy pump for the heating needs of the Electromechanical school in the town of Varaždin and for the installation of solar power plant in Potočić kindergarten in Jalžabet municipality. ZelEn is a product which guarantees that electricity was obtained exclusively from renewable sources, and is offered to its customers by HEP Opskrba. The money collected from selling ZelEn, is assigned and planned only for investment in projects of energy sustainability and renewable energy sources integrated into buildings used by public sector institutions in the fields of education, health and social care. The information on ZelEn product is described in the chapter *Electricity supply at the market – HEP Opskrba 2022*.

Award for primary and secondary school pupils - Imam žicu!

The 28th Award ceremony “Imam žicu!” was held in the headquarters of HEP in Zagreb. The award of HRK 3,000 for 2021/2022 school year was given to all primary and secondary school pupils, who won the first place at state competitions in physics, mathematics and public presentations of experimental papers in physics as well as pupils of secondary vocational schools, who won the first three places at state competitions in electrical engineering and computing.

Donation competitin “Svjetlo na zajedničkom putu”

The competition for awarding donations to institutions, associations and other ogranizations of civil society *Svjetlo na zajedničkom putu* (“Light on common way”) was carried out in 2022. In line with the conditions of the competition, 1,100 applications were received. Following the assessment of applications, donation agreements were concluded for the realization of 205 projects and programs from the following areas: youth, art and cultural heritage, humanitarian action, science and society and environment.

Write-off of receivables from customers in the area hit by the earthquake

Pursuant to the conclusions of the Croatian government, since 2021 HEP has been conducting the measure of writing off receivables for electricity and heat energy (used warm water) delivered to end customers in the areas hit by the earthquake on 29 December 2020. The measure of writing off receivables covers end customers from household category in the area of the following towns: Petrinja, Sisak and Hrvatska Kostajnica and the following municipalities: Lekenik, Sunja, Donji Kukuruzari, Majur, Dvor, Topusko, Gvozd, Jasenovac, Hrvatska Dubica, Martinska Ves, Pokupsko and Kravarsko, which fulfil prescribed conditions. The total of HRK 47.5 million was written off in 2022. HRK 126.6 million was written off since the measure became effective until the end of 2022.

HRK 47.5 MILLION of written-off receivables from customers in areas hit by earthquake in 2022

HRK 126.6 MILLION the total sum of written-off receivables from customers in areas hit by earthquake by the end of 2022

HEP Group's contribution to the prevention of energy poverty - SocialWatt

HEP ESCO participates in the implementation of the international energy sustainability project SocialWatt, and HEP Elektra is an associate member. The project is funded from the program OBZOR 2020, it started in September 2019 and lasts 43 months. The project aims to build the capacity of energy suppliers and utilities and enable them to use decision support tools developed as part of the project for efficient targeting energy poor households and the implementation of energy sustainability program.

In Croatia, the Regulation on Criteria for Acquiring the Status of Vulnerable Energy Customers from Networked Systems defines that the end customer from the household category may have the status of a vulnerable customer, provided that they are a beneficiary of the guaranteed minimum benefit or personal disability allowance or a household member, which is a beneficiary of one of those allowances. HEP Elektra and HEP Opskrba pay into the State Budget funds in the name of a solidarity fee set in the amount of three lipas per kilowatt hour, in accordance with the Regulation, which has been effective since 1 October 2015. The solidarity fee is part of the price of electricity and as such is stated on end customer's bill. The solidarity fee does not represent an additional burden for the customers of HEP Elektra and HEP Opskrba, since they are granted a discount in the same amount, whereby the solidarity fee does not affect the total amount of the bill. In 2022, HEP Group companies paid HRK 165 million to the State Budget in the name of the solidarity fee.

HRK 165 MILLION of the solidarity fee paid to prevent energy poverty

HEP Opskrba charity campaigns, support and volunteering

In 2022 HEP Opskrba participated in the charity campaign Zajedno HEPI and the UNICEF charity race Mliječa staza (Milky Way). The topic of Mliječna staza in 2022 was mental health support of the children and the young. 28 employees of HEP Opskrba collected the total of 1,572 kilometres through running, walking and cycling and ended in the TOP 20 of the overall ranking. The year was also marked by donations of food and toys to children's hospitals. HEP Opskrba employees collected groceries for the Special hospital for chronic diseases of children in Gornja Bistra. In agreement with the hospital personnel, the employees donated food in the value of around HRK 5,000.

In the volunteer action Zajedno HEPI, the employees of HEP Opskrba made everyday life brighter to the residents of the nursing home in Nuštar, a public institution, the main activity of which is social care of long-term accommodation of the elderly with mental impairments. The result of this volunteer action was the decoration of the outdor area, where the residents spend most of the time.

Like every year, we supported the National day of pink shirts again, the aim of which is raising awareness of the importance of solving problems of bullying as well as the public health campaign Day of red dresses, which was launched to raise awareness of stroke among women.

In 2022 the campaign Naša ZelEn priča took place in the middle of Gorski Kotar region, at the location of HEP's one of the most beautiful hydro power plants, Zeleni Vir, which celebrated 100 years of operation in 2022. The area of Zeleni Vir is protected and declared a special geomorphological reserve. With the approval of the Ministry of culture and media, HEP Opskrba employees and local contractor cleaned the surroundings, made and set up benches and desks along the promenade within the hydro power plant.

Other projects and activities

We continued our cooperation with organizations and institutions that take care of the children and the youth in all segments of their education, support or preparation for life. In the field of culture and tradition we continued supporting national and regional projects, projects of Croatian national theatres as well as regional and local cultural organizations.

GRI 3-3
GRI 414-1

Influence of the supply chain on society and human rights

In order to collect the data on the influence of HEP Group supply chain (first level of suppliers) on the society and human rights, we created a questionnaire in line with Consolidated GRI standards from 2021 and delivered it to important suppliers in 2022. The questionnaires contained questions connected to the number and fluctuations of employees, employee trainings, systems of managing occupationa safety and security, hazards of child and forced labour and whether our suppliers collect information on the influence of their suppliers on the society and human rights (second level of HEP Group suppliers). Important groups of HEP Group direct suppliers make up supplier chain of incoming goods, services, works and capital necessary for the production of our products and services (so-called upstream categories), then users and distributors of products and services, companies which measure the influence of our products on the environment and companies authorized for waste management (so-called downstream category). Legal basis for excluding economic entities, including suppliers from procurement procedures was described in the chapter *Public procurement*.

Out of 113 suppliers, to which the questionnaire was sent, 16 suppliers, i.e. 14.2 percent sent the information on the influence on the environment, which confirmed the assumption that collecting data on the influence of the supply chain on the society and human rights and the environment will present a big challenge in reporting.

Results of collecting data on the influence of HEP Group suppliers on the society and human rights

Asked questions	Comment with the data
Number of employees and fluctuations in 2022	16 suppliers delivered the data on the number of employees and fluctuations in 2022
System of managing work safety	Out of 16 suppliers • 11 of them have integrated and certified System of managing occupational health and safety under ISO 45001:2018 standard • 5 suppliers have integrated system, but it is not certified
Average number of hours of training per employee	Out of 16 suppliers, 16 of them keeps records on the number of training per employee
Hazard from child labour	All 16 suppliers answered there was no hazard from child labour
Hazards from forced labour	All 16 suppliers answered there was no hazard from forced labour
Including criteria on respecting human rights, avoiding forced and child labour when choosing suppliers	Out of 16 suppliers all answered that they include these criteria when choosing suppliers


10

ENVIRONMENT

Based on the conducted analysis described in the chapter Material topics, 6 topics have been determined for the presentation of HEP Group business operations in 2022 in the field of environment: Energy and energy fuels, Emissions into the air, Waters and waste waters, Waste, Biodiversity and Influence of the supply chain on the environment.

GRI 3-3
GRI 301-1
GRI 302-1
GRI 302-2
GRI 302-3
GRI 302-4
GRI 302-5

Energy and energy fuels

The following was described within material topic Energy and energy fuels: types and amounts of fuel used for electricity and heat energy generation, types and amounts of materials used in electricity and heat energy generation and distribution, and they are not primary raw materials, i.e. fuels for energy generation as well as managing energy, consumption and goals for energy saving.

GRI 3-3
GRI 301-1

Types of fuel and their consumption for electricity and heat energy generation

HEP does not perform the activity of energy fuel production, i.e. fuels it uses for electricity and heat energy generation, distribution and supply as well as gas distribution and supply, are procured from suppliers at the national and European market and at markets outside the EU. The following is taken into consideration when planning gas procurement: needs for supply of energy to customers, weather conditions, own consumption, energy fuel prices along with monitoring geopolitical and economic circumstances, which may affect the availability and prices of eneregy fuels, goals of global, EU and Croatian sustainability policies for the sectors of electricity and heat energy generation and distribution and gas distribution as well as goals from the development strategy HEP2030. In 2022 electricity was generated from renewable energy sources (HPP, WPP, SPP and biomass), nuclear energy and fossil fuels, whereas heat energy was generated from fossil fuels and biomass. A share of electricity was procured at the market, whereby all heat energy was generated in Croatia. The structure of generated electricity and heat energy with related capacities and amounts of energy generated is described in the chapter *Our products, services, markets and value chain*.

Fuel consumption for electricity and heat energy generation in 2022

Fuel consumption for electricity and heat energy generation in 2022 is shown by HEP Group companies which manage facilities owned and co-owned by HEP Group, as well as types of fuel. Information on fuel consumption for HEP PRoizvodnja and HEP Toplinarstvo includes fuel for own consumption and generation of electricity and heat energy sold to customers. For taking electricity from Nuclear power plant Krško (NEK), we showed the consumption of fuel for energy taken at the threshold of the power plant without own consumption. Information on fuel consumption in HEP Operator distribucijskog sustava refers to the fuel used for heat energy generation for own consumption, i.e. heating of business offices.

Fuel consumption for electricity and heat energy generation

Operator: HEP Proizvodnja			
Electricity generation – energy sold to customers + energy for own consumption			
Type of fuel	Unit	Amount	Measurement/ projection
Coal	t	550,375.00	Measurement
Gas oil	t	10,359.41	Measurement
Fuel oil	t	308.20	Measurement
Light fuel oil	t	711.70	Measurement
Natural gas NCV[1]	MWh	6,129,096.00	Measurement
Natural gas GCV[2]	MWh	6,802,548.00	Measurement
Wood chips	t	27,991.00	Measurement
Heat energy generation – energy sold to customers + energy for own consumption			
Type of fuel	Unit	Amount	Measurement/ projection
Gas oil	t	9,119.31	Measurement
Light fuel oil	t	6.12	Measurement
Natural gas NCV[1]	MWh	2,006,495.00	Measurement
Natural gas GCV[2]	MWh	2,226,964.00	Measurement
Wood chips	t	33,502.00	Measurement
Operator: Nuclear power plant Krško (NEK) – 50% of generated electricity			
Electricity generation – energy taken from NEK at the threshold without own generation			
Type of fuel	Unit	Amount	Measurement/ projection
Uranium dioxide UO_2 (up to max. 5% enriched uranium 235, and the rest uranium 238)	MWd/mtU[3]	13,200.00	Projection
Operator: HEP Toplinarstvo			
Heat energy generation – energy sold to customers + energy for own consumption			
Type of fuel	Unit	Amount	Measurement/ projection
Extra light fuel oil	t	1,510.33	Calculation based on supplier's invoice
Natural gas	MWh	99,065.29	Calculation based on supplier's invoice m^3 and conversion in MWh
Operator: HEP Operator distribucijskog sustava			
Heat energy generation – energy for own consumption			
Type of fuel	Unit	Amount	Measurement/ projection
Fuel oil	MWh	183.25	Calculation based on supplier's invoice
Natural gas	MWh	9,239.76	Calculation based on supplier's invoice

[1] NCV = lower calorific value of natural gas
[2] GCV = upper calorific value of natural gas
[3] MWd/mtU = nuclear fuel burnup is a physical quantity representing the measure of used nuclear fuel and is defined as energy freed in a unit of mass of nuclear fuel. In nuclear power it is most often expressed in negawatt-days (MWd) per metric tonne of uranium (mtU), i.e. MWd/mtU

GRI 3-3
GRI 301-1

Types and quantities of used materials, which are not fuel

In the process of electricity and heat energy generation, materials which are not fuel are also used. In this chapter we show the amonts of used chemicals for the chemical preparation of water and ion masses and amounts of used oil, grease and varnishes by HEP Group companies. We showed the data on the types and amounts of used materials, which are not fuel, for the first time for 2022. The choice of materials for 2022 was made based on the assessment of the importance of material consumption in each company, as compared to other materials they use.

Consumption of chemicals and oil

Operator: HEP Proizvodnja	Unit	Amount	Measurement/projection
Chemicals for chemical preparation of water	t	4,470.00	Amount on supplier's packaging
Ion masses	l	3,500.00	Amount on supplier's packaging
Turbine oil	l	61,917.00	Amount on supplier's packaging
Transformer oil	l	742.00	Amount on supplier's packaging
Other oils	l	5,147.00	Amount on supplier's packaging
Operator: HEP Toplinarstvo	**Unit**	**Amount**	**Measurement/ projection**
Chemicals for chemical preparation of water	t	3.00	Projected
Oils total	m^3	0.03	Projected
Greases total	t	0.015	Projected
Varnishes total	t	0.015	Projected

Safety management system for work with hazardous substances

Facility operator that determines presence of hazardous substances in their area is obliged to introduce the Safety management system (SMS) and to undertake preventive measures necessary to reduce the risk of occurrence of major accidents and to prevent major accidents as well as measures to limit the effect of major accidents on people, material goods and the environment. Thermal power plants operated by HEP Proizvodnja integrated the safety management system and adopted *Policies for preventing major accidents* which are published on HEP's websites.

Depending on the amont of hazardous substances pursuant to the Regulation on preventing major accidents, which include hazardous substances the plants TE-TO Zagreb and TPP Rijeka are included in the category of higher class plants and are obliged to draw up a Security report with Internal plan. TPP Plomin, TE-TO Sisak, TE-TO Osijek, EL-TO Zagreb and KTE Jertovec are included in the category of lower class plants and are obliged to draw up the Operational plan of civil protection of a legal entity of interest to the civil protection system, Operational plan of legal entities which perform the activity of using hazardous substances and the Projection of risk of legal entities which perform the activity of using hazardous substances.

GRI 3-3
GRI 302-1
GRI 302-4
GRI 302-5
GRI 11.1.1
GRI 11.1.2
GRI 12.1.1
GRI 12.1.2

Energy consumption and energy management systems

HEP Proizvodnja, HEP Toplinarstvo, HEP Operater distribucijskog sustava, HEP d.d. and HEP Upravljanje imovinom have integrated energy management systems under ISO 50001:2018 standard, which are parts of integrated management systems under ISO Standards. *Policies of energy management and certificates* are published on HEP Group websites. Almost all locations where HEP Group companies operate and which are fully owned by HEP Group are included in the energy management system. HEP Trgovina, HEP Opskrba, HEP ESCO, HEP Telekomunikacije and Energy park Korlat operate at HEP Group headquarters, which has integrated and certified energy management system. The overview of energy consumption at the location of HEP Nastavno obrazovni centar (HEP NOC) is included in the consumption of HEP Operator distribucijskog sustava, which is also the founder of HEP NOC. HEP Elektra mostly operates in rented business offices, so the renter manages energy consumption.

Energy consumption in 2022

The total of electricity and heat energy for own consumption in HEP Group companies in 2022 amounted to 542,856.48 MWh, 9,950.80 MWh from renewable energy sources, i.e. 2.83 percent. Electricity from renewable sources used for own consumption originates from 53 solar photovoltaic power plants installed on roofs of HEP's buildings. Heat energy used for own consumption from renewable energy sources originates from thermal power plants using untreated wood chips. For the first time we made the breakdown of used energy by source for 2022.

Consumption of electricty and heat energy in HEP Group companies by energy sources

Operator: HEP Proizvodnja	Unit	Quantity	Measurement/ projection
Total own electricity consumption	**MWh**	**319,317.68**	**Measurement**
From renewable energy sources	MWh	4,593.01	Measurement
From fossil fuels	MWh	314,724.67	Measurement
Total own heat energy consumption	**MWh**	**214,316.87**	**Measurement**
From renewable energy sources	MWh	3,416.45	Measurement
From fossil fuels	MWh	210,900.42	Measurement
Operater: HEP Toplinarstvo	**Unit**	**Quantity**	**Measurement/ projection**
Total own electricity consumption	**MWh**	**2,581.05**	**Measurement**
From renewable sources	MWh	0.00	Measurement
From fossil fuels	MWh	2,581.05	Measurement
Total own heat energy consumption	**MWh**	**789.85**	**Measurement**
From renewable sources	MWh	205.53	Measurement
From fossil fuels	MWh	584.32	Measurement
Operater: HEP Operator distribucijskog sustava	**Unit**	**Quantity**	**Measurement/ projection**
Total own electricity consumption	**MWh**	**1,247.18**	**Measurement**
From renewable sources	MWh	1,247.18	Measurement
From fossil fuels	MWh	0.00	Measurement
Total own heat energy consumption	**MWh**	**183.25**	**Measurement**
From renewable sources	MWh	0.00	Measurement
From fossil fuels	MWh	183.25	Measurement
HEP Group headquarters	**Unit**	**Quantity**	**Measurement/ projection**
Total own electricity consumption	**MWh**	**1885.15**	**Measurement**
From renewable sources	MWh	488.63	Measurement
From fossil fuels and nuclear energy (energy mix)	MWh	1,396.52	Measurement
Total own heat energy consumption	**MWh**	**2,035.45**	**Measurement**
From renewable sources	MWh	0.00	Measurement
From fossil fuels	MWh	2,035.45	Measurement
HEP Group	**Unit**	**Quantity**	**Measurement/ projection**
Total own energy consumption in HEP Group	**MWh**	**542,356.48**	**Measurement**
From renewable sources	MWh	9,950.80	Measurement
From fossil fuels	MWh	532,405.68	Measurement

GRI 3-3
GRI 302-2
GRI 11.1.1
GRI 11.1.3
GRI 12.1.1
GRI 12.1.3

Energy consumption in the supply chain

We collected data on energy consumption from suppliers on the basis of questionnaires drawn up according to Consolidated GRI standards for 2021. The results on collecting data on the influence of the supply chain on the environment, which include energy consumption are shown in the chapter *Influence of the supply chain on the environment*. On the basis of collected data, electricity consumption in the supply chain in 2022 amounted to 151,711,583.18 MWh. Thereby, collected data is not a real indicator of energy consumption in the supply chain, because out of 113 important suppliers, 16 answered the questions, and 10 suppliers delivered the data on energy consumption, i.e. 8.85 percent.

GRI 302-3
GRI 11.1.4
GRI 12.1.4

Energy intensity

The calculation of energy intensity includes the total own electricity and heat energy consumption in HEP Group companies, which amounted to 542,356.48 MWh (0.542 TWh) in 2022 and the total sold electricity (17.5 TWh) and heat energy (1.8 TWh) as well as gas sale (2.5 TWh) to customers, i.e. 21.8 TWh. By dividing energy used for own consumption (0.542 TWh) and the total sold electricity, heat energy and gas (21.8 TWh), energy intensity in 2022 amounted to 0.025 TWh by sold terawatt-hour (TWh) of total energy to customers.

GRI 3-3
GRI 302-5

Reducing energy consumption among customers

Under the Law on energy efficiency, energy saving obligation system (obligation system) was set up, on the basis of which energy suppliers have to achieve energy savings in immediate consumption. Under the Decision of the Management Board of HEP in 2018, the internal Energy saving obligation system was established in HEP Group, and HEP ESCO was appointed as its coordinator. HEP ESCO basic activities include coordination of all companies and professional technical assistance, as well as collecting, consolidating and reporting on achieved and planned results related to the achievement of obligatory energy savings in HEP Group. HEP ESCO enters all collected measures, apart from those independently entered by obliged companies, in the application System for monitoring and verification of energy savings (SMIV).

The companies performing the activities of supplying customers with electricity and heat energy as well as gas are included in SMIV. These are the following: HEP Elektra, HEP Opskrba, HEP Toplinarstvo and HEP Plin. Also, companies which are not obliged participate in the obligation system, and these are: HEP, HEP Proizvodnja, HEP Trgovina, HEP Upravljanje imovinom and HEP-ESCO. Under the Decision of the Management Board of HEP from 2020 it was decided that HEP shall be the holder of integrated report for daughter companies obliged by the Energy efficiency obligation system, which is to be delivered to the Ministry of Economy and Sustainable Development (MINGOR).

Obligation of reducing energy consumption among customers in 2022

In 2022 the obligation of all HEP Group suppliers amounted to 119,219,095 kWh (119,219.10 MWh), and the obligation was completely fulfilled with additional 2,057,016 kWh (2,057.02 MWh) of achieved savings, which were not a legal obligation. HEP Elektra achieved the biggest energy savings in immediate consumption in 2022, i.e. 58,489,493 kWh (58,489.49 MWh), which makes up 48.23 percent of the total achieved savings by HEP Group. HEP ESCO achieved 23,824,480 kWh (23,824.48 MWh) i.e. 19.64 percent, HEP Toplinarstvo 20,650,092 kWh (20,650.09 MWh) i.e. 17.03 percent, HEP Plin 11,299,232 kWh (11,299.23 MWh) i.e. 9.32 percent, HEP Proizvodnja 4,301,199 kWh (4,301.20 MWh) i.e. 3.55 percent, HEP Opskrba 2,324,529 kWh (2,324.53 MWh) i.e. 1.92 percent and HEP d.d. 387,087 kWh (387.09 MWh) i.e. 0.32 percent.

GRI 3-3
GRI 305-1
GRI 305-2
GRI 305-3
GRI 305-4
GRI 305-5
GRI 305-6
GRI 305-7
GRI 11.1.1
GRI 11.1.5
GRI 11.1.7
GRI 11.1.8
GRI 12.1.1
GRI 12.1.5
GRI 12.1.7
GRI 12.1.8

Emissions into the air

The overview of emissions into the air from HEP Group sources includes greenhouse gas emissions of carbon dioxide reduced to equivalent CO_2 (eq), and they include emissions of methane (CH_4), nitrous oxide (N_2O) and sulphur hexafluoride (SF_6), then emissions of nitric oxides (NO_x), sulphur oxide (SO_2), carbon monoxide (CO) and PM_{10} particles as well as data on managing devices and equipment containing ozone depleting substances.

GRI 3-3
GRI 305-1
GRI 305-2
GRI 305-3
GRI 305-4
GRI 305-5
GRI 11.1.1
GRI 11.1.5
GRI 11.1.6
GRI 11.1.7
GRI 11.1.8
GRI 12.1.1
GRI 12.1.5
GRI 12.1.6
GRI 12.1.7
GRI 12.1.8

Greenhouse gas emissions

We used a revised version of the GHG Protocol Corporate Accounting and Reporting Standards published by the World Business Council for Sustainable Development (WBCSD) to show greenhouse gas emissions of HEP Group according to Scope 1, 2 and 3. In line with the requirements of Consolidated GRI standards from 2021, greenhouse gas emissions from biomass-fired power plants are a part of Scope 1 and are shown separately.

GRI 3-3
GRI 305-1
GRI 11.1.1
GRI 11.1.5
GRI 12.1.1
GRI 12.1.5

Scope 1 emissions

The following is included in direct greenhouse gas emissions, which are a result of HEP Group acitivities, i.e. Scope 1 for 2022: emissions of electricity and heat energy generation plants in the European Union Emissions Trading System - EU ETS (A), emissions from biomass-fired thermal power plants shown separately (B), emissions from boiler rooms for heat energy generation outside EU ETS (C), emissions from vehicle fleet (D), fugitive emissions from switchgear equipment (E) and fugitive emissions from the floating LNG terminal included in EU ETS (F) in the part referring to HEP Group. Emissions from nuclear energy generation from NPP Krško for the 50 percent of energy delivered into the Croatian electric power system for sale to customers are included in Scope 3. Greenhouse gas emissions from electricity procured at the market to cover losses in the distribution grid should be included in Scope 2, but the distribution system operator HEP ODS is fully owned by HEP d.d., so greenhouse gas emissions resulting from energy generation to cover losses in the distribution grid are included in in Scope 1 emissions (G). Greenhouse gas emissions, which originate from energy to cover losses in the transmission grid are included in Scope 3. We are currently collecting data to calculate fugitive emissions form gas distribution operated by HEP Plin.

HEP Proizvodnja is the operator of EU ETS plants (A) and wood biomass-fired thermal power plants (B) which generate electricity and heat energy. HEP Toplinarstvo is the operator of boiler rooms for heat energy generation outside EU ETS, and distribution grid operator, which includes switchgear equipment is HEP Operator distribucijskog sustava (E) and (G). The operator of the floating terminal on the island of Krk (F) is LNG Hrvatska co-owned by HEP d.d. and Plinacro d.o.o. (75%:25%). Greenhouse gas emissions from the vehicle fleet cover vehicles of HEP Group companies (D) with the headquarters in Croatia, which are fully owned by HEP d.d.

Data on emissions in 2022, which were reduced to equivalent carbon dioxide, i.e. CO_2 (eq), and apart from CO_2, which is a result of electricity and heat energy generation process as well as of vehicle fleet, are included in the following greenhouse gases: sulphur hexafluoride (SF_6), methane (CH_4) and nitrous oxide (N_2O). Factors for global warming potential (GWP) stated in *The Fifth IPPC Assessment Report AR5* were used to convert SF_6, CH_4 and N_2O emissions to equivalent CO_2 (eq). According to said report, GWP for CH_4 totals at 28, for N_2O at 265, and for SF_6 at 23,500. Thereby CH_4 emissions originate from LNG on KRK and the vehicle fleet, N_2O from the vehicle fleet, and SF_6 is in the switchgear equipment.

Submission of emission units (EUA) in the EU Registry

In 2022, like in previous years, HEP Group fulfilled its obligation of purchasing emission units (EUA) for EU ETS plants in its full ownership and it submitted them in legal deadline on the accounts opened in the EU Registry. The total CO_2 emission from EU ETS plants in 2022 amounted to 3,051,909 tons. From that amount, 2,980,780 tons were emitted from TPP, TE-TO and EL-TO (A), and 71,129 from BE-TO (B). Out of 3,051,909 tons, 2,515,554 tons of CO_2 were emitted in the process of electricity generation, and 536,359 tons of CO_2 in the process of heat energy generation. In 2022 there was no obligation of EUA purchase for BE-TO Osijek and Sisak, which are in EU ETS. Methodology and emission factors defined in approved Plans of monitoring greenhouse gas emissions prescribed by the Intergovernmental Panel on Climate Change (IPCC) are used to calculate CO_2 emissions from EU ETS plants. Emissions were confirmed by an independent verifier.

In 2022 HEP Proizvodnja, EU ETS plant operator, did the following:

- Conducted a revision of Plans of monitoring greenhouse gas emissions and Plans for methodological monitoring of free emission units
- Drew up Reports on greenhouse gas emissions, which were reviewed and approved by authorized verifiers in Croatia and the European Commission
- Drew up Reports on free emission units of CO_2 for heat energy generation
- Conducted audits in all locations of EU ETS plants, in order to check how the system of monitoring CO_2 emissions functions

The amount of allocated free emission units in 2021 for a part of generated heat energy totalled at 96,150, and in 2022 to 90,409, i.e. 2.96 percent in comparison to total CO_2 emissions from EU ETS plants. The average price of EUA in 2022 was EUR 85.

Reporting to competent bodies on switchgear equipment containing SF_6

Like every year HEP ODS reported to the competent Ministry of Economy and Sustainable Development (MINGOR) on switchgear equipment containing greenhouse gas sulphur hexaflouride (SF_6). Data on SF_6 emissions is based on projected amount of refilled gas.

Switchgear equipment – high-voltage devices and circuits SF_6	2022
Amounts of switching apparatus (pcs)	14,466
Filling switching apparatus with gas SF_6 (t)	37.65
Flow of SF_6 from operating equipment (kg)	80.24
Handling SF_6 gas and switchgear equipment after the expiry of its working life (kg)	55.5

Scope 1 emissions in 2022

HEP Group Scope 1 emissions in 2022 totalled at 3,443,321 tons of CO_2 (eq). From that amount, the share of greenhouse gas emissions from sources using biomass as fuel, i.e. untreated wood chips was 2.07 percent, and the share from TPP Plomin 2, which uses imported low-sulphur coal as fuel, was 37.61 percent.

Types of sources, processes and greenhouse gases included in Scope 1 plus methodology

Source mark	Type of source	Process	Greenhouse gases	Methodology for calculating emissions
A	Electricity and heat energy generation plants that are a part of the European Union Emissions Trading System (EU ETS) -– TPP, TE-TO and EL-TO	Fuel compbustion for electricity and heat energy generation	Carbon dioxide (CO_2)	Calculation by methodology and emission factors defined in approved Plans of monitoring greenhouse gas emissions prescribed by the Intergovernmental Panel on Climate Change (IPCC)
C	Boiler rooms for heat energy generation outside EU ETS	Fuel combustion for heat energy generation	Carbon dioxide (CO_2)	Calculation by methodology and emission factors by the methodology of the Intergovernmental Panel on Climate Change (IPCC)
D	Vehicle fleet emissions	Fuel combustion in passenger and commercial vehicles and emissions from the processes prior to fuel combustion, so-called upstream emissions	Carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) reduced to equivalent CO_2 by using GWP factors	Calculation based on the type of vehicle, the type of fuel, mileage, number of emission factors from the basis of emission factors / removal of emissions for the calculation of carbon footprint under the GHG protocol
E	Switchgear equpiment – high-voltage devices and circuits	Fugitive emissions from switchgear equipment and equipment manipulation	Sulphur hexaflouride (SF_6) reduced to equivalent CO_2 by using GWP factors	Calculation based on projected amount of switchgear equipment refill with 0.08204 t of SF_6 and GWP 23,500
F	Emissions from the storage of liquefied natural gas in EU ETS part referring to HEP Group	fugitive emissions	methane (CH_4) reduced to CO_2 by using GWP factors	Calculation based on the methodology of calculation and independent verification used for plants in EU ETS as well as 23.79% nomination (gasification) for HEP Group in 2022, data submitted by LNG
G	Greenhouse gas emissions from energy for covering losses in the distribution grid	Fuel combustion for electricity generation	Carbon dioxide (CO_2)	Calculation by the intensity of energy mix emissions of avaliable energy in 2022 and losses in the distribution grid

Types of sources, processes and greenhouse gases from wood chips included in Scope 1 plus methodology

Source mark	Type of source	Process	Greenhouse gases	Methodology for calculating emissions
B	Electricity and heat energy generation plants from wood biomass (chips) – BE-TO	Fuel combustion for electricity and heat energy generation	Carbon dioxide (CO_2)	Calculation by methodology and emission factors defined in approved Plans of monitoring greenhouse gas emissions prescribed by the Intergovernmental Panel on Climate Change (IPCC), for which there was no obligation of purchasing emission units (EUA) in 2022

HEP Group greenhouse gas emissions included in Scope 1

Source mark	Name of source	Amount of CO_2 (eq)/ t	Share in Scope 1/ %
A	TPP Plomin 1	88	0.00
A	TPP Plomin 2	1,295,063	37.61
A	TPP Rijeka	1,243	0.04
A	CCGT Jertovec	44,486	1.29
A	TE-TO Zagreb	859,167	24.95
A	EL-TO Zagreb	210,129	6.10
A	TE-TO Sisak	525,195	15.25
A	TE-TO Osijek	45,409	1.32
TOTAL from sources marked with A		**2,980,780**	**86.57**
C	Bregana – 2 boiler rooms	224	0.01
C	Samobor – 2 boiler rooms	2,662	0.08
C	Velika Gorica – 8 boiler rooms	12,408	0.36
C	Zaprešić – 5 boiler rooms	3,534	0.10
C	Zagreb – 9 boiler rooms	4,048	0.12
C	Osijek – 1 boiler room	674	0.02
TOTAL from sources marked with C		**23,551**	**0.68**
D	HEP Group vehicle fleet	160,058	4.65
TOTAL from sources marked with D		**160,058**	**4.65**
E	Switchgear equipment	1,886	0.05
TOTAL from sources marked with E		**1,886**	**0.05**
F	Diffuse emissions from LNG	8,670	0.25
TOTAL from sources marked with F		**8,670**	**0.25**
G	Energy for covering losses in the distribution grid	190,247	5.73
TOTAL from sources marked with G		**197,247**	**5.73**
TOTAL from sources A+C+D+E+F+G		**3,372,192**	**97.93**

Greenhouse gas emissions from wood chips included in Scope 1

Source mark	Name of source	Amount of CO_2 (eq)/ t	Share in Scope 1/ %
B	BE-TO Sisak	40,495	1.18
B	BE-TO Osijek	30,634	0.89
TOTAL from sources marked with B		**71,129**	**2.07**

Comparison of total greenhouse gas emissions in EU-27 and Croatia with HEP Group emissions in 2021

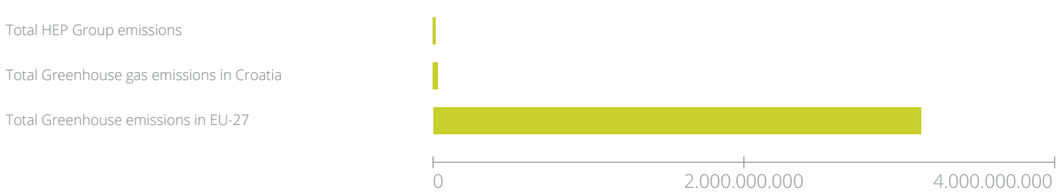
The last results on greenhouse gas emissions were published for 2021, so the comparison refers to the comparison of total greenhouse gas emissions in EU-27 and in Croatia with HEP Group emissions for 2021. Thereby Scope 1 emissions are compared, so as not to double the data. Fossil fuel- and biomass- fired combustion plants (A and B) as well as boiler rooms for heating cities (C) were included in the calculation of HEP Group Scope 1 emissions during 2021. Greenhouse gas emissions from HEP Group in 2022 are described in the following chapters *Scope 1 emissions*, Scope 2 emissions and Scope 3 emissions.

Share of HEP Group greenhouse gas emissions in the total emissions of EU-27 and Croatia in 2021

	CO_2 (eq)/t	Share of HEP Group emissions/ %
Total greenhouse gas emissions in EU-27	3,241,716,000	0.08
Total greenhouse gas emissions in Croatia	19,020,000	14.40
Total HEP Group greenhouse gas emissions	2,739,410	-

Source: *EEA greenhouse gases — data viewer*

Comparison of total CO_2 (eq) emissions in EU-27 with emissions in Croatia and HEP Group emissions in 2021



GRI 3-3
GRI 305-2
GRI 11.1.1
GRI 11.1.6
GRI 12.1.1
GRI 12.1.6

Scope 2 emissions

Croatian Transmission System Operator (HOPS) operates under the model of independent transmission operator, which implies functional independence from the parent company, Hrvatska eletkropriveda d.d. and HEP Group companies. Among other things, HOPS is responsible for procuring electricity to cover losses in the distribution grid. HEP conducts a long-term procurement of losses on the Croatian Power Exchange (CROPEX) on an annual, quarterly and mothly level, and thus ensures energy to cover losses. Therefore emissions for covering losses in the transmission grid are not included in HEP's Scope 2, but in Scope 3. Since Scope 2 refers to greenhouse gas emissions from energy purchased from suppliers and used in the reporting company, Scope 2 is not applicable to HEP Group in 2022.

GRI 3-3
GRI 305-3
GRI 11.1.1
GRI 11.1.7
GRI 12.1.1
GRI 12.1.7

Scope 3 emissions

Collecting data to calculate greenhouse gas emissions included in Scope 3 is a complex procedure as it includes emissions from HEP Group supply chain. Based on the GHG Protocol Corporate Accounting and Reporting Standards for 2022, we determined that our suppliers are found in 12 out of 15 supplier categories, which need to be included in Scope 3. Suppliers are divided in the ones prior to product generation and service provision (so-called upstream supply chain) and the ones after product generation and service provision (so-called downstream supply cain). Suppliers preceding product generation and service provision (so-called upstream supply chain) come from the following categories: procurement of goods, works and services, procurement of capital goods (tools, machines, IT and other equipment, vehicles, buildings) procurement of fuel for electricity and heat energy generation, gas distribution and supply as well as electricity procurement for sale to customers, fuel and goods transporters, management of waste resulting from product generation and service provision, transporters for business trips, transporters used by employees to come to work, renters of property, equipment and vehicles. Suppliers in the supply chain after product generation and service provision (so-called downstream supply chain) come from the following categories: electricity transmission, customers of electricity, heat energy and natural gas as well as capital markets (banks, funds).

Scope 3 emissions in 2022

For the first time in 2022 HEP Group drew up a questionnaire according to the Consolidated GRI Standards 2021 to examine the effect of the supplier chain on the society, human rights and the environment. We sent the questionnaires on e-mail addresses of 113 important suppliers and their importance was defined according to the amount of paid financial means for services, goods and works as well as suppliers' engagement in a significant project. Out of 113 suppliers, 16 of them answered the questionnaire about the effects on the environment, i.e. 14.2 percent, and the data on their total Scope 1 emissions was submitted by 7 suppliers, 1 of which submitted data on emissions by the unit of product. The results of data collection for 2022 confirmed the prediction that data collection on greenhouse gas emissions is going to present the biggest challenge, since suppliers submit the data on a voluntary basis. Only a proportion of suppliers are obliged to sustainability reporting, and the number of suppliers that include greenhouse gas emission data, originating from their operations, in sustainability reports is even smaller, particularly on emissions by unit of product or provided service.

Suppliers which delivered data on their total Scope 1 emissions were the following: fuel suppliers (1), producers of parts for generation facilities and energy power equipment (3), banks (2) as well as a supplier from ICT sector (1). Diffuse greenhouse gas emissions from liquefied natural gas terminal, which were not for nominations (gasification) for HEP Group 2022 (LNG Hrvatska) are also included in HEP Group Scope 3. The following are also included: greenhouse gas emissions from electricity generation in NPP Krško sold to customers in Croatia, greenhouse gas emissions to cover losses in the transmission grid of the independent Croatian transmission system operator (HOPS), and emissions from energy procured at the market to be sold to customers.

Taking into consideration these are total emissions of suppliers that submitted data on greenhouse gas emissions, and not the quantities the suppliers emitted when performing activities and providing services to HEP Group, and that the share of important suppliers, which delivered data on emissions, is only 6.2 percent, the data on HEP Group Scope 3 emissions for 2022 is informative and does not indicate the real condition. On the basis of the data collected from the suppliers, HEP Group greenhouse gas emissions from Scope 3 for 2022 amounted to 2,058,884 tonnes.

GRI 3-3
GRI 305-4
GRI 11.1.1
GRI 11.1.8
GRI 12.1.1
GRI 12.1.8

Greenhouse gas emission intensity

For 2022 HEP Group calculated the carbon footprint including greenhouse gas emissions from Scopes 1 and 3, since Scope 2 is not applicable to HEP Group. The total intensity of HEP Group greenhouse gases is calculated on the basis of HEP Group carbon footprint in 2022 and total available energy, which includes electricity and heat energy. Emission intensity is also presented by activities of electricity generation and distribution as well as heat energy generation and distribution. Currently, the system is being set up for the activity of gas supply to customers for the calculation of greenhouse gas emissions, which shall be reported in the forthcoming reporting period.

Carbon footprint end greenhouse gas emission intensity in 2022

HEP Group total carbon footprint for 2022 amounted to 5,502,205 tonnes of carbon dioxide CO_2 (eq) and it included emissions from Scopes 1 and 3. Carbon footprint from electricity generation and distribution amounted to 2,794,637 tonnes, and carbon footprint from heat energy generation and distribution totalled at 624,402 tonnes of CO_2 (eq). In 2022 the total of available electricity was 19.8 TWh, and the total od generated heat energy amounted to 2.27 TWh.

HEP Group carbon footprint in 2022

Sources of greenhouse gas emissions	Carbon dioxide – CO_2 (eq)/ t
Scope 1 – direct greenhouse gas emissions	3,443,321
Scope 2 – non-direct greenhouse gases from generated energy purchased from suppliers, which is used in the reporting organization	Not applicable
Scope 3 – other non-direct greenhouse gas emissions from the supplier chain	2,058,884
HEP Group total carbon footprint	**5,502,205**

Carbon footprint from electricity generation and distribution

Sources of greenhouse gas emissions	Carbon dioxide – CO_2 (eq)/ t
Direct greenhouse gas emissions from electricity generation (emissions from fossil fuel- or biomass-fired combustion plants, vehicle fleet emissions)	2,590,795
Direct greenhouse gas emissions from electricity distribution (emissions from switchgear equipment, vehicle fleet, covering losses in the distribution grid)	203,684
Total carbon footprint	**2,794,479**

Carbon footprint form heat energy generation and distribution

Sources of greenhouse gas emissions	Carbon dioxide – CO_2 (eq)/ t
Direct greenhouse gas emissions from heat energy generation and distribution (emissions from fossil fuel- or biomass-fired combustion plants, vehicle fleet emissions)	639,283
Diffuse emissions from LNG for gas for heat energy generation	8,670
Total carbon footprint	**647,953**

Total HEP Group greenhouse gas emissions intensity for electricity and heat energy

	g CO_2/ kWh
Total HEP Group greenhouse gas emission intensity: • HEP Group carbon footprint / total available electricity and generated heat energy	249
Greenhouse gas emission intensity from electricity generation: • Carbon footprint of generated electricity / generated electricity from sources owned and co-owned by HEP Group	208
Greenhouse gas emission intensity for available electricity: • Carbon footprint of generated electricity / available electricity includes generation from sources onwed and co-owned by HEP Group as well as off-system procurement	131
Greenhouse gas emission intensity from electricity generation and distribution: • Carbon footprint of generated and distributed electricity / electricity generated from sources owned and co-owned by HEP Group	224
Greenhouse gas emission intensity from electricity generation and distribution: • Carbon footprint of generated and distributed electricity / available electricity includes generation from sources owned and co-owned by HEP Group as well as off-system procurement	141
Emission intensity from heat energy generation: • Carbon footprint of generated heat energy (emissions from combustion plants and fossil fuel-, biomass-fired boiler rooms for heating cities as well as from vehicle fleet, and diffuse emissions from LNG for heat energy generation / generated heat energy (in combustion plants and fossil fuel- and biomass-fired boiler rooms for heating cities)	285

GRI 3-3
GRI 305-5

Reduction of greenhouse gas emissions

The goals of reducing greenhoushe gas emissions for Croatia for sources included in EU ETS and for emission sources outside EU ETS by 2030 are described in the table *Contribution of HEP Group's business operations to Croatian sustainability policies*.

Goal of reducing greenhouse gas emissions from EU ETS plants in Croatia by 2030

Mutual goal of reducing greenhouse gas emissions from EU ETS plants for EU-27 is 62 percent by 2030 in comparison to 2005. Pursuant to the National Energy and Climate Plan for the Republic of Croatia (NECP) for the period from 2023 to 2027, the goal for EU ETS plants in Croatia is to reduce total emissions by 50.2 percent by 2030, in comparison to 2005. Emissions from stationary sources in Croatia, which were not included in EU ETS in 2005, since Croatia still had not been a EU-member, amounted to 12,426,119 tonnes, and in 2030 EU ETS plants in Croatia may emit 6,188,207 tonnes at the most, i.e. total greenhouse gas emissions from EU ETS plants have to be reduced by 4.14 percent by 2030.

Goal of reducing greenhouse gas emissions by 2030 outside EU ETS in Croatia

According to NECP, The goal for reducing greenhouse gas emissions from plants outside EU ETS in Croatia between 2023 and 2027 is to reduce greenhouse gas emissions by 16.6 percent by 2030, in comparison to 2005. HEP Group greenhouse gas sources outside EU ETS are switchgear equipment and for now boiler rooms for heat energy generation, diffuse emissions of gas from gas supply as well as vehicle fleet emissions. Pursuant to the provisions of EU ETS Directive from 2023, fossil fuel distributors for road traffic and building industry shall enter the emissions trading system, so-called EU ETS2. Diffuse greenhouse gas emissions from the liquefied natural gas terminal on Krk, operated by LNG Hrvatska, are included in EU ETS. A share of HEP Group greenhouse gas emissions outside EU ETS in total emissions of sources outside EU ETS in Croatia amounted to 0.14 percent in 2021 (data for 2022 on the level of Croatia was not available when the Report was being published).

Reduction of greenhouse gas emissions by 2022

In 2005 HEP Group emitted the total of 4,694,000 tonnes of CO_2 from stationary sources for combustion, which were used for electricity and heat energy generation. In 2022 the emissions totalled at 3,051,913 tonnes (A and B), marking a decrease by 34.98 percent. Base year, in comparison to which the goal of reducing emissions from HEP Group EU-ETS plants is set, is 2005, because this year was chosen as base year according to the European Green Deal and the European Climate Law.

Share of greenhouse gas emissions form HEP EU ETS plants in emissions of EU-27 and Croatia in 2022

Sources of emissions	Verified CO_2 (eq) emissions from EU ETS plants/t	Share of HEP emissions from EU ETS plants
EU ETS plants EU-27	1,283,622,084	0.24
EU ETS plants in Croatia	6,455,403	47.28
EU ETS HEP plants (A and B)	3,051,913	-

Source: *EU Emissions Trading System (ETS) data viewer, European Environment Agency EEA*

In 2021 HEP Group CO_2 emissions from EU ETS plants amounted to 2,739,410 tonnes. They increased in 2022 by 10.23 percent due to a dry year and reduced generation from hydro power plants, increased electricity generation from thermal power plants and the use of gas oil as fuel oil in TE-TO Zagreb, TE-TO Osijek and CCGT Jertovec, as a result of gas supply distortion caused by the Russian-Ukrainian crisis.

According to indicators from 2022 Croatia should fulfil the goal of reducing greenhouse gas emissions from EU ETS plants by 2030, and HEP Group shall contribute to it by implementing the project of constructing renewable energy sources and high-efficiency cogenerations, by reconstructing the existing renewable sources and high-efficiency cogenerations, by reducing losses in the grids for electricity, heat energy and gas distribution as well as by increasing energy efficiency. Stated products and activites are described in the chapter *Our products, services and value chain*.

Share of greenhouse gas emissions from HEP sources outside EU ETS in emissions of EU-27 and Croatia in 2021

Sources of emissions	CO_2 (eq) /t	Share of HEP emissions outside EU ETS
CO_2 (eq) emissions of EU-27 outside EU ETS	1,958,093,916	0.013
CO_2 (eq) emissions of Croatia outside EU ETS	12,564,597	0.14
HEP CO_2 (eq) emissions from sources outside EU-ETS	26,302	-

Greenhouse gas emissions for 2022 are not published, so the data from 2021 was used. Thereby in 2021 HEP Group Scope 1 greenhouse gas emissions were greenhouse gas emissions from boiler rooms for heat energy generation operated by HEP Toplinarstvo, and in 2022 HEP Group Scope 1 was expanded with emissions from vehicle fleet, switchgear equipment, covering electricity losses in the distribution grid as well as diffuse emissions from LNG terminal for the part referring to HEP Group. A share of HEP Group greenhouse gas emissions from sources outside EU ETS in emissions of EU-27 and Croatia 2022 shall be presented in the 2023 Annual and Sustaianbility Report. HEP Group greenhouse gas emissions outside EU ETS in 2022 totalled at 10.46 percent.

GRI 203-1

E-mobility – HEP's contribution to greenhouse gas emissions from road traffic

HEP Group's step forward into e-mobility and installation of electric vehicle charging stations on motorways and in cities contributes to the decarbonisation of road traffic and new options for tourism, which is a contribution to the goals set in the Croatian transport development strategy for 2017 – 2030 as well as the Sustainable tourism strategy by 2030.

E-mobility in 2022

E-mobility project entered its commercial phase in 2022 by applying the charging systems in publicly available charging stations. Further customer experience and income enable the development of the project and improvement of the overall service, as well as analysis and production of new business models.

In Croatia there are currently 275 operational charging stations in the network, of different types and charging capacities, and during 2022 13 became operational. In its plants and facilities, HEP Group has 51 charging stations installed, and they are used to charge 70 electric, 10 hybrid vehicles as well as 10 electric bicycles from own vehicle fleet. HEP Group also conducts activities for the procurement of heavy equipement, such as forklifts.

GRI 3-3
GRI 305-6

Ozone depleting substances

HEP Group does not produce, import or export substances or mixtures that destroy the ozone layer. Controlled substances and/or fluorinated greenhouse gases are found in cooling and air-conditioning devices and equipment as well as stationary fire protection systems and fire extinguishers. Companies and crafts with the licence from the Ministry of economy and sustainable development perform the activities of collecting, leak checking, installation, maintenance and repair of cooling and air-conditioning devices and equipment as well as stationary fire protection systems and fire extinguishers containing controlled substances or fluorinated greenhouse gases, which are located in HEP.

Ozone depleting substances in 2022

The activities of collecting, leak checking, installation, maintenance and repair of cooling and air-conditioning devices and equipment as well as stationary fire protection systems and fire extinguishers containing controlled substances or fluorinated greenhouse gases were conducted in HEP Group companies in 2022, pursuant to annual plans for managing said equipment.

GRI 3-3
GRI 305-7
GRI 11.4.1
GRI 11.4.2
GRI 12.4.1
GRI 12.4.2

Emissions of NO_x, SO_2, CO and PM_{10} particles

Thermal power plants for electricity and heat energy generation from fossil fuels and biomass (TPP, TE-TO, EL-TO and BE-TO), operated by HEP Proizvodnja as well as boiler rooms generating heat energy from fossil fuels, operated by HEP Toplinarstvo, are sources of nitrogen oxides (NO_x), sulphur oxides (SO_2), carbon monoxide (CO) and PM_{10} particles in HEP GROUP. All HEP Group thermal power plaints for electricity and heat energy generation as well as boiler rooms for heat energy generation are located in Croatia.

All thermal power plants for electricity and heat energy generation with the capacity of 50 MWt or more (so-called big combustion plants) operated by HEP Proizvodnja are holders of the Environmental Permit Decision issued by the competent Ministry of economy and sustainable development (MINGOR) and they are published in the database kept by MINGOR entitled *Environmental permits*. Environmental Permit Decisions stipulate the limit values of NO_x, SO_2, CO emissions and of floating PM_{10} particle emissions, as well as the manner of monitoring and reporting. Monitoring emissions is conducted through continuous and temporary measurements based on norms for continuous and temporary measurements stated in environmental permit decisions for each plant. The results of monitoring emissions are additionally verified by an independent authority through the internal application "Verification of gas emissions", in the event the device for continuous measurement was out of operation or the data from temporary measurements is used to calculate emissions. Environmental permit decisions are published on MINGOR's websites and are available to the interested public. The information on continuous and temporary measurements kept by MINGOR is published in the database entitled *Emissions from stationary sources*. In thermal power plants (A) operated by HEP Proizvodnja the emissions of polluting substances into the air are regularly performed in line with legal regulations, as well as calibration of the system for monitoring the emissions of polluting substances into the air (CEM systems), which MINGOR reports about.

Combustion plants with nominal input heat capacity between 1 and 50 MWt belong to medium combustion plants. Medium combustion plant operators are HEP Proizvodnja and HEP Toplinarstvo. Medium combustion plants are not obliged to obtain environmental permits, but have to be registered in the medium combustion plant register kept by MINGOR. All HEP's medium combustion plants are registered in the medium combustion plant register. Medium combustion plants are not obliged to perform continuous, but temporary measurements. Emissions from boiler rooms for heat energy generation operated by HEP Toplinarstvo are calculated on the basis of temporary measurements conducted once in two years, and for the years in which there was no obligation of temporary measurement, emissions are calculated on the basis of calculation from fuel consumption.

All HEP's combustion plants as well as gas tourbines are registered in the *Register of small, medium and large combustion plants as well as medium and large gas tourbines* kept by MINGOR, which is available to the public.

Pursuant to the information from *the European Environmental Agency*, emissions of polluting substances significantly decreased between 2005 and 2020 in the EU-27 member countries. This refers particularly to SO_2 emissions, which decreased by 79.5 percent, NO_x emissions, which were reduced by 48.5 percent and emissions of $PM_{2.5}$ floating substances, which were reduced by 32 percent. The information for 2022 has not been published yet. Reduction of emissions from energy, industry and traffic sector significantly affected the reduction of emitting polluting substances in the air, partially as a result of setting emission limit values (ELV) specific for individual sectors. For energy sector the most important document in this respect is the Industrial Emissions Directive 210/75/EU (so-called IED).

Environmental permit status

Negotiations with MINGOR were completed in 2022. They were connected to amendments and compliance of all environmental permits with the new requirements of the Commission Implementing Decsision (EU) 2017/1442 on establishing best available techniques (BAT) conclusions for big combustion plants pursuant to the Industrial Emissions Directive. The obligation of compliance referred to all new thermal power plants, except CCGT Jertovec and TPP Rijeka. In 2021 the procedures were completed and permits were obtained for EL-TO Zagreb and TPP Plomin 2. TE-TO Sisak and TE-TO Zagreb had their environmental permit amended and complied in 2022. The procedure of complying the permit for TE-TO Osijek continued in 2023. Due to the completion of constructing low-pressure boilers NTK3 and NTK4 as well as heat accumulator in EL-TO Zagreb, as as result of relocating CEMS from the big chimney onto flue ducts VK3 and VK 4 in 2022, MINGOR was submitted the Request for obtaining environmental permit for EL-TO Zagreb. The measures of environment protection in line with the requirements from existing Environmental Permit Decisions are being implemented in all facilities. Adaptations for monitoring pollutant emissions into the air in operating CEMS machines for continuous emission measurement were conducted during 2022.

Emissions of NO_x, SO_2, CO and PM_{10} particles in 2022 and comparison to 2021

The total emissions of nitrogen oxides in 2022 from HEP Group sources rose by 11.15 percent in comparison to 2021. Thereby emissions from TPP, TE-TO, EL-TO (A) and BE-TO (B) operated by HEP Proizvodnja rose by 14.87 percent, and emissions from boiler rooms for heat energy generation (C) operated by HEP Toplinarstvo fell by 68.41 percent. In 2022 the total of 2,001.03 tonnes of NO_x were emitted from HEP Group sources.

Emissions of nitrogen oxides, NO_x from HEP Group sources in 2022

Source mark	Name of source	NO_x emission /t	Share in NO_x emissions / %
A	TPP Plomin 1	0.05	0.00
A	TPP Plomin 2	511.95	25.58
A	TPP Rijeka	1.19	0.06
A	CCGT Jertovec	171.88	8.59
A	TE-TO Zagreb	387.49	19.36
A	EL-TO Zagreb	527.57	26.36
A	TE-TO Sisak	280.64	14.02
A	TE-TO Osijek	39.35	1.97
Total from sources marked with A		**1,920.12**	**95.96**
B	BE-TO Sisak	23.17	1.16
B	BE-TO Osijek	25.55	1.28
Total from sources marked with B		**48.72**	**2.43**
Total from sources marked with A and B		**1,968.84**	**98.39**
C	Bregana – 2 boiler rooms	0.28	0.01
C	Samobor – 2 boiler rooms	4.24	0.21
C	Velika Gorica - 8 boiler rooms	17.68	0.88
C	Zaprešić - 5 boiler rooms	4.10	0.21
C	Zagreb – 9 boiler rooms	5.89	0.29
C	Osijek - 1 boiler room	0.00	0.00
Total from sources marked with C		**32.19**	**1.61**
Total from HEP Group sources A+B+C		**2,001.03**	**100**

Total emissions of sulphur oxide, SO_2 from HEP Group in 2022 increased by 26.93 percent in comparison to 2021. Thereby the emissions from TPP, TE-TO, EL-TO (A) and BE-TO (B) operated by HEP Proizvodnja increased by 29.13, i.e. 2.89 percent, and emissions from boiler rooms for heat energy generation (C) operated by HEP Toplinarstvo decreased by 10.77 percent. The total of 284.81 tonnes of SO_2 was emitted from HEP Group sources in 2022.

Emissions of sulphur oxide, SO_2 from HEP Group sources in 2022

Source mark	Name of source	SO_2 emission /t	Share in SO_2 emissions / %
A	TPP Plomin 1	0.06	0.02
A	TPP Plomin 2	214.82	75.43
A	TPP Rijeka	1.90	0.67
A	CCGT Jertovec	11.14	3.91
A	TE-TO Zagreb	21.52	7.56
A	EL-TO Zagreb	3.71	1.30
A	TE-TO Sisak	7.62	2.68
A	TE-TO Osijek	8.60	3.02
Total from sources marked with A		**269.36**	**94.58**
B	BE-TO Sisak	0.24	0.08
B	BE-TO Osijek	0.45	0.16
Total from sources marked with B		**0.69**	**0.24**
Total from sources marked with A and B		**270.05**	**94.82**
C	Bregana - 2 boiler rooms	0.33	0.12
C	Samobor - 2 boiler rooms	0.00	0.00
C	Velika Gorica - 8 boiler rooms	9.50	3.34
C	Zaprešić - 5 boiler rooms	2.36	0.83
C	Zagreb - 9 boiler rooms	2.56	0.90
C	Osijek - 1 boiler room	0.00	0.00
Total from sources marked with C		**14.75**	**5.18**
Total from HEP Group sources A+B+C		**284.81**	**100**

Total carbon monoxide, CO, emissions in 2022 from HEP Group sources remained on the same level in comparison to 2021. Thereby emissions from TPP, TE-TO, EL-TO (A) increased by 6.56 percent, and emissions from BE-TO (B) fell from 15.84 to 15.46 tonnes. CO emissions from boiler rooms for heat energy generation (C) operated by HEP Toplinarstvo rose from 2.19 to 14.78 tonnes. The total of 208.35 tonnes of CO was emitted from HEP Group sources in 2022.

Emissions of carbon monoxide, CO from HEP Group sources in 2022

Source mark	Name of source	Emission of CO /t	Share in CO emissions / %
A	TPP Plomin 1	0.00	0.00
A	TPP Plomin 2	70.52	33.84
A	TPP Rijeka	0.14	0.07
A	CCGT Jertovec	3.01	1.44
A	TE-TO Zagreb	68.23	32.75
A	EL-TO Zagreb	18.91	9.08
A	TE-TO Sisak	15.66	7.51
A	TE-TO Osijek	1.65	0.79
Total from sources marked with A		**178.11**	**85.49**
B	BE-TO Sisak	14.16	6.79
B	BE-TO Osijek	1.31	0.63
Total from sources marked with B		**15.46**	**7.42**
Total from sources marked with A and B		**193.57**	**92.91**
C	Bregana - 2 boiler rooms	0.11	0.05
C	Samobor - 2 boiler rooms	1.86	0.89
C	Velika Gorica – 8 boiler rooms	7.25	3.48
C	Zaprešić - 5 boiler rooms	3.12	1.50
C	Zagreb - 9 boiler rooms	2.45	1.17
C	Osijek - 1 boiler room	0.00	0.00
Total from sources marked with C		**14.78**	**7.09**
Total from HEP Group sources A+B+C		**208.35**	**100**

Total emissions of PM_{10} particles from HEP Group sources in 2022 increased by 61.43 percent in comparison to 2021. Thereby emissions from TPP, TE-TO, EL-TO (A) and BE-TO (B) operated by HEP Proizvodnja fell by 54.83, i.e. 1.1 percent, and emissions from boiler rooms for heat energy generation (C) operated by HEP Toplinarstvo decreased by 63.54 percent. The total of 349.20 tonnes of PM_{10} particles was emitted from HEP Group sources in 2022.

Emissions of PM_{10} particles from HEP Group sources in 2022

Source mark	Name of source	Emission of PM_{10} particles/t	Share in PM_{10} emissions/ %
A	TPP Plomin 1	0.05	0.02
A	TPP Plomin 2	8.57	2.45
A	TPP Rijeka	0.22	0.06
A	CCGT Jertovec	0.37	0.11
A	TE-TO Zagreb	4.23	1.21
A	EL-TO Zagreb	0.73	0.21
A	TE-TO Sisak	1.91	0.55
A	TE-TO Osijek	0.46	0.13
Total from sources marked with A		**16.54**	**4.74**
B	BE-TO Sisak	14.26	4.08
B	BE-TO Osijek	10.82	3.10
Total from sources marked with B		**25.08**	**7.18**
Total from sources marked with A and B		**41.63**	**11.92**
C	Bregana - 2 boiler rooms	0.00	0.00
C	Samobor - 2 boiler rooms	0.00	0.00
C	Velika Gorica - 8 boiler rooms	129.83	37.18
C	Zaprešić - 5 boiler rooms	142.79	40.89
C	Zagreb - 9 boiler rooms	34.95	10.01
C	Osijek - 1 boiler room	0.00	0.00
Total from sources marked with C		**307.57**	**88.08**
Total from HEP Group sources A+B+C		**349.20**	**100**

Monitoring air quality in the area of TPP Plomin 2 and EL-TO Zagreb

EL-TO Zagreb has installed Vrhovec metering station for monitoring air quality, where continuous measurements are conducted, and in 2022 no parameters connected to air quality were exceeded. Monitoring air quality in the area of TPP Plomin influence for 2022 is conducted by the Public Health Institute of Istria County. Due to the lack of representative data caused by breakdowns and longer periods without measurements in 2022, data on all metering stations is not available. Stated emission stations for monitoring air quality are a part of the local state network, and the data is publicly available in the database kept by MINGOR *Air quality in Croatia*.

GRI 3-3
GRI 303-1
GRI 303-2
GRI 303-4
GRI 303-5
GRI 308-1
GRI 11.6.1
GRI 11.6.2
GRI 11.6.3
GRI 11.6.6
GRI 12.6.1
GRI 12.6.2
GRI 12.6.3
GRI 12.6.6

Waters and waste waters

The chapter about waters describes the effects of sectors on waters they use together and water management, it also states the quantities of captured waters and discharged waste waters as well as HEP Group water consumption and results of collecting data from the supply chain on effects on waters in 2022.

GRI 3-3
GRI 303-1

Influence of users from various sectors on waters

The plants operated by HEP Proizvodnja use the sources of surface water and ground water, as well as the sea in their electricity and heat energy generation processes. Managing waters and influences of water users from various sectors is based on the Croatian water area management plan, which is compiled by Hrvatske vode. The aim of the Water Framework Directive and EU-member water area management plans, which include Croatia, is to achieve a good condition of water by 2027 at the latest.

Property-legal relations between Hrvatske vode and HEP Proizvodnja were being settled in 2022, which was the condition for continuing the process of obtaining concession for the use of hydropower to generate electricity in HPP Golubić, HPP Jaruga and HPP Ozalj. The activities of determining borders of public water resources, pursuant to the Guidelines for defining the scope of water structures and criteria for determining the borders of public water resources for said plants and for accumulations Dubrava, Lokve, Sabljaci and Peruća were carried out by 2022. The next step includes geodetic studies of the derived condition of water structures, after the State Geodetic Administration adopts legal regulations necessary for the preparation of the studies and registration in the cadester.

The activities of Annual plan of activities for 2022 were also implemented during 2022, pursuant to the Agreement on cooperation in the area of protection from harmful water effects, use and protection of water and common interest in the period 2019-2022. A new Agreement with Hrvatske vode was signed in June 2022 for the period 2023 – 2027.

In line with the requirements of Hrvatske vode, Technical basis of HEP Proizvodnja d.o.o. was drafted in 2022 for the compilation of the Water Area Management Plan 2022-2027, and it refers to permanent declaration of significantly changed river water bodies as a consequence of the effects of existing HEP hydro- and thermal power plants on the hydro-morphological condition of waters.

GRI 3-3
GRI 303-2
GRI 11.6.1
GRI 11.6.3
GRI 12.6.1
GRI 12.6.3

Managing effects on water

Water in HEP Group is used to generate electricity in hydro power plants. The amounts of water which hydro power plants may use to generate electricity are prescribed by concessions and concession conditions. Water is also used in the process of electricity and heat energy generation in thermal power plants operated by HEP Proizvodnja (A) and (B) from surface waters and ground waters (wells) and from the public water supply system. All HEP's thermal power plants have valid water permits for water use. TPP Plomin and TPP Rijeka have obtained concessions on maritime property for the purpose of economic use and special use of the sea. Information on captured quantities of water is delivered to Hrvatske vode, in line with legal regulations. Water is used for heat energy generation from boiler rooms for heating cities and in offices and restaurants. Boiler rooms for heating cities (C) operated by HEP Toplinarstvo use water from public water supply. All other HEP Group companies use water from the public water supply system to perform their business operations, and they discharge waste waters in the public drainage system.

Apart from HPP Vinodol and HPP Senj, hydro power plants are not subject to the Regulation on the waste water emission limit values, but the quantities of used waters are shown as the quantity of generated electricity. HPP Vinodol and HPP Senj have a water permit for discharging sanitary waste waters. Testing the quality of drinking, waste, surface and ground waters in HEP Proizvodnja thermal power plants are conducted in line with the requirements of environmental permits, water permits and concession conditions at all locations. The information on discharged amounts of water and water analyses are delivered to Hrvatske vode, and are kept in HEP's internal database INFOZOK.

Regular examinations of physical-chemical, biological and in some places ichthyological features as well as reports in line with the Directive on the water quality standard are conducted on accumulations of hydro power systems GA HPP Sjever and GA HPP Jug. In line with the Directive, ecological condition of water is expressed until the establishment of ecological potential methodology, and the type of water structures is expressed under the valid Water Area Management plan 2016 – 2022. A detailed analysis of the condition by locations of examination is in the Reports on physical-chemical and microbiolgical condition of waters of individual HPPs.

No limit values of pollutant emissions into waters were exceeded in 2022, and all hydro power plants operated in line with valid concessions, concession conditions and water permits. No limit values of emissions into waste waters from thermal power pplants were exceeded during 2022.

GRI 303-2
GRI 303-3
GRI 303-4
GRI 303-5
GRI 11.6.1
GRI 11.6.6
GRI 12.6.2
GRI 12.6.6

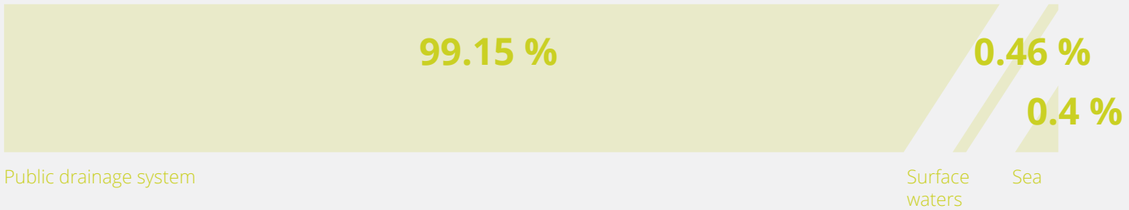
Capturing waters and discharging waste waters

Information on captured waters as well as the quantity of discharged waste waters in 2022 was shown by activities i.e. from electricity and heat energy generation processes in plants and offices operated by HEP Proizvodnja, from heat energy generation process in the plants operated by HEP Toplinarstvo, from electricity distribution in HEP ODS, from gas distribution and supply in HEP Plin and from HEP Group headquarters in Zagreb, i.e. the total captured and discharged water by types in HEP Group.

Quantity of captured waters and discharged waste waters in 2022

The total of 159,538 m³ of waters for own consumption was captured in HEP Group in 2022 for own sanitary consumption from the public water supply system. The total of 158,181 m³ of sanitary waste waters was discharged in the public drainage system, 726 m³ in surface waters and 631 m³ in the sea, with previous treatment.

Shares of total discharged sanitary waters for own consumption in HEP Group by water sources

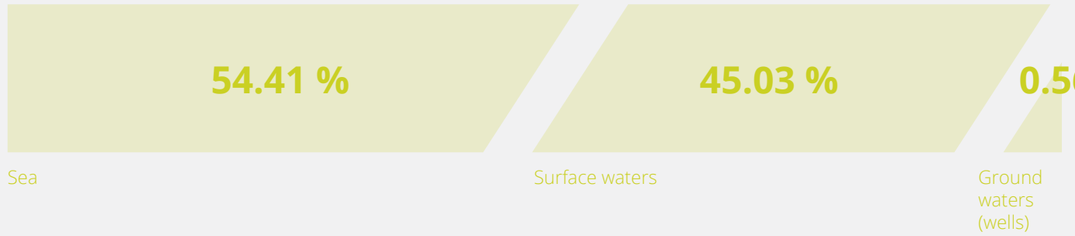


GRI 3-3
GRI 303-2
GRI 303-3
GRI 303-4
GRI 12.7.1
GRI 12.7.2

Captured waters and discharged waste waters in electricity and heat energy generation

The total of 433,907,702 m³ of water was captured in 2022 in thermal power plants for electricity and heat energy generation and in HPP Vinodol and HPP Senj for sanitary consumption. To calculate the total captured water amounting to 433,907,702 m³, 93,477 m³ of water for sanitary use was added, so the total quantity of captured waters amounted to 434,001,179 m³. The quantity of captured waters in 2022 increased by 5.63 percent in comparison to 2021 when it amounted to 409,468,263 m³. The increase is a result of reduced electricity generation from hydro power plants due to drought, i.e. increased generation from thermal power plants. Water used for electricity generation in hydro power plants is not included in the total quantity of captured waters, because the quantity and composition of water remain the same after hydro power is used. The quantities of used waters in hydro power polants is expressed as the quantity of generated electricity in line with legal regulations. From the total of captured waters, 143,955 m³ was from the public water supply system, 236,055,244 m³ was sea water, 195,138,350 m³ was from the Sava river in the area of Sisak and Zagreb, 143,954 m³ was from the Drava river in Osijek, 81,574 m³ was from the Krapina river in Konjščina, 2,019,760 m³ was from wells in Zagreb area and 407,366 m³ was from Bubić burrow in Plomin.

Shares of total captured water for electricity and heat energy generation by source



The total of 431,773,788 m³ of waste waters was discharged in 2022 from thermal power plants and HPP Vinodol and HPP Senj. Other hydro power plants are in separate locations, which are not connected to the public waste water drainage systems, but sanitary waters are collected in septic tanks which are regularly emptied.

To calculate the total of discharged waste waters, 75,326 m³ of waste sanitary waters from HEP Proizvodnja was added, so the total of discharged waste waters in 2022 amounted to 431,867,265 m³. The quantity of discharged waste waters in 2022 increased by 9.61 percent in comparison to 2021, when it totalled at 390,332,980 m³. Out of the total of 431,773,788 m³ of waste waters 749,364 m³ was discharged in the public drainage system, 236,196,851 m³ in the sea, 171,792,788 m³ in the Sava river, 23,079,200 m³ in Savica lake in Zagreb, 10,976 m³ in the Palčić canal in the area of Osijek, 37,360 m³ in the Jertovec stream in the area of Konjšćina and 726 m³ in the Dubračina watercourse in the area of Vinodol. Types of waste waters discharged from thermal power plants and HPP Vinodol and HPP Senj, as well as the types of waste water treatments are shown in the table below.

The data on captured and discharged water quantities as well as water analyses in 2022 from HEP Proizvodnja plants are in line with legal regulations delivered on prescribed forms to Hrvatske vode. No limit values stipulated through water and environmental permits were exceeded in 2022. Regular examinations of physical-chemical, biological and in some places ichthyological features as well as reports in line with the Directive on the water quality standard are conducted on accumulations of hydro power systems GA HPP Sjever, GA HPP Zapad and GA HPP Jug. In line with the Directive, ecological condition of water is expressed until the establishment of ecological potential methodology, and the type of water structures is expressed under the valid Water Area Management plan 2016 – 2022. A detailed analysis of the condition by locations of examination is in the Reports on physical-chemical and microbiolgical condition of waters of individual HPPs.

Quantity of captured waters and discharged waste waters from thermal power plants

Plant	Source of capturing water	Quantity of captured water/ m^3	Type of waste water	Type of waste water treatment	Waste water discharge	Quantity of waste water (m^3)
TPP PLOMIN	Bubić Burrow	407,366	Process waters	Waste water treatment plant (desulphurization and and boiler water)	Čepić canal - sea	86,754
				Neutralization		30,745
	Public water supply system	11,311	Sanitary waters	BIO device without treatement		3,284
	Sea (cooling water)	236,055,244	Cooling waters	No treatment		236,055,244
TPP RIJEKA	Public water supply system	19,997	Process waters	Device for waste water treatment, neutralization	Sea	653
			Oily waters	Oil separation		18,980
			Sanitary waters	BIO device		560
	Sea (cooling water)	0	Cooling waters	No treatment		0
TE-TO SISAK	The Sava River	275,910	Process waters	Device for waste water treatment, neutralization	The Sava River	7,674
			Oily water	Oil separation		0
	Public water supply system	1,874	Sanitary waters	No treatment		1,874
	The Sava River (cooling water)	79,466,440	Cooling waters	No treatment		79,466,440
TE-TO ZAGREB	Wells	1,016,872	Process waters	Device for waste water treatment, neutralization	City sewage system	464,659
			Oily waters	Oil separation		
	Public water supply system	7,067	Sanitary waters	No treatment		
	The Sava River (cooling water)	115,396,000	Cooling waters	No treatment	The Sava River	92,316,800
					Savica Lake	23,079,200
EL-TO ZAGREB	Wells	1,002,888	Process waters	Device for waste water treatment, neutralization	City sewage system	121,288
			Oily wates	Oil separation		
	Public water supply system	3.060	Sanitary waters	No treatment		
TE-TO OSIJEK	The Drava River	143,954	Process waters	Neutralization	City sewage system	69,940
			Oily waters	Oil separation		
	Public water supply system	5,161	Sanitary wates	No treatment		
	Rainfall	10,976	Clean rainfall and rainfall from liquid oil management systems	Oil separation	Palčić canal	10,976
CCGT JERTOVEC	The Krapina River	81,574	Process waters	Device for waste water treatment, neutralization and deposition	Jertovec stream	37,360
			Oily waters	Oil separation		
	Public water supply system	651	Sanitary waters	BIO device		
HPP VINODOL	Public water supply system	726	Sanitary waters	Imhof tank	Dubračina wastercourse	726
HPP SENJ	Public water supply system	631	Sanitary waters	BIO device	Sea	631

Waters from the public water supply system are used in the process of heat energy generation in bolier rooms for heating cities operated by HEP Toplinarstvo, and waste waters are discharged in the public drainage system. In 2022 HEP Toplinarstvo did not generate heat energy in Osijek facility, which has the permit to capture water from the Drava River, so there was no consumption of process waters captured from surface waters in 2022. The examinations of waste water quality were condcucted in 2022 at the headquarters of HEP Toplinarstvo in Zagreb, and limit values were not exceeded. Water consumption in 2022 rose by 4.16 percent, due to the leakage in water supply network, but that was removed. The total quantity of waters captured from the public water supply system amounted to 6,662 m^3, and the same quantity was discharged in the public drainage system in the City of Zagreb and in Zagreb, Osijek-Baranja and Sisak-Moslavina County.

GRI 3-3
GRI 303-2
GRI 303-3
GRI 303-4

Captured waters and discharged waste waters from electricity distribution

In the electricity distribution process in HEP Operator distribucijskog sustava water is captured from the public water supply system. The total of 51,712 m³ was captured, and the same quantity of waste sanitary waters was discharged in the public drainage systems in all counties on the territory of Croatia.

GRI 11.6.1
GRI 11.6.3
GRI 11.6.4
GRI 11.6.5

Captured and discharged waters from gas distribution and supply

Water from the public water supply system is used in the process of gas distribution and supply. In 2022 the total of 1,521 m³ was captured for own demand, and the same quantity of sanitary waters was discharged in the public discharge systems in 5 counties in Slavonia and in Bjelovar-Bilogora County. The quantity of captured and discharged waste waters increased in 2022 by 8.15 percent, as compared to 2021 when it totalled at 1,397 m³.

GRI 303-2
GRI 303-3
GRI 303-4

Captured and discharged waters in HEP Group headquarters

Apart from HEP d.d., in HEP Group headquarters in Zagreb, there are the following companies: HEP Opskrba, HEP Trgovina, HEP Telekomunikacije, HEP Upravljanje imovinom and HEP ESCO. In HEP Group headquarters are also the management board of HEP Proizvodnja and HEP ODS. Water in HEP Group headquarters is captured from the public water supply system, and in 2022 the total of 9,950 m³ were captured, and the same quantity of sanitary waste waters was discharged. The comparison with the data of the previous year will be possible in 2024, since water consumption monitoring was introduced in 2022.

GRI 3-3
GRI 305-5
GRI 11.6.1
GRI 11.6.6
GRI 12.7.1
GRI 12.7.6

Water consumption

Water consumption in HEP Group is managed as part of introduced systems of energy management under ISO 50001:2018 standard in HEP d.d., HEP Upravljanje imovinom, HEP Proizvodnja, HEP Operator distribucijskog sustava and HEP Toplinarstvo. In other companies water consumption is monitored on the basis of bills on water consumption, and the system for monitoring water consumption by indicators i.e. employed workers, is being established. Sanitary water consumption in HEP Proizvodnja is monitored by employee and water for technological use is monitored by delivered kWh of energy. HEP Toplinarstvo also monitors the consumption of sanitary water by employee. In Osijek facility, pumps present a significant consumer, so water consumption for cooling pumps is monitored by the number of operating hours of pumps. In HEP ODS sanitary water consumption is monitored by employee. In order to save capturing waters for own consumption, internal educations through e-learning, i.e. HEP Akademija, are conducted in HEP Group companies.

In order to determine the influence of the supply chain on the environment, including waters, we created a questionnaire in line with Consolidated GRI standards from 2021 and asked the suppliers about the information on the quantities of captured waters and of discharged waste waters.

Water consumption in 2022

The data on water consumption was obtained by subtracting the quantities of captured waters and discharged waste waters in line with the guidelines of Consolidated GRI standards from 2021. The overview includes the total quantities of HEP Group sanitary waste waters for own consumption and waste waters from electricity and heat energy generation from plants operated by HEP Proizvodnja, which include process waters, cooling waters and rainfall.

Total sanitary water consumption for own consumption and electricity and heat energy generation

Water use	Captured waters / m³	Discharged waste waters / m³	Water consumption/ m³	Used waters / %
Sanitary water for own consumption	159,538	159,538	0	-
Water for electricity and heat energy generation	433,906,345	431,772,431	2,133,914	0.5
Total	**434.065.883**	**431.931.969**	**2.133.914**	**0.5**

Water consumption by generated electricity and heat energy was calculated based on discharged process waste waters and kWh of delivered electricity and heat energy. Water consumption by delivered kWh of electricity and heat energy was reduced by 8.73 percent in 2022, in comparison to 2021.

0.02415 m³/kWh Water consumption by delivered kWh of energy in 2022

0.02646 m³/kWh Water consumption by delivered kWh of energy in 2021

GRI 308-1

Water consumption in the supply chain

Out of 113 suppliers, 16 suppliers, i.e. 14.2 percent answered the questionnaire regarding the influence on the environment, and 10 suppliers submitted data on the quantities of captured waters: fuel suppliers (1), energy producers (1), producers of parts for generation facilities and electric power equipment (3), banks (3), proxies for environmental protection activities (2) and the supplier from information – communication sector (1). The total quantity of captured water in the supply chain amounted to 792,518,950 m³, while the total quantity of discharged waste waters from the supply chain in 2022 amounted to 787,509,730 m³. Therefore, water consumption in the supply chain was 5,009,220 m³, i.e. 0.63 percent in comparison to captured waters. Since 8.85 percent of suppliers answered the questionnaires on effects on water, the data is shown informatively.

GRI 3-3
GRI 306-3

Managing marine pollution from TPP Rijeka

On 9 November 2022 around 2 p.m. leakage of fuel, i.e. fuel oil into the sea was noticed in Rijeka Thermal Power Plant. The cause of the leakage was a malfunction of filter drainage valve in the fuel pump. Pursuant to the Operational plan of measures for sudden and exceptional water pollution in TPP Rijeka, intervention measures of stopping and preventing the spread of pollution were implemented, and the 112 emergency center was informed. It operates as part of the Civil Protection Directorate of the Ministry of the Interior. Based on the phone call to the 112 center the procedure under the Plan of interventions during sudden marine pollutions in Primorje-Gorski Kotar County was implemented, as well as the remediation of the pollution. The pollution within TPP Rijeka was remediated by AEKS company from the town of Ivanić Grad, which specializes in interventional cleaning. Since fuel had leaked in the sewage system, the pollution was remediated quickly, and there was no soil pollution within TPP Rijeka. In line with the Plan of interventions during sudden marine pollutions in Primorje-Gorski Kotar County, County Operational Center hired the company Dezinskecija, specialized in and authorized for cleaning seas and shores from oil pollution. Oil pollution was noticed on the sea surface, the rocks and beaches from TPP Rijeka to Spužvina beach. In order to stop the spread of pollution, floating absorbent dams were installed at the location of the highest concentration of surface pollution (in the bays of Londina and Perilo, Stara voda harbour and Mikulova kava beach). The pollution also covered the rocks in the coastal area in the height of approximately 0 – 2 nmv as well as the gravel on the following beaches: Spužvina, Podražica, Vali, Nova Voda, Perilo and Perovićeva vala. The competent body for environment protection did not approve of a limited use of chemicals for cleaning, so the rocks were washed by sprinkling water warmed at 120°C under the pressure of 200 ba. Polluted gravel shall be removed after ventilation and new gravel of similar features shall be poured. According to the principle "the polluter pays", polluted coastal area of Kostrena is being cleaned and remediated, until it is restored to its original condition. For that purpose, a tripartite agreement was signed – with Primorje-Gorski Kotar County, County Operational Center of Primorje-Gorski Kotar County for the implementation of the Plan of interventions during sudden marine pollutions in Primorje-Gorski Kotar County and the company Dezinskecija on the manner of settling the costs of remediation of marine environment from TPP RIjeka.

GRI 3-3
GRI 306-1
GRI 306-2
GRI 306-3
GRI 306-4
GRI 306-5
GRI 11.5.1
GRI 11.5.4

Waste

Below is the description of waste management system in HEP group, the quantity of produced hazardous and non-hazardous waste, the quantity of waste, which has been recovered, exported and disposed of as well as the quantities of radioactive waste (RAW) generated by NPP Krško. HEP Group did not collect data on waste from the supply chain in 2022, and data collection is planned for 2023.

GRI 3-3
GRI 306-1
GRI 306-2
GRI 11.5.1
GRI 11.5.4

Waste management

Waste in HEP Group is generated in electricity and heat energy generation and distribution processes, gas distribution, asset management and in offices. Generated waste is separated at the place of generation by type and properties and it is managed in line with the waste management order of priority for the purpose of preventing waste generation and reducing the amount of waste disposed of at the landfills. In line with legal regulations, all waste is delivered to companies that have the waste management permit or are registered in the appropriate register. Along with the waste, authorized companies are also delivered an accompanying sheet and, where applicable, the analysis of delivered waste. Depending on the type of waste and the existing waste management system in Croatia, waste is given for further preparation, recovery, disposal and export. Until the arrival of authorized companies, waste is temporarily stored, for a maximum of one year, in warehouses arranged pursuant to the Ordinance on waste managemtn. In 2022, inspections carried out by the State inspectorate of the Republic of Croatia did not reveal any irregularities in waste management in HEP Group.

Data on the generation and flow of waste for all the waste generated in HEP Group is kept in HEP's electronic database INFOZOK (Information system of environment protection). INFOZOK is also linked to e-ONTO, electronic database on waste kept by MINGOR. Internal landfill for non-hazardous waste in TPP Plomin is obliged to fill in e-ONTO in HEP. Waste disposed of on the internal landfill site is only own non-hazardous waste, which is a result of the generation process (dross, sludge from industrial waste water treatement, floating ash from coal combustion and gypsum). It is disposed of at this location only when the companies in the surroundings, which have a licence for waste recovery, are not able to take over the waste. The landfill for non-hazardous waste in Plomin has a permit for waste management.

Waste management in 2022

The largest quantity of non-hazardous waste is a result of electricity generation in TPP Plomin 2 as well as of electricity and heat energy generation in biomass-fired thermal power plants BE-TO Osijek and Sisak. In 2022 TPP Plomin generated 45,022.15 t of floating ash, 15,388.9 t of gypsum and 4,013.9 t of dross. The total quantity of generated floating ash, gypsum and dross is recovered in the cement plant in the immediate vicinity of TPP Plomin 2 or is exported to the surrounding countries, whose quantity of disposed waste has been reduced to a minimum. The largest share of generated hazardous waste, like in 2021, refers to metals contaminated with hazardous substances, various waste oils and oily water from separators as well as waste electrical and electronic equipment. Since there is no landfill for hazardous waste in Croatia, all hazardous waste is exported to be recovered and disposed of. Floating ash, which is a result of wood biomass combustion in BE-TO Osijek and BE-TO Sisak, is disposed of at landfills, according to the proximity principle, in line with the Waste Management Act. In 2022 the total of 1,523.34 t of floating ash was produced.

GRI 3-3
GRI 306-3
GRI 306-4
GRI 306-5
GRI 11.5.1
GRI 11.5.4
GRI 11.5.5
GRI 11.5.6
GRI 12.6.1
GRI 12.6.4
GRI 12.6.5
GRI 12.6.6

Total quantitiy of generated waste by types and waste management method

In 2022 HEP Group generated the total of 73,312.87 tonnes of waste, 1,677.13 tonnes of hazardous and 71,635.74 tonnes of non-hazardous waste. The quantity of generated waste in 2022 remained almost at the same level as the year before. In 2021 HEP Group generated the total of 71,402.86 tonnes of waste, 69,361.90 tonnes being non-hazardous and 2,040.96 tonnes being hazardous waste. The share of hazardous waste in total quantities of waste generated by HEP Group amounted to 2.29 percent, and 8.30 percent of generated waste was disposed of at landfills, while 93.7 percent of waste was recovered in Croatia or was exported for recovery.

Quantities of generated waste by type of waste

Type of waste and waste management method	Quantity / t	Shared in generated waste / %
Hazardous waste	1,677.13	2.29
Non-hazardous waste	71,635.74	97.71
Total generated waste	**73,312.87**	**100**

Quantities of generated waste by management method

Waste management method	Quantity / t	Share in generated waste/ %
Disposed of in landfills	6,081.39	8.30
Recovered in Croatia	55,432.32	75.61
Recovered outside Croatia	11,799.16	16.09
Total generated waste	**73,312.87**	**100**

Quantity of low (LILW) and intermediate and high radioactive waste (HLW) from NPP Krško in 2022

NPP Krško delivers 50 percent of generated electricity into the Croatian electric power system, based on the ownership share of HEP d.d. and GEN Energija (50%:50%). The table below provides information on stored radioactive waste (RAW) in 2022.

Stored RAW

Electricity generation in 2022 on the threshold of NPP Krško:	**5,310,695,133 MWh**
489 LILW packages were stored with a volume of 112.3 m^3 and net weight of 51,060.1 kg	
LILW (volume): 112.3 m^3 / 5,310,695,133 MWh (el) = 2.114 * 10-8 m^3/kWh(el)	
LIlW net (net weight): 51,060.1 kg / 5,310,695,133 MWh MWh (el) = 9,614 * 10-6 kg/kWh(el) or 9614 µg/kWh(el)	
HLW – spent fuel – replacement of 56 combustible elements in 2022 = 48.7 t U * 56/121 element in the core = 22,538.84 kg U	
HLW: 22,538.84 kg U / 5,310,695,133 MWh(el) = 4.24 * 10-6 kgU/kWh(el)	

Fee for decommissioning and disposal of radioactive waste and spent nuclear fuel

HEP d.d. fully settled all obligations towards the Fund for financing decommissioning and disposal of radioactive waste and spent nuclear fuel from NPP Krško, in the total of EUR 14,250,000.00, which was paid in 4 installments.

GRI 3-3
GRI 304-1
GRI 304-2
GRI 304-3

Biodiversity

Some plants and electric power facilities are located in protected areas on the regional and national level, and in the areas of NATURA 2000 ecological network. Management of protected areas for the purpose of reducing potential negative effects on the environment, as well as projects and activities carried out in 2022 are described in the text below.

GRI 3-3
GRI 304-1
GRI 11.4.1
GRI 11.4.2
GRI 12.5.1
GRI 12.5.2

Location of HEP Group electric power plants in relation to protected areas

Electricity and heat energy generation plants TPP, EL-TO, TE-TO, BE-TO operated by HEP Proizvodnja and boiler rooms for heating cities operated by HEP Toplinarstvo are located within urban or industrial areas, i.e. they are not located within the area of NATURA 2000 ecological network or protected areas on the national level. However, some protected areas are located in the vicinity of generation facilities, for instance significant landscape Savica near TE-TO Zagreb, while the border of Mura-Drava regional park is near TE-TO Osijek. A large number of HEP hydro power plants is in the area of NATURA 2000 ecological network, while some are completely or partially in protected areas, such as national parks, nature parks, regional parks and areas of significant landscape. Construction, reconstruction and maintenance of distribution grid, operated by HEP ODS is conducted in the area of distribution grid, which means on the territory of all Croatia, including protected areas of NATURA 2000 ecological network as well as protected areas on the regional and national level. Plants and business offices of HEP Toplinarstvo, HEP Plin and companies in the headquarters of HEP Group, i.e. HEP d.d., HEP Trgovina, HEP Opskrba, HEP Telekomunikacije, HEP Upravljanje imovinom and HEP ESCO are not located near protected areas. Business offices of HEP Elektra are also not located near protected areas. Areas of NATURA 2000 ecological network and protected areas on the national level can be found on *Bioportal*, kept by MINGOR. In comparison to 2022 NATURA 2000 ecological network was not expanded, and no new protected areas were declared on the national level.

GRI 3:3
GRI 304-2

Managing business operation effects on protected areas

Construction of new facilities and infrastructure as well as modernization and increase of capacity of existing facilities and infrastructure are conducted in line with the requirements of the Environmental Protection Act, the Decree on Enironmental Impact Assessment and the Nature Protection Act, which regulates the procedures for the effect of interventions on NATURA 2000 ecological network and protected areas on the regional and local level. Interested public was included in the procedures of environmental impact assessment. During construction and modernization and plant and infrastructure operation, all prescribed measures specified in the Decisions on the acceptability of the intervention on the environment and the ecological network are implemented. Interventions which do not require the Decision on the acceptability of the intervention on the environment and the ecological network are carried out in line with goals and procedures from introduced and certified systems of environment management under ISO 14001:2015 standard. In this way we contribute to the realization of goals from the Strategy and Action Plan for Nature Protection of the Republic of Croatia for the period from 2017 to 2025 and the goals of the EU Biodiversity Strategy for 2030.

Results of the procedures conducted by HEP were published on the websites of the *Ministry of Economy and Sustainable Development* and websites of competent bodies of regional self-goverentment units, depending on the location where the intervention was carried out and competent bodies, which implemented said procedures.

Cooperation agreement for implementing measures of protection, population monitoring and ringing of a strictly protected species of white stork (*Ciconia ciconia L.*)

The execution of the Cooperation agreement for implementing measures of protection, population monitoring and ringing of a strictly protected species of white stork (*Ciconia ciconia L.*). In 2022 the Agreement covered the total of 14 distribution areas in continental Croatia, which conducted around 200 activities including the repair/replacement of stork nest holders, displacement of stork nests to a safe location, removal of inactive stork nests and installation of insulation equipment for bird protection from electric shocks. HEP ODS employees continued to provide professional and technical assistance to local public institutions for nature protection, while implementing the procedure of young stork ringing in the area of Lonjsko polje and Zagreb County.

LIFE Danube Free Sky Project

Following a successful application on the international competition at the end of 2020, the Cooperation Agreement in LIFE Danube Free Sky international project was signed, and it was financed from the European Union funds. The full name of the project is "Transnational conservation of birds along the Danube river" and its main aim is to contribute to the strategic goal of biodiversity within the EU. By reducing bird mortality as a result of interaction with power lines within the total of 22 Natura 2000 important bird areas (IBA), a safer bird migration route along the Danube river will be achieved, so the survival rate of 19 priority species will also increase. The total value of the project is EUR 6,636,170.00 and its duration is 60 months. The total of 15 partners from 7 countries of the Danube region participate in the project, and the main coordinator is Slovakia. HEP ODS activities refer to the reduction of threats for birds from electricity and collisions with power lines in Elektroslavonija Osijek within Kopački rit nature park. Along with well-known bird protection measures, i.e. the installation of insulation equipment, as part of the project mechanical devices, i.e. optical diverters will be installed in HEP ODS grid, so as to divert birds' attention and thus avoid collision with power lines. For that purpose around 30 km of existing power lines are to be reconstructed by the use of insulated conductors. The total value of the project allocated to HEP ODS amounts to EUR 613,256.00, which includes the cost of employees' working hours, administrative and other operating costs, services of external contractors and equipment procurement. A part financed by the EU equals 75 percent of the total eligible project costs. The activity of installing diverters using drones started at the end of 2022, in order to prevent the collision of birds with power line wires on 35 kV power lies within Kopački rit nature park. It is expected that the installation of 564 diverters will be completed during 2023, which is going to be followed by monitoring activities, so as to check their effectiveness.

LIFE SUPport project

Consortium Agreement for the project of griffon vulture preservation in Croatia was signed – LIFE SUPport. HEP ODS participates in the project as one of the partner beneficiaries, with an aim of implementing measures of preventing the electrocution of birds. By LIFE SUPport project, worth EUR 2,159,598, 60 percent of which is financed from the European Union LIFE program, the protection of griffon vulture will be improved, as well as their nesting conditions in Croatia. The leading partner in the LIFE SUPport project is BIOM Association, and the partners are the public institution "Priroda" from Primorje-Gorski Kotar County, agricultural cooperative "Otok Krk", HEP- Operator distribucijskog sustava and Vulture Conservation, and affiliated partner is the Administration for nature protection of the Ministry of Economy and Sustainable Development. HEP ODS activities are conducted in the area of Elektroprimorje Rijeka, and refer to the implementation of the measures of bird protection on 200 poles of overhead medium voltage network through the installation of insulation equipment and the replacement of bare conductors with insulated ones. The project started as at 1 January 2023, and its total duration is 60 months. The first activities of HEP ODS are expected in the second year of the project, i.e. in 2024. The total value of the project is EUR 323.366.84, while 60 percent of the investment was financed through non-refundable EU grants.

GRI 304-4

IUCN Red list of protected species

HEP ODS is obliged to plan and construct energy infrastructure in a manner to prevent and reduce the risk of death of strictly protected bird species in these areas. Natura 200 important bird areas have been identified, as well as corresponding species, to which measures from the energy sector relate. Within the Natura 2000 important bird areas there is a bit more than 5,000 kilometers of overhead medium-voltage lines, a part of which are insulated and pose no threat for birds. The total of 17 bird species are covered by the measures and they are on the *Red list of protected species* of birds: the golden eagle (*Aquila chrysaetos*), the Eurasian eagle-owl (*Bubo bubo*), the white stork (*Ciconia cicionia*), the short-toed snake eagle (*Circaetus gallicus*), the western marsh harrier (*Circus aeruginosus*), the hen harrier (*Circus cyaneus*), the Montagu's harrier (*Circus pygargus*), the merlin (*Falco columbarius*), the lesser kestrel (*Falco naumanni*), the peregrine falco (*Falco peregrinus*), the red-footed falcon (*Falco vespertinus*), the common crane (*Grus grus*), the griffon vulture (*Gyps fulvus*), the white-tailed eagle (*Haliaeetus albicilla*), the black kite (*Milvus migrans*), the osprey (*Pandion haliaetus*) and the honey buzzard (*Pernis apivorus*).

In 2022 there were no changes in comparison to the previous period, i.e. the list of strictly protected bird species in the important bird areas (IBAs), to which protection measures from energy sector relate, was not prolonged.

GRI 308-1

Influence of the supply chain on the environment

In order to collect the data on the influence of HEP Group supply chain (first level of suppliers) on the environment, we created a questionnaire in line with Consolidated GRI standards from 2021. Out of 113 suppliers, 16 suppliers, i.e. 14.2 percent sent the information on the influence on the environment, so the results of collected data are not the presentation of the real condition, but a confirmation of the assumption that collecting data on the influence of supply chain on the environment will present a big challenge.

Results of collecting data on the influence of HEP Group supply chain on the environment

Postavljena pitanja	Prikupljeni podaci
Published Sustainability reports /non-financial reports	Out of 16 suppliers 8 publish sustainability reports
Environment management system (formal and informal)	Out of 16 suppliers, 12 have established Environment management system under ISO 14001 standard
Establishment of energy management system (formal and informal)	Out of 16 suppliers, 10 have established Energy management system under ISO 14001 standard
Data on energy consumption	Out of 16 suppliers, 13 delivered data on energy consumption, and 5 delivered the data on energy consumption from renewable energy sources. Energy consumption from the supply chain in 2022 amounted to 115,711,583.18 MWh
Data on capturing and discharging waters	Out of 16 suppliers, 13 delivered data on captured waters and 5 on captured and discharged waste waters. The total of 1,018,489.65 m^3 water was captured in the supply chain in 2022, and the total of 601,480,888 m^3 of waste waters was discharged.
Data on greenhouse gas emissions into the air	Out of 16 suppliers, 9 delivered data on greenhouse gas emissions. Emissions from the supply chain in 2022, i.e. Scope 3 emissions amounted to 2,058,884 tonnes
Monitoring the influence of the supply chain on the environment	Out of 16 suppleirs, 2 suppliers delivered data on Scope 3 emissions from their supply chain

11

GRI Index

Statement of use	In its Annual and Sustainability Report for 2022 HEP Group published the information in line with GRI indicators. The reporting period covers the time span between 1 January and 31 December 2022.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	GRI 11: Oil and Gas Sector 2021

GRI STANDARD	DISCLOSURE	LOCATION
GRI 2: General Disclosures 2021	2-1 Organizational details	14
	2-2 Entities included in the organization's sustainability reporting	16
	2-3 Reporting period, frequency and contact point	16
	2-4 Restatements of information	17
	2-5 External assurance	17
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GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed (GRI 11.14.1, GRI 11,14.2, GRI 12.14.1, GRI 11.14.2)	81, 85, 93, 95, 115, 116, 117
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GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
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	202-2 Proportion of senior management hired from the local community	55
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	81, 93, 95, 175
	203-2 Significant indirect economic impacts	81, 93, 95
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	83, 97, 115, 135

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
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	205-2 Communication and training about anti-corruption policies and procedures	67
	205-3 Confirmed incidents of corruption and actions taken	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	20
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 207: Tax 2019	207-1 Approach to tax	
	207-2 Tax governance, control, and risk management	
	207-3 Stakeholder engagement and management of concerns related to tax	
	207-4 Country-by-country reporting	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
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	301-2 Recycled input materials used	
	301-3 Reclaimed products and their packaging materials	

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
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	302-2 Energy consumption outside of the organization (GRI 11.1.4, GRI 12.1.4)	96, 159, 164
	302-3 Energy intensity	96, 159, 164
	302-4 Reduction of energy consumption	96, 159, 162
	302-5 Reductions in energy requirements of products and services (GRI 11.1.1, GRI 11.1.2, GRI 12.1.1, GRI 12.1.2)	85, 96, 99, 59, 159, 162, 164
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	83, 91, 183
	303-2 Management of water discharge-related impacts	89, 91, 96, 98, 183, 184, 185, 188
	303-3 Water withdrawal	89, 91, 96, 98, 184, 185, 188
	303-4 Water discharge (GRI 11.6.1, GRI 11.6.2, GRI 11.6.3, GRI 11.6.4, GRI 11.6.5, GRI 12.6.1, GRI 12.6.3, GRI 12.7.1, GRI 12.7.2)	91, 91, 96, 183, 184, 185, 188
	303-5 Water consumption (GRI 11.6.1, GRI 11.6.6, GRI 12.6.1, GRI 12.6.6)	183, 184, 188
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas (GRI 11.4.1, GRI 11.4.2, GRI 12.5.1, GRI 12.5.2)	89, 98, 193
	304-2 Significant impacts of activities, products and services on biodiversity	89, 89,98, 193
	304-3 Habitats protected or restored	89, 98, 193
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	89, 98, 195

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions (GRI 11.1.1, GRI 11.1.5, GRI 12.1.1, GRI 12.1.5)	85, 95, 99, 165, 166
	305-2 Energy indirect (Scope 2) GHG emissions (GRI 11.1.1, GRI 11.1.6, GRI 12.1.1, GRI 12.1.6)	85, 95, 99, 165, 170
	305-3 Other indirect (Scope 3) GHG emissions (GRI 11.1.1, GRI 11.1.7, GRI 12.1.1, GRI 12.1.7)	85, 95, 99,165, 171
	305-4 GHG emissions intensity (GRI 11.1.1, GRI 11.1.8, GRI 12.1.1, GRI 12.1.8)	85, 95, 99,165, 172
	305-5 Reduction of GHG emissions (GRI 11.1.6, GRI 11.2.2, GRI 11.1.1, GRI 11.1.5, GRI 11.1.6, GRI 11.1.7. GRI 11.1.8, GRI 12.1.1, GRI 12.1.5, GRI 12.1.6, GRI 12.1.7, GRI 12.1.8, GRI 11.6.6, GRI GRI 12.7.1, GRI 12.7.6)	85,95, 165, 173, 188
	305-6 Emissions of ozone-depleting substances (ODS)	165, 176
	305-7 Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions (GRI 11.1.1, GRI 11.1.5, GRI 11.1.7, GRI 11.1.8, GRI 12.1.1, GRI 12.1.5, GRI 12.1.7, GRI 12.1.8, GRI 11.4.1, GRI 11.4.2, GRI 12.4.1, GRI 12.4.2)	89, 93, 97, 98, 165, 177
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	83, 85, 97, 191
	306-2 Management of significant waste-related impacts	83, 85,97, 191
	306-3 Waste generated	83, 89, 97, 98, 190, 191, 192
	306-4 Waste diverted from disposal	83, 89, 97, 98, 191, 192
	306-5 Waste directed to disposal (GRI 11.5.1, GRI 11.5.4, GRI 11.5.5, GRI 11.5.6, GRI 12.6.1, GRI 12.6.4, GRI 12.6.5, GRI 12.6.6)	83, 89, 97, 98, 191, 192
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria (GRI 11.1.5, GRI 11.1.6, GRI 11.1.7, GRI 11.1.8, GRI 11.4.3, GRI 11.6.1, GRI 11.6.2, GRI 11.6.3, GRI 11.6.6., GRI 12.6.1, GRI 12.6.2, GRI 12.6.3, GRI 12.6.6)	81, 85, 89, 95, 98, 183, 195
	308-2 Negative environmental impacts in the supply chain and actions taken	

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 401: Employment 2016	401-1 New employee hires and employee turnover (GRI 11.10.1, GRI 12.10.1)	141, 142
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees (GRI 11.10.1, GRI 11.10.3, GRI 12.10.1, GRI 12.10.3)	141, 142
	401-3 Parental leave (GRI 11.11.1, GRI 11.11.3, GRI 12.11.1, GRI 12.11.3)	87, 98, 141, 143
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	87, 98, 147
	403-2 Hazard identification, risk assessment, and incident investigation	87, 98, 148
	403-3 Occupational health services	87, 98, 148
	403-4 Worker participation, consultation, and communication on occupational health and safety (GRI 11.9.1, GRI 11.9.6, GRI 11.9.5)	87, 98, 147, 148
	403-5 Worker training on occupational health and safety	87, 98, 148
	403-6 Promotion of worker health	87, 98, 148
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships (GRI 11.9.1, GRI 11.9.3, GRI 11.9.4, GRI 11.9.8, GRI 12.9.1, GRI 12.9.3, GRI 12.9.4)	148
	403-8 Workers covered by an occupational health and safety management system (GRI 11.9.1, GRI 11.9.2, GRI 11.9.4, GRI 12.9.1, GRI 12.9.2, GRI 12.9.4, GRI 12.9.8)	87, 98, 147
	403-9 Work-related injuries	149
	403-10 Work-related ill health	87, 98

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee (GRI 11.11.1, GRI 11.11.4, GRI 12.1.1, GRI 12.11.4)	141, 144
	404-2 Programs for upgrading employee skills and transition assistance programs (GRI 11.6.2, GRI 12.6.2, GRI 12.6.4, GRI 11.5.4, GRI 11.5.5, GRI 11.5.6)	83, 97
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GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees (GRI 11.10.1, GRI 11.10.3, GRI 11.10.4, GRI 12.10.1, GRI 12.10.3, GRI 12.10.4, GRI 11.11.1, GRI 11.11.5, GRI 12.1.1, GRI 12.11.5)	87, 98, 141, 145
	405-2 Ratio of basic salary and remuneration of women to men	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
	413-2 Operations with significant actual and potential negative impacts on local communities	151
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	155
	414-2 Negative social impacts in the supply chain and actions taken	

GRI STANDARD	DISCLOSURE	LOCATION
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 415: Public Policy 2016	415-1 Political contributions	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 417: Marketing and Labeling 2016	417-1 Requirements for product and service information and labeling	149
	417-2 Incidents of non-compliance concerning product and service information and labeling	
	417-3 Incidents of non-compliance concerning marketing communications	
GRI 3: Material Topics 2021	3-3 Management of material topics	75, 76, 77, 78, 79, 94, 116, 128, 130, 131, 132, 133, 134, 135, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 155, 159, 161, 162, 164, 165, 166, 170, 171, 172, 173, 176, 177, 183, 185, 188, 190, 191, 192, 193
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data (GRI 11.9.2, 11.9.3, 11.9.4, 11.9.6, 11.9.8, 11.9.9, 11.9.10)	87, 98, 150

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ANNEX

Abridged Consolidated Financial Report of HEP Group business operations in 2022

Business operations

HEP's business operations in 2022 were exposed to a number of unfavourable influences. In terms of hydrology, it was the most unfavourable year in the past decade, with hydro production of 4.9 TWh of electricity, which was 1.9 TWh (27%) less than in 2021 and 24% less than the ten-year hydro generation average. Lower hydro power plant production along with the growing electricity demand by HEP's customers was compensated by higher production of thermal power plants and bigger imports of electricity at extremely high prices.

Since the second half of 2021, the European energy markets were facing extreme price volatility driven by geopolitical tensions, market uncertainty around gas supply and reduced hydropower and nuclear power generation, while the purchase prices of electricity, gas, coal and CO_2 emission units during 2022 recorded historically high record levels.

During 2022, the Government of the Republic of Croatia enacted and proposed regulations with the aim of mitigating the consequences of rising prices on the market and ensuring reliable energy supply for end customers. As part of the measure package from February 2022, the selling prices of electricity and gas for household customers were minimally increased as of 1 April 2022. On 8 September 2022, the Government of the Republic of Croatia adopted the Regulation on eliminating disturbances on the domestic energy market, which regulates special measures in electricity trade, the method and conditions of price formation for certain categories of electricity and heat energy customers in the period from 1 October 2022 to 31 March 2023. Said regulation has limited the electricity prices for business customers. As a result, the difference up to the price agreed under the contract was recorded as a business expense, and led to an increase in other expenses in 2022 in the amount of HRK 1.83 billion.

In 2022, HEP Group generated a pre-tax loss in the amount of HRK 6.94 billion as a result of the aforementioned negative impact on its operations.

Despite the aforementioned challenges, HEP ensured a safe and high-quality supply of electricity, heat and gas in the territory of the Republic of Croatia. On 2 March 2022, the Croatian Energy Regulatory Agency appointed HEP Plin (HEP Gas) a guaranteed gas supplier responsible for the public service of supply of end customers under regulated terms. In accordance with the decision of the Government of the Republic of Croatia dated 3 June 2022, HEP secured strategic gas supplies on the territory of the Republic of Croatia for the period from 1 April 2022 to 31 March 2023. Also, by the Regulation on Amendments to the Regulation on Eliminating Disruptions on the Domestic Energy Market (Official Gazette no. 106/22), HEP became responsible for the procurement of gas produced in the Republic of Croatia and its sale to gas distributors for the purpose of covering gas distribution losses, to heat buyers from independent heat system, to public service for the needs of household customers and to gas customers from the business category (public institutions) at the prices and terms established by the Regulation.

According to the conclusions of the Government of the Republic of Croatia, the write-off of energy-related liabilities from households in the earthquake-affected area continued, resulting in a write-off of HRK 47.5 million in 2022, making a total of HRK 126.6 million written off since the beginning of the measure. Also, the investment cycle continued with the launch of new investments characterized by a large share of the domestic component.

Macroeconomic environment

According to the estimate of the Croatian Bureau of Statistics published on 28 February 2023, gross domestic product (hereinafter: GDP) in 2022 increased in real terms by 6.3 percent compared to 2021. In the fourth quarter, GDP increased by four percent compared to the same period last year, which was a slower growth than in the previous quarter when it grew by 5.2 percent. However, this was the seventh consecutive quarter of economic recovery from the consequences of the coronavirus crisis. The GDP growth in the fourth quarter was driven by the growth of all GDP components, from personal consumption to exports and investments.

Since the annual growth is faster than the European Union average (hereinafter: EU), the growth of the Croatian GDP in 2022 was among the highest in the EU, following Ireland (12.2%), Portugal (6.7%) and Malta (6.6%).

According to the winter economic forecast of the European Commission[1] (hereinafter: EC), a significant slowdown of the GDP growth is expected ie 1.2 percent in 2023 and 1.9 percent in 2024, which is still a more positive forecast than the previous ones, based on the expectations of the positive consequences of the Croatia's entry into the eurozone and the Schengen area.

The absence of seasonal fluctuations in the kuna exchange rate trends in relation to the euro in 2022 confirmed the kuna as one of the most stable European currencies, which ultimately resulted in the introduction of the euro as a single currency (on 1 January 2023) as per the conversion rate of HRK 7.5345 for 1 EUR as announced earlier. The HRK exchange rate fluctuated from HRK 7.58 for 1 EUR (March 2022 average) to HRK 7.50 for 1 EUR (August 2022 average).

The average exchange rate of the kuna against the euro on an annual basis increased slightly by 0.2 percent, i.e. HRK 7.54 for 1 EUR in 2022 compared to HRK 7.52 for 1 EUR in 2021. In 2022, the kuna fluctuated significantly against the dollar, primarily due to its relation to the euro. Thus, the average exchange rate of the kuna against the dollar was higher by as much as 12.7 percent, i.e. HRK 7.18 per USD in 2022 compared to HRK 6.37 per USD in 2021.

The accelerated growth of inflation, resulting mainly from the increase in energy prices, especially oil derivatives, and the significant increase in the prices of food products, which began in the second half of 2021, continued during 2022. In mid-January 2023, the CBS announced that the prices of goods and services for personal consumption, measured by the consumer price index, increased by 13.1 percent in December compared to the same month in 2021, which was also the highest level of inflation since the beginning of CBS measurement. The 2022 average annual inflation rate amounted to 10.8 percent, which was an increase of +8.2 p.p. compared to 2021.

During 2022, the record inflation rate was recorded in the eurozone as well, mainly driven by high energy prices. However, the inflation slowdown in December 2022 to 9.2 percent compared to 10.1% in the previous month (Eurostat estimate[2]) brought the first sign of weakening inflationary pressures.

[1] *Winter economic forecast 2023*
[2] Statistical office of the European Union

Price of energy on the market

Energy prices in the EU and the world began to rise from the second half 2021 as a result of a combination of supply and demand factors that, on the eve of the winter season, brought European gas supplies to historically low levels. Climate change and reduced electricity production in nuclear and hydropower plants (due to drought) also contributed to price increases. The Russian invasion of Ukraine and international sanctions led to uncertainty in energy supply which resulted in extreme volatility of energy prices. In 2022, gas and electricity prices reached record high levels due to the interruption of gas flow from the pipeline (North Stream 1), uncertainty in gas supply markets and the impact of gas prices on the wholesale electricity market. The European Council decided to ban almost 90 percent of all Russian oil imports until the end of 2022, with a temporary exception of crude oil delivered by pipeline, and a new gas storage regulation aimed at ensuring sufficient storage capacity before the start of the winter season.

August 2022 saw the peak of gas prices at CEGH[3] with an increase of 1,000 percent compared to prices in previous decades. During the last ten years, the average price of gas ranged from 5 EUR/MWh to 35 EUR/MWh. In August 2022, TTF prices for one month in advance and one day in advance reached a historically high level of over 300 EUR/MWh. The highest price levels were reached during five consecutive trading days from 22-26 August 2022, when they were above 265 EUR/MWh the entire time (the highest price was recorded on 26 August 2022 - 337 EUR/MWh).

The electricity price trend is significantly correlated with the gas price trend in view of the large share of the gas component, in addition to the prices of emission units, in the costs of electricity production. The average price of base electricity on the CROPEX[4] spot market in the first and second quarter of 2022 amounted to 233 EUR/MWh and 213 EUR/MWh, respectively. The record level of electricity prices was seen in August (30 August; base energy – 749 EUR/MWh, peak energy – 808 EUR/MWh), while the average price for the third quarter amounted to 421 EUR/MWh.

At the beginning of the last quarter, temperatures higher than usual delayed the start of the heating season and, in addition to the high level of occupancy of underground storages, affected the drop in the price of gas and, consequently, electricity. However, with the first cold wave in Europe, a repeated increase in the price of electricity occurred (244 EUR/MWh average price for the fourth quarter).

The price of CO_2[5] emission units on the EEX[6] spot market during 2022 was extremely volatile ranging from 58 EUR/t (7 March 2022) to record high 98 EUR/t (19 August 2022). The increased demand for emission units, and thus the high prices, are the result of the increased production of coal-fired power plants, which became profitable in conditions of high gas prices.

Coal prices experienced a historic soar after Russia's attack on Ukraine and the additional introduction of sanctions on the import of Russian coal. The disappearance of Russian suppliers from the European market, which accounted for 60 percent of the total imported quantities of hard coal in Europe, meant great challenges for the market, along with the increase in coal prices. The situation began to calm down in late 2022, when the price reached "high" 196 USD/t.

[3] CEGH -Central European Gas Hub
[4] CROPEX – Croatian Power Exchange
[5] European Emission Allowances - EUA
[6] European Energy Exchange

Basic indicators

HEP sold 15.3 TWh of electricity to customers in Croatia (0.6 TWh more than in 2021), and 2.2 TWh of electricity (0.5 TWh less than in 2021) on its neighbouring markets. Revenues from the sale of electricity in Croatia increased by HRK 6.7 billion (56.5%) due to higher electricity demand at higher prices.

A market share in the supply of electricity to customers in the Republic of Croatia was 92.7 percent. Revenues from the sale of electricity abroad increased due to the higher price of exported electricity in addition to lower exports of surplus electricity produced in the HEP Group's power plants, as well as higher average selling prices and greater supply of customers in the region.

The total production and purchase of electricity by HEP Group amounted to 19.8 TWh, of which 63 percent was produced in power plants owned and partially owned by the Group (12.4 TWh, 1.3 TWh less than in 2021), while 37 percent of the required electricity was procured outside the system (7.4 TWh, 946 GWh more than in 2021).

The year 2022 was marked by unfavourable hydrological circumstances. Thus, 4.9 TWh was produced in hydropower plants, which was by 1.9 TWh (27.5%) less than in 2021. Thermal and cogeneration power plants produced 4.6 TWh, 0.6 TWh more than in 2021, while Krško nuclear power plant delivered 2.7 TWh, which was 54 GWh (2.0%) less compared to 2021 due to a six day longer regular overhaul. HEP's solar and biomass cogeneration power plants produced a total of 23 GWh, while Korlat wind power plant generated 149 GWh.

7.4 TWh of electricity was procured on the market (including mandatory purchase from HROTE for the production from renewable sources and high-efficiency cogeneration in the incentive system) i.e. 946 GWh (14.7%) more than in 2021, which, in addition to the higher average price of imports, led to an increase in electricity procurement costs by HRK 7.6 billion (210%). Energy fuel costs increased by HRK 5,380.6 million (224%) due to the increase in the average consumption prices of natural gas and coal as a consequence of energy price increase on the market. The unit price of coal and natural gas increased by 188 and 206 percent, respectively, while the demand for natural gas and coal was higher by 12.3 and 4.2 percent, respectively.

Revenues from the sale of gas on the retail market increased by 105.2 percent due to a 5.4% increase in the sale of gas as well as a higher selling price of gas, which was reduced for household and entrepreneurial customers through a package of measures introduced by the Government of the Republic of Croatia, including subsidies for these customer categories and the reduction of the VAT rate from 25 to 5 percent. Sales increased as a result of assuming the role of a guaranteed supplier from 1 April 2022, as well as the sale of gas under the Regulation of the Government of the Republic of Croatia on Amendments to the Regulation on Eliminating Disturbances on the Domestic Energy Market, which entered into force on 1 October 2022.

Revenues from the sale of heat energy increased by 23.3 percent due to the increased price in the last quarter of 2022. Pursuant to the Regulation of the Government of the Republic of Croatia, the existing sales prices have been retained for the majority of end customers, while said increase has been subsidized by the Ministry of Economy and Sustainable Development.

Compared to 2021, staff costs increased by 1.2 percent as a result of the increase in the value of salary points from 1 January 2022, based on the provisions of the Collective Agreement and the Annex to the Collective Agreement (signed on 6 July 2021, valid until 31 December 2023) as well as the new employment. At the end of 2022, HEP Group employed 11,782 workers.

Financial activities recorded loss of HRK 303.0 million compared to HRK 75.2 million of profit in 2021. In 2021, profit was recorded as a result of the change in the fair value of the cross-currency swap for bonds issued in 2015 in the amount of HRK 299.2 million reported in financial income, while the loss in 2022 was the result of interest expenses of HRK 252.7 HRK million and negative exchange rate differences of HRK 52.8 million.

Throughout the year, all due liabilities were settled within the due date. The Group ended the business year with HRK 3.09 billion in cash and cash equivalents, which was a decrease of HRK 1.18 billion (27.6%) compared to the end of 2021. HEP took advantage of the record low interest rates in 2021 and the favourable cost of financing in 2022, and agreed favourable credit arrangements on time, which were, together with its own funds, used to repay the bonds in full[7].

During July 2022, Moody's and S&P rating agencies upgraded the long-term credit rating of Hrvatska elektroprivreda. Moody's increased the credit rating from Ba1 to Baa2, while S&P upgraded the long-term credit rating from BBB- to BBB. Both agencies rated the outlook as stable.

[7] Eurobonds issued in 2015 in the amount of HRK 3.65 billion

Investments

In 2022, numerous investment projects were launched or continued, from solar power plants, hydropower plants, high-efficiency cogeneration, wind power plants, the introduction of the smart network concept to energy efficiency projects and development of electromobility. All these projects confirm a clear direction of development and determination in the realization of the development strategy for the period until 2030. Through their realization, as well as the constant improvement of business operations, HEP strives to be a highly competitive and successful company, a key stakeholder in the energy transition, a driver of the Croatian economy and a support for the Government of the Republic of Croatia in the implementation of the strategic goals of energy and economic development. In 2022, HEP Group was also one of the largest investors in Croatia, with investments of 3.41 billion kuna, which included HRK 212.2 million invested in Krško NPP. In 2022, there was no need for arranging new long-term loans for investment funding. They were financed by HEP's own as well as EU funds, while the construction of EL-TO Zagreb CCPP was funded through the EBRD and EIB loans.

By the end of 2022, more than 90 percent of the aforementioned unit, with electrical output of 150 MWe and heat output of 114 MW, was completed. The construction completion is expected in late 2023. The total value of the investment is HRK 1,052.7 million. As part of the Kosinj HPP project, work began in 2022 on the construction of the first hydrotechnical facility, the Bakovac-Lika tunnel and canal. Project documentation for contracting main works (dams, engine houses, reservoirs) was prepared. Along with HydroPower Plant Senj 2, HES Kosinj is one of the two segments of the overall project of upgrading the existing Hydropower System Senj (HES Senj). With a total capacity increase of 412 MW and investments of HRK 3.5 billion, it is HEP's largest project since Croatia's independence.

In 2022, Stankovci solar power plant (2.5 MW) and currently Croatia's largest solar power plant Obrovac (7.35 MW) were put into operation. The construction of three more solar power plants has begun: SE Donja Dubrava (9.9 MW), Radosavci (9.9 MW) and Jambrek (5 MW). The procurement procedure for the construction of Črnkovci solar power plant (8.5 MW) was carried out. It is the first power plant that will be built on the basis of the cooperation agreement that HEP concluded with several local self-government units. A 75 MW solar power plant is under development at the location of the existing Korlat Wind Power Plant. As part of Vis solar power plant, a battery storage tank for energy storage was installed and put into operation.

In terms of network activities, the SINCRO.GRID, CEF co-funded project, was completed. It will contribute to the optimization of voltage conditions in the transmission system, the stabilization of voltage in the distribution network and capacity increase for connecting renewable energy sources to the distribution system. The EU co-funded smart network introduction pilot project continued. The total value of the project is HRK 176.8 million, of which ERDF grants acccount for 85 percent. In addition, HEP DSO will independently invest an additional HRK 52 million, resulting in the total investment of almost HRK 230 m allocated to smart networks. The project was granted an extension until 30 November 2023. Within the framework of the EU's Modernization of the Croatian Distribution Electricity Network project, activities related to four projects began (Development of smart network, Submarine cables in the distribution network for powering the island, Network modernization for Natura 2000 areas and Construction of a micro-energy network in areas with special development features).

In 2022, equipment replacements, reconstructions and revitalization of existing production facilities and transmission and distribution networks were continuously carried out, with a large scale engagement of domestic producers and contractors.

During 2022, work continued on two largest HEP District Heating investment projects co-financed by the European Fund for Regional Development - Revitalization of the hot water network in the area of the city of Zagreb and Replacement of the connecting hot water pipe from Osijek TE-TO CCGT to Osijek heating plant. Works within the Zagreb project cover 68.5 kilometers of the total 239.2 kilometers of the Zagreb's hot water network. The total value of the project is HRK 700 million, or HRK 556.1 million of eligible costs, of which HRK 421.5 million are EU non-refundable. This is the largest amount ever allocated to HEP from the European Union funds. The "Replacement of the connecting hot water network from Osijek TE-TO CCGT to Osijek heating plant" includes the replacement of the 4.4 km long connecting hot water network, dimensions DN 800. The total estimated value of the project is HRK 78.9 million, of which the EU grant accounts for HRK 46 million.

As for investments in the gas activities, in August 2022 the Government of the Republic of Croatia passed a Decision on increasing the security of gas supply by building the Zlobin – Bosiljevo gas pipeline and increasing the capacity of the LNG terminal to 6.1 billion cubic meters of gas per year. The decision defined that LNG Hrvatska was to be allocated the grant in the amount of EUR 25 million to cover the project's capital expenditures. In the gas distribution business, investments in the gas network continued. In May 2022, HEP Gas acquired the ownership stake in Pakrac plin d.o.o.

The implementation of the measures and the preparation of projects for increasing energy efficiency as well as the commercialization of the eMobility project continued. Billing at motorway charging stations was introduced on 24 January 2022, and at publicly accessible off-motorway ELEN charging points on 1 March 2022. In 2022, 14 publicly accessible charging stations were installed, bringing the total number of public charging stations in the ELEN network to 271. Two charging stations were also installed for the internal needs of HEP Group, bringing the total number to 48.

Financial performance

According to financial indicators, HEP Group is one of the biggest business groups in the Republic of Croatia.

In 2022, HEP's operations were carried out in extremely complex and crisis-like circumstances resulting in an operating loss of HRK 6,635.5 million compared to a profit of HRK 1,170.1 million in 2021. Despite higher revenues, the deterioration of business results compared to 2021 was primarily influenced by a drastic increase in variable operating costs. A loss from financial activities of HRK 303.0 million was recorded compared to a profit therefrom of HRK 75.2 million in 2021. The net loss of HEP Group amounted to HRK 5,722.7 million, of which HRK 5,724.4 million was attributable to the shareholders of the parent company, and the profit of HRK 1.7 million to the non-controlling interest.

Operating revenues amounted to HRK 25,315.8 million and were by HRK 9,345.1 million higher than in 2021, primarily due to an increase in revenue from the sale of electricity by HRK 8,364.9 million (62.4%), revenue from gas supply to customers by HRK 570.0 million (105%), revenue from the sale of heat energy by HRK 165.0 million (23.3%) and other operating income by HRK 115.6 million. Revenues from the sale of gas produced in the Republic of Croatia in accordance with the Regulation of the Government of the Republic of Croatia amounted to HRK 115.9 million.

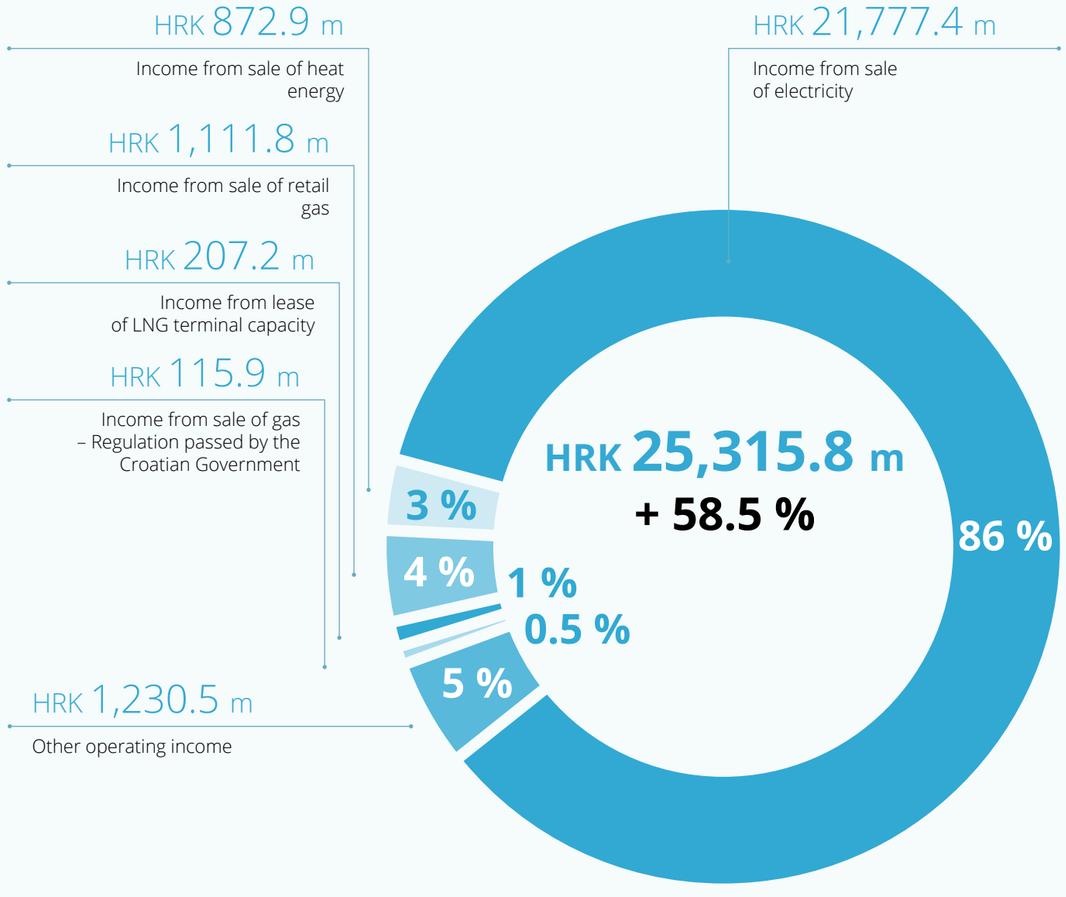
Operating expenses amounted to HRK 31,951.3 million and were by HRK 17,150.7 million higher than in 2021. The increase was influenced by a higher cost of electricity purchase (210%) due to a higher purchase price of electricity (219%) and higher imports, higher fuel costs (224%) due to higher natural gas and coal prices and a greater demand, a higher purchase cost of gas for sale (95%) and higher costs of carbon dioxide emission units (119%). The difference between the price charged to end customers in accordance with the Regulation of the Government of the Republic of Croatia and the contracted price[8] was recorded under other expenses in the amount of HRK 1,827.1 million[9].

Consolidated profit and loss account (abridged) HRK m	2021	2022	2022-2021	%2022/2021
Operating income	15,970.7	25,315.8	+9,345.1	+58.5%
Operating expenses	14,800.6	31,951.3	+17,150.7	+116%
Profit from operations	1,170.1	-6,635.5	-7,805.6	-667%
Net profit of the Group	1,019.5	-5,722.7	-6,742.2	-661%
Net profit attributable to owners of the parent	1,017.4	-5,724.4	-6,741.8	-663%

[8] for customers opting for guaranteed supply, the price determined by HERA's decision in accordance with the *Methodology for determining the amount of tariff items for guaranteed electricity supply*.
[9] the total cost of the Regulation, taking into account internal relations, amounted to HRK 1,854.6 million

Operating income

In 2022, the Group generated operating revenues in the amount of HRK 25,315.8 million. This was an increase of HRK 9,345.1 million (58.5%) compared to 2021 due to an increase in the revenue from the sale of electricity, the revenue from the supply of gas to customers, the revenue from the sale of heat energy, and the revenue from the sale of gas produced in the Republic of Croatia in accordance with the Regulation passed by the Government.



The structure of operating income (HRK m) and its share in overall operating income (%)

The Group generated HRK 21.78 billion from the sale of electricity, which accounted for 86 percent of operating income. The increase of 62.4 percent (HRK 8,364.9 million) compared to the previous year was primarily the result of higher billed quantities to business customers at higher electricity prices, and of higher electricity prices for household customers as well as transmission and distribution network fees.

Revenues from the sale of electricity to customers in the Republic of Croatia amounted to HRK 18.68 billion (85.8% of revenue from the sale of electricity). However, HRK 16.85 billion was billed to customers. Namely, costs arising from the application of the Regulation of the Government of the Republic of Croatia in the amount of HRK 1.83 billion were recorded as other expenses.

Also, due to the application of the Regulation of the Ministry of Economy on the criteria for acquiring the status of vulnerable customers of energy from networked systems (Official Gazette 95/2015) and the Decision of the Assembly of HEP d.d. under which the price of electricity for household customers remained unchanged, HEP's income from the sale of electricity to households was reduced by the solidarity fee in the amount of HRK 179.9 million.

The income from the sale of electricity abroad increased by 110.2 percent due to the higher price of exported electricity with a lower export of surplus electricity produced in the HEP Group's power plants and a bigger supply to customers in the region at a higher average selling price.

Revenues from the sale of gas to end customers amounted to HRK 1,111.8 million accounting for 4 percent of operating revenue, which was by HRK 570.0 million higher compared to 2021 due to the increase in the average selling price of gas (105%), which was reduced for household and enterpreneurship customers through a package of measures by the Government of the Republic of Croatia including subsidies for these categories of customers and a reduction in the VAT rate from 25 to 5 percent. Revenue growth was also increased as a result of HEP Gas taking over the role of a guaranteed supplier as of 1 April 2022, and the entry into force of the Regulation amending and supplementing the Regulation of the Government of the Republic of Croatia dated 1 October 2022.

On the basis of the Regulation, on 19 October 2022, the Government of the Republic of Croatia adopted a Decision on the price and allocation of natural gas capacity that HEP d.d. had taken over from the natural gas producer (Official Gazette 122/22) defining the quantities of gas for certain categories of customers and the prices at which HEP d.d. supplies gas as of 1 October 2022. According to these conditions, contracts were concluded with a total of 29 customers. A total of 614 GWh of gas was sold and the revenue of HRK 115.9 million generated.

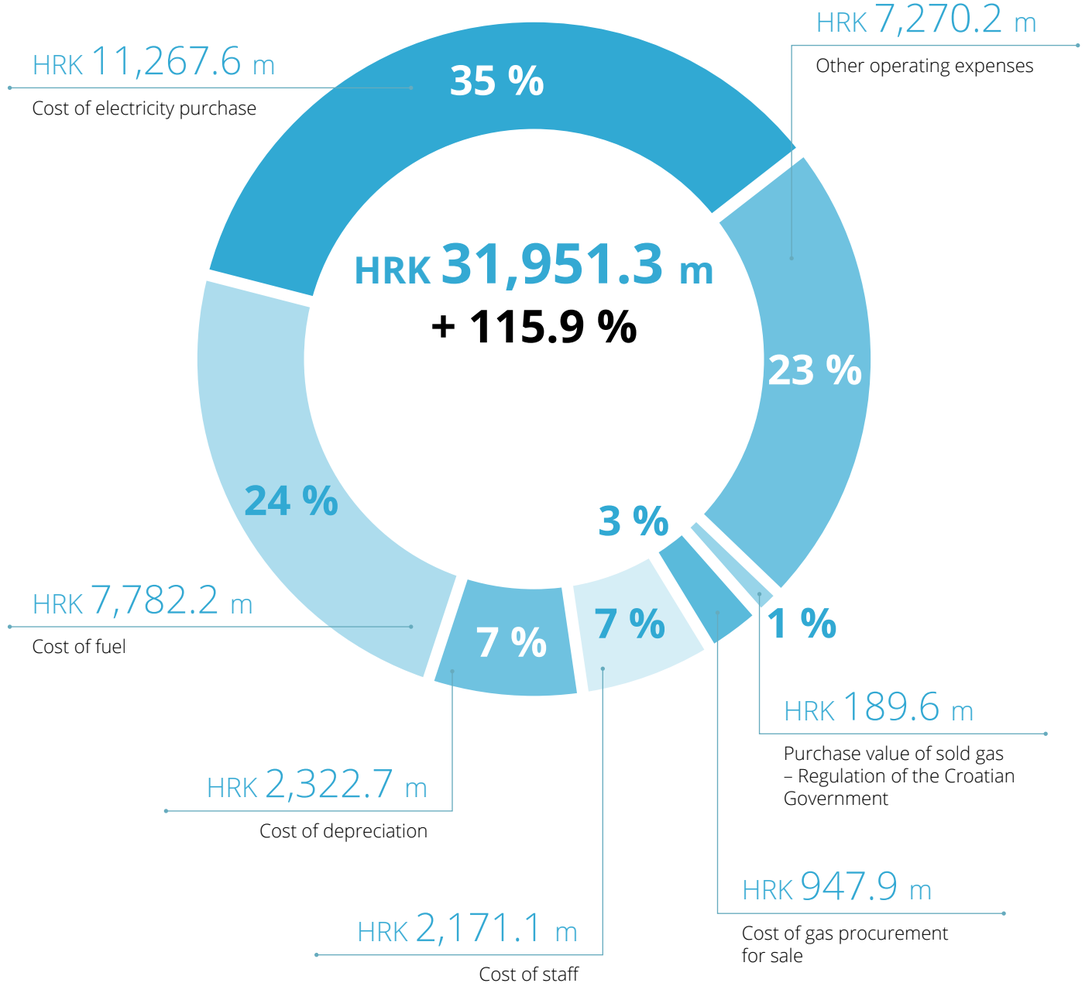
Income from the lease of the LNG terminal capacity amounted to HRK 207.2 million, which was by HRK 33.0 million (19.0%) more than in 2021.

Income from the sale of heat energy amounted to HRK 872.9 million accounting for 3 percent of operating income. This was a HRK 165.0 million increase due to the included subsidies realized on the basis of the application of the Government of the Republic of Croatia Regulation on eliminating disturbances on the domestic energy market in the last quarter of 2022, at a 9.6 percent lower consumption, while the selling price to end customers remained unchanged.

Other operating income amounted to HRK 1,230.5 million, which in total increased by HRK 115.6 million (10.4%) compared to 2021. Revenues from the cancellation of reservations, revenues from external services, higher carbon price revenues last year, and revenues from the sale of materials increased.

Operating expenses

The Group's operating expenses in 2022 increased by HRK 17,150.7 million to HRK 31,951.3 million.



The structure of operating expenses (HRK m) and its share in overall operating expenses (%)

Energy fuel for the production of electricity and heat and the purchase of electricity accounted for 60 percent of the total costs and amounted to HRK 19,049.8 million. The costs of purchasing electricity on the market increased by HRK 7,628.8 million (210%) due to the higher purchase price and higher imports of electricity, while the costs of energy fuel in 2022 increased by HRK 5,380.6 million, which was primarily a consequence of higher prices of natural gas and coal and increased electricity production in thermal power plants, as a result of extremely unfavourable hydrological circumstances.

The purchase price of electricity increased by 219 percent along with a higher import volume of electricity, which increased by 584 GWh compared to 2021. 262 GWh more electricity was taken from eligible producers in the incentive system due to the increase in the mandatory purchase from 40 to 60 percent of the total electricity produced in the incentive system. The purchase of electricity from producers and customers with own production in the Republic of Croatia increased by 54 GWh at a 176% higher price.

The cost of energy fuel increased by HRK 5,380.6 million (224%) compared to 2021. Electricity production in thermal power plants grew by 15.1 percent as well as the price of natural gas by 206 percent at a 12.3 percent higher natural gas demand, and the price of coal by 188 percent at a 4.2 percent higher coal consumption. The costs of forest biomass for the production of BE-TO Osijek and BE-TO Sisak CHPs grew by 23.7 percent due to increased demand, while the price of forest biomass decreased by 1.3 percent. Due to high gas prices, reserves of substitute fuel and gas oil were also used in production, resulting in the fuel oil cost of HRK 152.2 million.

The cost of gas purchase for market supply amounted to HRK 947.9 million, which was by HRK 461.6 million more than in 2021 due to a 117 percent higher average gas purchase price along with increased gas purchase (105 GWh). The purchase value of sold gas that HEP acquired from INA d.d. based on the Regulation amending and supplementing the Regulation of the Government of the Republic of Croatia amounted to HRK 189.6 million.

The costs of salaries and other employee benefits amounted to HRK 2,171.1 million, which was an increase of HRK 43.4 million (2.0%) primarily due to the increase in the value of salary points for the year 2022 based on the Collective Agreement.

Other operating expenses increased by 91.7 percent compared to 2021, in which the cost of selling electricity to customers at prices determined by the Regulation of the Government of the Republic of Croatia in the amount of HRK 1,827.1 million account for the biggest increase. A significant cost in other operating expenses comes from the cost of carbon dioxide emission units, which increased by HRK 967.0 million due to the 103 percent higher price than in 2021 with 316 thousand tons of larger quantities of emission units. Other operating expenses also include the write-off of receivables from households for energy in the earthquake-affected area, which was carried out by HEP Group companies pursuant to the conclusions of the Government of the Republic of Croatia. Said amount in 2022 amounted to HRK 47.5 million.

Results by activities

The largest part of operating income (90.0%) was generated from the electricity-related activity, which recorded the operating loss of HRK 5,208.8 million, a decrease by HRK 6,889.7 million compared to 2021 due to a drastic increase in variable operating costs due to an enormous increase in the average prices of all energy products in extremely unfavourable hydrological circumstances. District heating accounted for 3.7 percent of operating income, recording an operating loss of HRK 1,317.0 million. Compared to the previous year, the result worsened due to the maintenance of an inadequate level of tariff items in the circumstances of an increase in the cost of energy fuel due to the increase in the price of natural gas and carbon dioxide emission units. The sale of heat decreased by 9.6 percent. The share of gas activity (which includes gas retail and wholesale as well as LNG capacity lease) in operating income was 6.1 percent. A profit from operations in the amount of HRK 10.0 million was recorded compared to the operating loss in 2021 of HRK 21.8 million.

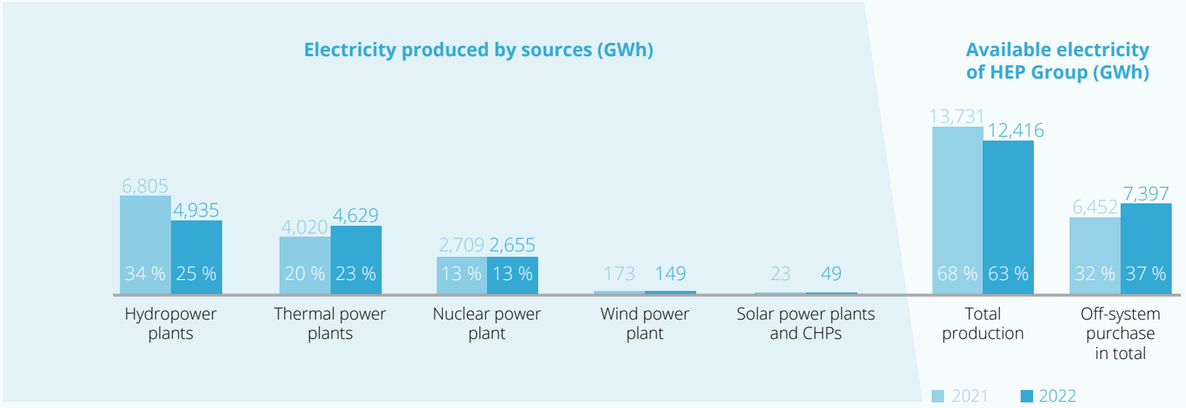
In other activities, operating loss of HRK 119.7 million was generated.

Operating result in HRK m	Electricity			Heat		
	2021	2022	%2022/2021	2021	2022	%2022/2021
Operating income	14,320.8	22,776.8	+59.0%	765.1	929.6	+21.5%
Operating expenses	12,640.0	27,985.7	+121.4%	1,141.4	2,246.6	+96.8%
Profit/loss from operations	1,680.8	-5,208.8	-409.9%	-376.2	-1,317.0	+250.1%
Operating result in HRK m	**Gas**			**Other activities**		
	2021	2022	%2022/2021	2021	2022	%2022/2021
Operating income	840.2	1,556.5	+85.3%	44.6	52.9	+18.6%
Operating expenses	862.0	1,546.5	+79.4%	157.3	172.6	+9.7%
Profit/loss from operations	-21.8	10.0	-146.1%	-112.7	-119.7	+6.2%

Electricity

The activity of electricity production, transmission, distribution, trade and supply is carried out by HEP Group throughout the territory of the Republic of Croatia. HEP Group is the largest supplier of electricity in Croatia with 15.3 TWh of sold electricity, while a total of 2.3 GWh was sold through the supply of customers in Slovenia, Serbia, Bosnia and Herzegovina and the export of surpluses and trading. In 2022, an operating loss of HRK 5,208.8 million was generated in this activity, compared to the operating loss of HRK 1,680.8 million in 2021.

The income from the sale of electricity amounted to HRK 21,777.4 million, of which the sale to domestic customers accounted for 86 percent (HRK 18,681.8 million), and the sale abroad for 14 percent (HRK 3,095.6 million).



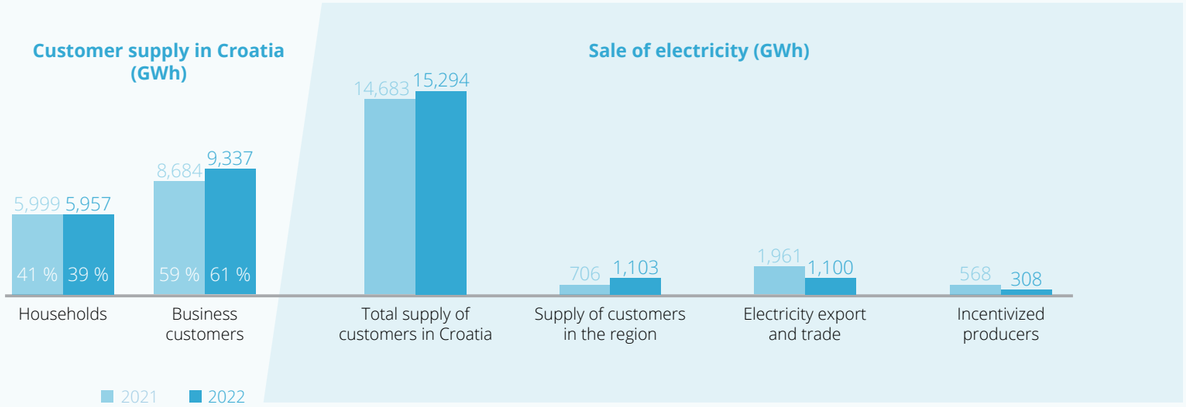
Total realized production and purchase of electricity by HEP Group amounted to 19.8 TWh, of which 12.4 TWh (63%) was produced in power plants owned and partially owned by the Group. Compared to 2021, 1.3 TWh less electricity was produced primarily due to lower production in hydropower plants.

Namely, the year 2022 was marked by extremely unfavourable hydrological circumstances, the worst in the past decade, with significantly reduced water inflows, resulting in 4.9 TWh of electricity produced by hydropower plants, which was by 1.9 TWh (27%) less than in 2021 and 24 percent less compared to the ten-year production average. Lower hydro production volume, along with the growing electricity demand by HEP's customers, was compensated by the production of thermal power plants and the purchase of electricity on the market at extremely high prices.

Thermal power plants and cogeneration facilities produced 4.6 TWh (23% of available electricity), which was by 608 GWh (15.1%) more than in 2021. Krško nuclear power plant delivered 2.6 TWh, 54 GWh (2.0%) less than in 2021 due to the longer duration of the regular overhaul that was carried out in the period from 1 October to 7 November 2022.

The remaining electricity production includes the production of Korlat wind power plant (149 GWh), Osijek and Sisak biomass cogeneration plants (27 GWh) and solar power plants (22 GWh).

The off-system energy procurement amounted to 7,397 GWh (37% of available electricity), which was by 946 GWh (14.7%) more than in 2021. Of the total amount, the import of electricity for customer supply accounted for 5,333 GWh, the purchase by HEP Group from HROTE for production from renewable energy sources and high-efficiency cogeneration in the incentive system for 1,509 GWh (262 GWh more) and the procurement from producers outside HEP Group and the take-off from end customers with their own production for 162 GWh. 393 GWh was procured off-system for covering losses in the transmission network, which was by 46 GWh more than in 2021.



In total, 15.3 TWh was sold to customers in Croatia, an increase by 0.6 TWh (4.2%) compared to sales in 2021, with 653 GWh (7.5%) more electricity billed to business customers, and 42 GWh less billed electricity to household customers (0.7%). HEP Group's market share was 92.7 percent of the total electricity sales to end customers in Croatia in 2022. 1.1 TWh was sold to customers in the region, which was by 397 GWh (56.2%) more than in 2021. The remaining sales abroad (1.1 TWh) decreased by 861 GWh compared to 2021, and included the export of surplus electricity produced in HEP Group power plants and trading. In 2022, 308 GWh of electricity produced in power plants with the eligible producer status in the incentive system was sold.

Revenues from the sale of electricity amounted to HRK 21,777.4 million, which was an increase of HRK 8,364.9 million (62.4%) compared to 2021. Revenues from the sale of electricity to customers in Croatia increased by HRK 6,742.2 million (56.5%) due to higher electricity demand by business customers in addition to higher electricity prices caused by a price growth on the reference stock exchanges and higher electricity prices for household customers as well as fees for the use of the transmission and distribution network. Income from the sale of electricity on the foreign market amounted to HRK 3,095.6 million, which was an increase of HRK 1,622.8 million (110.2%) due to the higher price of exported electricity and a lower export of surplus electricity produced in HEP Group's power plants as well as higher average sales prices to customers in the region along with a higher volume of supply to said customers.

District heating

Heat energy production, distribution and supply are conducted on the territory of Zagreb, Osijek, Velika Gorica, Zaprešić, Samobor and Sisak.

An operating loss of HRK 1,317.0 million was generated, which was by HRK 940.8 million more than in 2021. The result was worsened by the exceptional increase in costs due to the increase in the price of natural gas and carbon dioxide emission units. The increase in the selling price of heat energy occurred as late as the last quarter of 2022, while the aforementioned costs were increasing throughout the year.

Under the Regulation of the Government of the Republic of Croatia on eliminating disturbances on the domestic energy market, the Ministry of Economy and Sustainable Development subsidizes the price of heat energy, due to which sales prices for end customers remained unchanged.

In 2022, a total of 2,271 GWh of heat energy was produced, which was by 176 GWh or 7.2 percent less than in 2021. 98 GWh of heat energy was produced in HEP District Heating facilities, and 2,173 GWh in cogeneration plants of HEP Generation. Of the total produced quantities, process steam accounted for 25.9 percent and the production of heating energy for 74.1 percent.

The sale of heat energy in 2022 was in total by 9.6 percent or 196 GWh lower compared to 2021, amounting to 1,838 GWh, of which household and business customers accounted for 56 (1,036 GWh) and 44 percent (802 GWh), respectively. In total, compared to 2021, sales to households and businesses decreased by 9.7 and 9.6 percent, respectively.

Gas

Gas business includes the distribution and supply of gas to end customers and the management of the liquefied natural gas terminal. Under the Regulation and decisions of the Croatian Government, HEP was also responsible for the procurement of strategic gas supplies and the procurement and sale of gas produced in the Republic of Croatia in 2022. Gas business generated the operating profit of HRK 10.0 million compared to an operating loss of HRK 21.8 million in 2021.

Gas distribution and supply

Distribution area of HEP Plin d.o.o. in 2022 covered the territory of Osijek-Baranja, Požega-Slavonia, Vukovar-Srijem, Virovitica-Podravina, Bjelovar-Bilogora and Krapina-Zagorje counties and included a distribution network 4,770 kilometers. In 2022, the number of customers increased as a result of appointing HEP Plin d.o.o. a guaranteed supplier[10].

In January 2022, the merger of acquired Gradska plinara Krapina d.o.o. and Darkom distribucija plina d.o.o. to HEP Plin d.o.o. was carried out. Also, HEP Plin d.o.o. acquired the ownership of 100 percent shares in PAKRAC-PLIN d.o.o. The purchase agreement was concluded on 26 May 2022, and the company was merged with HEP Plin d.o.o. on 30 November 2022.

The supply of gas to retail customers in 2022 grew by 5.4 percent amounting to 2.5 TWh. Gas sales to household and business customers increased by 4.5 percent and 6.1 percent, respectively. Revenue from gas distribution and supply grew by 105.2 percent as a result of higher sales and a higher price subsidized to customers according to the package of measures passed by the Government of the Republic of Croatia to mitigate the consequences of rising energy prices. The package entered into force on 1 April 2022, and included subsidies for covering the cost of gas for household and business customers in the period until 31 March 2023, along with a reduction in the VAT rate from 25 to 5 percent. Under the decision on subsidizing the price of gas, the final price for household category excluding VAT is subsidized in the amount of HRK 0.10/kWh[11], and for business customers with an annual consumption of up to 10 GWh in the amount of HRK 0.15/kWh by means of a support voucher[12].

Strategic gas reserves

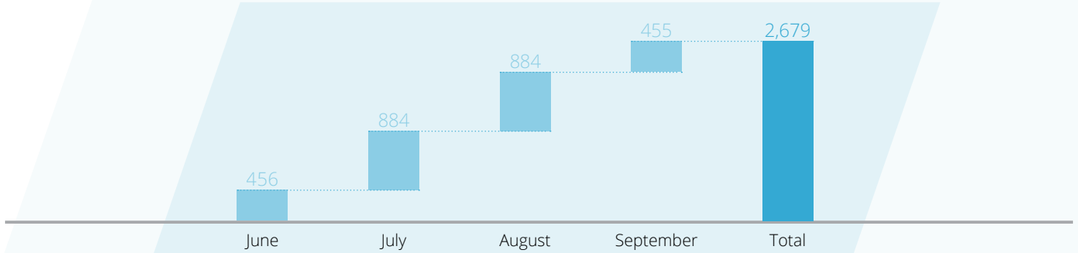
Instability on the global and European energy markets, which manifested itself through an unprecedented increase in gas prices in the second half of 2021, continued in 2022. Negative trends were inevitably reflected on the gas market in the Republic of Croatia, and the Ministry of Economy and Sustainable Development issued a Decision on the declaration of an early warning regarding the level of crisis in the protection of gas supply security in the Republic of Croatia (Official Gazette 49/22), on the basis of which the Croatian Government passed the Decision on securing gas supplies on the territory of the Republic of Croatia (Official Gazette 63/22) dated 3 June 2022. Under said decision, HEP d.d. was mandated with ensuring sufficient gas supplies, for the period from 1 April 2022 to 31 March 2023, providing gas quantities in the amount of 270.83 million m^3 as well as gas, in accordance with the filling curve determined by the Crisis Team for the implementation of the Intervention plan on measures to protect the security of gas supply in the Republic of Croatia (hereinafter referred to as the Crisis Team) in the Okoli underground gas storage.

For this purpose, in the period from 1 April 2022 to 31 March 2023, HEP d.d. ensured 52 SBUs i.e. 2,886 GWh. As of 31 December 2022, the storage was filled with 2,679 GWh, which represents 92.8 percent of its volume intended for storing Croatia's gas supply.

[10] By the decision of the Croatian Energy Regulatory Agency from March 2022, HEP PLIN (GAS) was appointed a guaranteed gas supplier in the Republic of Croatia for the period from 1 April 2023 to 31 March 2024. The Regulation on Amendments to the Regulation on Eliminating Disturbances on the Domestic Energy Market dated 14 September 2022 orders HEP-Plin d.o.o. as a guaranteed supplier to start providing guaranteed gas supply to all business customers which gas supply contract expires during the validity of the Regulation as of 1 October 2022.

[11] The supplier reduces the trade receivables by reducing the net amount of the invoice by the amount of the subsidy. At the end of the accounting period, the supplier submits a request for refund of subsidies to the Ministry of Economy and Sustainable Development.

[12] Customers from the small and medium-sized enterprise category are entitled to vouchers based on their annual consumption and by submitting a request for support through the HAMAG BICRO system.



Rate of gas procurement in 2022 in GWh

The value of strategic gas reserves as of 31 December 2022 included gas procurement costs, transport capacity leases and gas storage costs amounting to HRK 2,097.7 million. HEP d.d. disposes of strategic gas in accordance with the orders of the Crisis Team (Official Gazette 127/22). The purpose of the Intervention Plan is to eliminate or mitigate the impact of disruptions in gas supply and to resolve situations in which gas supply can no longer be guaranteed to all customers on the domestic market. Given there was no threat to the national security of gas supply in 2022, there was no need to use strategic gas reserves.

Procurement and sale of gas produced in the Republic of Croatia

The Regulation of the Government of the Republic of Croatia on Amendments to the Regulation on Eliminating Disturbances on the Domestic Energy Market of 14 September 2022 stipulates that the natural gas producer INA d.d., in the period from 1 October 2022 to 31 March 2024, shall sell natural gas produced in the Republic of Croatia to HEP at a price of HRK 0.3086/kWh (EUR 0.0410/kWh), with the aim of securing supplies and increasing the availability of natural gas in the Republic of Croatia.

On the basis of the aforementioned Regulation, the Government passed a Decision on the price and allocation of natural gas capacity acquired by HEP d.d. from the natural gas producer (Official Gazette 122/22), thus defining the gas quantities for certain categories of customers and the prices at which HEP d.d. supplies gas as of 1 October 2022. On this basis, HEP purchased 1,241 GWh of gas from INA in the period from 1 October 2022 to 31 December 2022, with a purchase value of HRK 383.0 million. By the end of the year, contracts were signed with a total of 29 customers, to whom 614 GWh of gas was sold.

Operation of LNG terminal

In 2022, the LNG terminal continued its safe and reliable operation, which includes the reloading process of liquefied natural gas from ships for the transport of liquefied natural gas to the "LNG Croatia" FSRU ship[13], storage and gasification of liquefied natural gas, and dispatch of natural gas to the transport system of the Republic of Croatia. In 2022, a total of 4,117,431.51 m□ of liquefied natural gas was reloaded, and more than 2,451,286,025 m□ of natural gas gasified and transported into the transport network, which accounted for more than 65 percent of all inputs into the gas transportation system of the Republic of Croatia in 2022.

Income from leasing the capacity of the LNG terminal amounted to HRK 207.2 million, which was by HRK 33.0 million (19.0%) more than in 2021.

[13] Floating Storage Regasification Unit

Financial position

Consolidated balance (abridged)	31 December 2021		31 December 2022		% 2022/2021
	HRK m	share	HRK m	share	
Long-term asset	37,355.3	80%	39,902.1	77%	+6.8%
Short-term asset	9,545.6	20%	12,135.2	23%	+27.1%
Total asset	**46,900.8**	**100%**	**52,037.3**	**100%**	**+11.0%**
Capital and reserves	26,660.1	57%	20,976.1	40%	-21.3%
Long-term provisions	1,405.6	3%	1,410.3	3%	+0.3%
Long-term liabilities	8,259.0	18%	19,406.6	37%	+135.0%
Short-term liabilities	10,576.1	23%	10,244.3	20%	-3.1%
Total liabilities and equity	**46,900.8**	**100%**	**52,037.3**	**100%**	**+11.0%**

Asset

The value of the total assets of HEP Group at the end of 2022 was HRK 52.0 billion, an increase by HRK 5.1 billion. Fixed assets, in the amount of HRK 39.9 billion, make up 77 percent of the value of the Group's assets and have increased by HRK 2.5 billion, which mostly refers to the increase in deferred tax assets by HRK 1.3 billion and the value of real estate, plant and equipment by HRK 876.7 million.

The value of current assets is HRK 12.1 billion, an increase by HRK 2.6 billion as a result in an increase in inventories by HRK 3.0 billion due to strategic gas reserves amounting to HRK 2.1 billion and an increase in trade receivables by HRK 1.1 billion primarily due to the increase in electricity receivables by HRK 792.1 million. Cash and cash equivalents decreased by HRK 1.2 billion.

Capital and liabilities

Capital and reserves at the end of 2022 amounted to HRK 21.0 billion with a decrease of HRK 5.7 billion compared to 2021, which is related to the reduction of retained earnings. Long-term provisions were maintained at last year's level of HRK 1.4 billion.

Long-term liabilities amounted to HRK 19.4 billion with an increase of HRK 11.1 billion and make up 37 percent of the Group's total liabilities and capital. The increase mostly refers to long-term loan liabilities, increased by HRK 10.4 billion due to new funding sources.

Short-term liabilities amounted to HRK 10.2 billion and have decreased by HRK 331.9 million compared to the beginning of the year. Due to the repayment of the 2015 bonds, in 2022 there was a decrease in the current maturity amount of issued bonds by HRK 3.4 billion compared to 2021, while short-term trade liabilities increased by HRK 1.8 billion, deferred payment of expenses and income of the future period by HRK 710.6 million due to the increase in billed costs for carbon dioxide emission units by HRK 945.7 million and other short-term liabilities by HRK 490.3 billion.

Credit rating

HEP is rated by Standard & Poor's and Moody's.

In July 2022, Standard & Poor's upgraded the long-term credit rating of Hrvatska elektroprivreda from BBB- to BBB, and assessed the rating outlook as stable. Due to the methodology and criteria used by S&P in evaluating HEP, the increase followed the upgrade of the long-term sovereign rating of the Republic of Croatia to BBB+ with a stable outlook. The report emphasizes the opinion of S&P that the capacity of the Government of the Republic of Croatia to support Hrvatska elektroprivreda d.d. has been increased in case of distress, and that the stable outlook reflects the expectation that the company's credit quality will remain proportional to the bbb- standalone credit profile.

Also in July 2022, Moody's upgraded the long-term credit rating of Hrvatska elektroprivreda d.d. to Baa2 from Ba1, with a stable outlook and the standalone assessment of HEP's rating to baa2. The report highlights the agency's opinion that HEP's ratings are no longer limited to the previous level of ba1 following the increase in the sovereign rating, and given the company's past performance in terms of a strong standalone credit profile.

Credit agency	Baseline credit assessment	Standalone credit quality
Standard & Poor's	BBB (stable)	bbb-
Moody's	Baa2 (stable)	baa2

Business risks

The Group defines risk as a combination of the probability of an event and its consequences. For HEP Group, risks are events and/or potential developments (internal or external) that have or could have a negative impact on the achievement of business goals. Regardless of the source of the risk, the Group manages the risk appropriately in order to mitigate or avoid it completely.

The Group is exposed to material risks, which are described below.

Risks of economic conditions of business and environment

The macroeconomic and economic environment is of particular importance for HEP's operations. For example, the risk of the sovereign credit rating downgrade affects the possibility and terms of HEP Group's indebtedness. The Group cannot manage these risks directly.

Legal and regulatory risks

Risk of business environment, regulation and compliance with EU regulations

The risk of the business environment is determined by the political, economic and social conditions in the country and the region, which affect the operations and performance of domestic business entities. Despite its current dominant position on the market, the changing nature of competition (new regulations, the emergence of new players, mergers of existing players, etc.) may result in the loss of HEP Group's market share.

Furthermore, the legal framework on the basis of which the operation of the energy sector is organized, as well as changes to that legal framework, may result in additional costs, be inconsistent with the HEP Group's growth model, or change the competitive context within which HEP Group operates. Through continuous monitoring of changes in the business environment, timely and appropriate adaptation of the strategic orientation and business system to regulatory, legal and market changes, as well as continuous improvement of the efficiency of the business system, HEP Group will be able to overcome the effects of new competition and the burden of new possible costs without reducing market share and profitability.

Requirements arising from legal regulations related to environmental protection

The activities of HEP Group are subject to legal provisions on environmental protection, which are becoming increasingly numerous and restrictive. Violating these provisions may result in additional costs and/or expose HEP Group to significant legal proceedings.

Furthermore, national or European authorities may request the strengthening of these provisions, which would have a negative impact on the Group's activities and its financial results. For example, the expected trend of reducing the limit values of emissions will lead to an increase in the production price from thermal energy facilities due to investments in technologies for achieving the limit values of pollutant emissions into the environment and energy efficiency, which is a risk to which all investors in such facilities in the EU are exposed. HEP joined the European System of Greenhouse Gas Emission Units (EU-ETS) on 1 January 2013. During the third trading period, the price of emission units was volatile and significantly increased until the end of the period that ended on 31 December 2020. The growth in the prices of emission units continued at the beginning of the fourth trading period, and the risk of a further price growth is present due to the EU policy that has the goal of significantly reducing greenhouse gas emissions by 2030, i.e., achieving decarbonization of the energy sector by 2050. The increase in the price of emission units affects the production price of energy, on which the operation of individual thermal energy plants are dependent. The shortage of energy produced from hydropower plants is set off by production from other sources, depending on the availability of other generation facilities and having in mind cost optimization.

The proposal for a regulation on the establishment of a carbon border adjustment mechanism (CBAM) in 2016 introduces the obligation to purchase the so-called CBAM certificate for each MWh of imported electricity from countries outside the EU (BiH and Serbia), which will further increase the price of imported electricity produced from fossil fuels. The CBM certificate is comparable to EUA, i.e. emission units that HEP is obliged to purchase for each ton of emitted CO_2 from HEP's plants in the EU-ETS system.

Furthermore, direct consequences of the application of the provisions of the current legal regulations in the field of environmental protection to the operation of existing and the construction of planned electric power facilities are the uncertainty of the issuance, i.e. a significant extension of the issuance period of location permits, an increase in costs and lower profitability of the facilities (European Ecological Network NATURA 2000, Water Area Management Plan, emission of pollutants into the air, climate protection, etc).

The development of the Water Area Management Plan for the period 2022 to 2027 is in progress, on the basis of which the operating conditions of HEP's hydropower plants will be established in order to protect target species and habitats, which may result in a change in hydropower plant operating conditions, a reduction in production, and an increase in the production price energy, due to the obligation to install and apply measures for the preservation of the good water status.

HEP Group is obliged to issue a sustainability report. In accordance with the Directive (EU) 2020/852 on the establishment of a framework for facilitating sustainable investments and amending Regulation (EU) 2019/2088 from 2022 ie 2023, it must report on its environmentally sustainable investments. The possibility of obtaining more favourable loans on the capital market and the company's reputation in the public will depend on the assessment of activities of importance for HEP Group according to the prescribed technical criteria, in terms of the share of turnover, CAPEX and OPEX related to sustainable activities in relation to absolute turnover, CAPEX and OPEX.

Water act related risks

In May 2018, the Act on Amendments to the Water Act (Official Gazette 46/18) entered into force, which resolved the ownership status of water structures for the production of electricity, i.e., hydropower plants built by HEP d.d., i.e., its legal predecessors.

HEP d.d. became the owner of hydropower facilities by virtue of the law by establishing the building right for the benefit of HEP, free of charge, for a period of 99 years.

During the validity of said building right, HEP d.d. also manages the public good/land on which buildings for the production of electricity are erected, as well as reservoirs and supply and drainage channels and tunnels (parts of hydropower plants where HEP's ownership is not acquired through the establishment of building rights) on behalf of the Republic of Croatia.

In order to implement the provisions of the Act on Amendments to the Water Act, that is, the Water Act (Official Gazette 66/19, 84/21), which provisions confirm the model of resolving property-legal relations, HEP d.d. is obliged, in cooperation and with the participation of Hrvatske vode, to start the procedures for registering the above-mentioned rights in the land registers and to obtain the corresponding subdivision studies. The aforementioned studies will be the basis for the issuance of a tabular document by the competent municipal state attorney's offices for the registration of the right to build, or management on the public water good for the benefit of HEP d.d. on the land on which hydropower facilities are located.

Bearing in mind the state of the land registers in the Republic of Croatia and the fact that this involves a demanding and complex task of preparing and implementing the registration of the mentioned rights for the benefit of HEP, i.e. a large number of procedures, which does not depend exclusively

on the engagement of HEP's expert services, but includes the engagement of Hrvatske vode and the State Attorney's Office, a lengthy process of sorting out and registering the rights in question in land registers and other registers is expected. The completion of the entire process can be expected over a period of several years.

Regardless of the above, in order to protect its business interests, HEP d.d. actively participates in the proceedings in question, trying to speed up the implementation processes of the Water Act through cooperation with Hrvatske vode and the establishment of joint operational teams for the implementation of the Act in individual water areas.

Land registry relations

Given that not all real rights have yet been fully registered in the land registers, i.e. other public registers, HEP d.d. and other companies of HEP Group continue with the ongoing process of regulating the land registry situation, that is, registering their real rights on real estate with the land registry departments of the competent municipal courts of the Republic of Croatia.

Financial risks

Market risks

The prices of energy fuels for the production of electricity and thermal energy (coal, gas), the price of electricity purchased on the market and the prices of carbon dioxide emission units are very sensitive to trends and disturbances in world markets, as well as to the available production capacities in the region, which can produce electricity at a competitive price in relation to electricity demand.

The Group reduces the risk of sudden changes in the prices of energy fuels, electricity and carbon dioxide emission units which it purchases on the market by concluding contracts that define quantities and prices for a certain future period, and partly provides the necessary energy fuel and electricity through semi-annual or annual contracts.

Financing of investment plan

In order to deliver planned investment projects, HEP Group secures financial sources on the money and capital market in addition to its own funds. For the timely realization and cost of the investment, it is of particular importance to implement a conservative financial policy by considering and securing new favourable external sources of financing in a timely manner. Potential risks relate to the possibility of accessing adequate markets and investors with a long-term investment horizon, corresponding to the cycle of construction and exploitation of energy facilities, and the cost of financing such arrangements. As part of this risk can be mitigated by a satisfactory credit rating of the Group, the Group continuously implements activities and measures to maintain an acceptable rating for favourable external borrowing.

The planned construction of new power plants also entails potential risks in implementation, which HEP Group tries to minimize as much as possible. Potential risks relate to investment conditions in Croatia, the direction of development and integration of the Croatian energy market in the common European market, and macroeconomic, regulatory and other factors that affect the profitability and attractiveness of planned investment projects, on which HEP Group has no influence.

The Group mitigates this risk through the flexibility of its plans, which enables, in the event that favourable means and methods of financing cannot be secured, making a time shift in the realization of individual planned investment projects in accordance with their importance for the security of the energy system and customer supply.

Currency risk

During 2022, the Group was exposed to currency risk in the event of the exchange rate volatility of the euro and the US dollar. Namely, the largest part of HEP's long-term liabilities, as well as the costs of fuel and purchased electricity, are linked to foreign currency exchange rates, primarily to the euro and the US dollar, while the largest part of the inflow is in the domestic currency. To protect against changes in currency exchange rates, the Group uses preferential forward exchange rates and currency swap transactions for fixed liabilities to banks and suppliers. Regardless of the activities undertaken, significant changes in foreign currencies can significantly increase the cost of financial operations.

The currency risk related to the change in the euro exchange rate has been eliminated as of 1 January 2023, with the entry of the Republic of Croatia into the European exchange rate mechanism, when the euro became the official currency of payment in Croatia.

Interest rate risk

The Group is exposed to interest rate risk as it concludes loan agreements with variable interest rates. It manages this risk in such a way as to maintain an appropriate ratio of loans with fixed and variable interest rates in its loan portfolio. Also, contracts on interest rate swaps are concluded, which protect the Group's exposure based on liabilities at variable interest rates. The growth of EURIBOR and LIBOR rates affects the increase of interest costs for loans without a fixed interest rate, which make up about 8.18 percent of the value of the total debt. For new borrowing, the state's risk premium as well as the credit rating of HEP are important, because they affect the margin that financial institutions demand above the level of reference interest rates.

Liquidity risk

Liquidity risk is expressed as the uncertainty that the Group will not be able to fulfill its obligations to creditors, in accordance with the agreed deadlines. The Group manages this risk by concluding framework agreements with banks in order to quickly and under foreseeable conditions provide funds for the settlement of due obligations if faced with a potential shortage of available funds from its operations. According to the framework agreements, the Group can use short-term loans and approved current account overdrafts, issue guarantees and open letters of credit. In addition, realized and forecasted future cash flows are being continuously monitored and the maturity profiles of receivables and liabilities compared. To overcome the risk of liquidity, a number of internal measures are continuously implemented to improve operations and reduce costs, the appropriate level of the investment plan and the annual rate of its realization determined, and a proactive and conservative liquidity management policy continuously implemented. The situation on the financial markets, globally and in Croatia, can be a limiting factor for refinancing existing and securing new credit arrangements.

Collection risk

Financial risk is also a collection risk, which primarily results from the quality of the credit assessment, that is, the customer's credit risk. The collection function in subsidiaries manages the risk of collection through a system for evaluating the creditworthiness of customers, extending payment terms, paying debts in installments, etc.

Operational risks

Risk of dependence on hydrological conditions

The Group has more than 50 percent of its installed electricity production capacity in hydropower plants, which makes it largely dependent on hydrological conditions and water inflows. Some of the hydropower plants have reservoirs, which to a certain extent enables optimizing the use of the energy potential of water throughout the year. To reduce this risk, the existence of a diversified structure of electricity production is of particular importance, whereby HEP Group does not rely exclusively on one form of electricity production or fuel for thermal power plants, in the event of their increased production due to deteriorating hydrology.

Competition related risks

Other suppliers outside HEP Group have become more active on the electricity market in the Republic of Croatia over the past years, which has strengthened HEP Group's activities related to competition risk management.

HEP manages the risk of a possible loss of a large part of the market by creating new products and services tailored to customer requirements, with a strong marketing campaign and other activities aimed at strengthening HEP's brand and raising the quality of customer relations, as well as intensifying activities aimed at generating income on the regional market.

In 2022, other suppliers achieved a share of 7.3 percent in total sales to domestic customers, which represents a decrease compared to the previous year.

Risks of HEP's operating system

Risks of organizational changes

In a dynamic and uncertain environment, systematic monitoring of its changes and adjustment of HEP's operations by implementing appropriate organizational changes is one of the fundamental tasks of HEP's management.

In order to reduce all the risks that such a complex operation entails, careful planning, execution and control, i.e. change management, is of crucial importance, in order to ensure the acceptable functioning of the organization during and after the transition. The Group will manage a defined personnel management system during the change, which will involve all employees who will be introduced to the change process.

Risks of hep's internal business system

The risks of the internal business system are related to the security of the Group's information and IT system, the safety and reliability of plant operation, the brand perception in the public and the reputation of HEP, work safety, the risk of key employees leaving and a number of other business areas.

In addition, other internal risks, of which the Group is not aware at the moment or which it considers to be of non-material nature, may have the same adverse effect.

The Group reduces the risks of the internal business system by systematically monitoring business processes and actively managing all business segments.

Investments

In 2022, the Group made investments in the amount of HRK 3,407.4 million. The majority of investments was related to the renovation and modernization of production facilities and energy system facilities, the construction of new power generation facilities, and the renovation of the existing ones as well as the construction of new transmission and distribution network infrastructure facilities.

The construction and commissioning of two solar power plants has been completed. The construction of three more solar power plants has begun. HEP's largest solar power plant project is under development at the site of Korlat wind power plant. HEP has been autonomously developing several RES projects with the aim of creating prerequisites for their construction, as well as continued cooperation with municipalities and cities on the development of solar power plant projects.

In addition, investments were made in heating and gas distribution and the upgrade of the IT and telecommunications infrastructure, as well as the development and expansion of the public EV charging station network in cities and on motorways in Croatia.

The Government of the Republic of Croatia passed the Decision on increasing the security of gas supply by increasing the capacity of the LNG terminal.

Investments[14] in HRK m	2020	2021	2022	%2022/ 2021
Investements in property, plants and equipment	4,342.2	3,083.1	3,407.4	+10.5%

[14] The value of investments includes realized investments of LNG Hrvatska d.o.o. in the amount of HRK 920.6 million in 2020. The LNG terminal is a strategic EU and Croatian project, and HEP, as the majority owner of LNG Croatia, is an investor in the LNG terminal. The LNG terminal has been in operation since 1 January 2021

Through continuous investments in the maintenance and modernization of the existing facilities and the construction of new generation capacities and network systems, HEP meets the following objectives: security of energy supply, competitiveness of HEP's power system, the development of HEP Group's business system, contribution to sustainability and the continuity of the Croatian energy sector by taking into consideration the increasing presence of other participants on the open market, especially in electricity supply and electricity generation from renewable energy sources.

Through investments, HEP Group meets preconditions for Croatia's future reach of an adequate level of energy independence in the electricity sector, by taking current electricity consumption and the projection of its growth into consideration as well as the necessary decommissioning of thermal power facilities unable to meet prescribed conditions of environment protection due to their technological old age.

Key investments

- The development of the HPS Kosinj/HPP Senj 2 construction project continued. In 2022, the HPS Kosinj project, which was in 2021 declared by the Government a project of strategic importance for the Republic of Croatia, included activities on the construction of tunnels, access roads and residential buildings in Perušić. Environmental monitoring, archaeological research, relocation and expansion of the cemetery were carried out, and documentation for contracting main works prepared. The development of the main project was contracted for HPP Senj 2.
- The construction of the combined cogeneration unit L in EL-TO Zagreb CCPP continued, while the preparation of documentation for obtaining a location permit for the new gas cogeneration plant - KKP Osijek plant continued at the location of the Osijek TE-TO CCGT facility.
- Stankovci and Obrovac solar power plants were put into operation, the construction of Donja Dubrava, Radosavci and Jambrek solar power plants began, the procedures for obtaining location permits for Kruševo and Sukošan solar power plants were initiated, while the construction permit for Korlat solar power plant was issued. A usage permit for the battery system within Vis solar power plant was obtained and its full functionality achieved. Independent development of several RES projects continued with the aim of creating prerequisites for their construction in the next two years.
- In the distribution sector, the construction, reconstruction, strengthening of the transformation or extension of MV facilities in several 110/10(20)kV, 35/10(20)kV facilities and the MV network was completed, the remediation of voltage conditions and the increase of power supply security in the distribution network continued as well as investments in the replacement and arrangement of measuring points and connections.
- In the heating industry, activities continued on the implementation of EU co-financed projects related to the revitalization of the hot water network in Zagreb and the increase in the size of the connecting hot water pipeline from TE-TO Osijek CCGT to Osijek heating plant. Investment in the planned revitalization of the steam water network in the city of Zagreb, the construction of the hot water network in Velika Gorica, and the revitalization of the hot water and steam water networks in Osijek continued, while the revitalization of the dilapidated hot water network was completed in the city of Sisak.
- In the gas distribution business, gas pipelines were built for the settlements of Kapinci, Vaška and Lipovac, as well as a gas pipeline in the Donji Miholjac industrial zone. Pakrac plin d.o.o. was acquired.
- Continuous investment is made in the development of telecommunications infrastructure, as well as the construction of telecommunication connections, which ensure the inclusion of important facilities and business infrastructure in HEP's telecommunications system, as well as in the implementation of the smart grid concept.
- At the LNG terminal, the LNG reloading system from the FSRU "LNG Croatia" ship into trucks for transporting liquefied natural gas was put into operation, while the construction of a point for supplying liquefied natural gas continued.
- Upgrade and adjustment of the SAP technical infrastructure for the needs of the euro conversion projects and future optimization of hardware resources and upgrades of the existing SAP systems continued.
- The eMobility project activities continued, ie development and expansion of the public EV charging infrastructure, thereby creating a future platform for acquiring new customers and enabling the concept of smart networks as a support to the entire electric power system.