

## GREENHOUSE GAS EMISSIONS BY THE KGHM POLSKA MIEDŹ S.A. GROUP IN 2021

[in eCO2 tonnes]

	<b>KGHM Polska Miedz S.A.</b>	<b>Companies in Poland</b>	<b>Companies ex- Poland</b>	<b>KGHM Group</b>
TOTAL EMISSIONS (Scope 1 + 2)	3 109 616	851 264	1 222 799	5 183 679
SCOPE 1 – direct emissions	1 457 899			
SCOPE 2 - indirect emissions:	1 651 717	239 04	744 61	2 635 367
Including indirect equivalent emissions related to heat	0	4 917	0	4 917
Including indirect equivalent emissions related to	1 651 717	234	744 61	2 630 450
Direct CO2e emissions from biomass:	2 984	31 064	0	34

*Scope 3 emissions for the KGHM Group will be disclosed in December 2022*

## Direct and indirect emissions of greenhouse gases

KGHM Polska Miedź S.A.

The standard or methodology used to collect activity data and calculate emissions:

- (1) European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations
- (2) The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

### Direct and indirect emissions of greenhouse gases

KGHM Polska Miedź S.A.

	2021	2020	2019	2018	2017	2016
# Gross global Scope 1 emissions [in tonnes CO2e]	1 457 899	1 413 129	1 527 183	1 334 507	1 296 176	1 507 785
# Gross global Scope 2 emissions [in tonnes CO2e]	1 651 717	1 617 217	1 947 113	1 985 511	2 019 721	1 918 068
# Gross global Scope 3 emissions [in tonnes CO2e] Location-based	2 056 912	1 082 045	(not available)	(not available)	(not available)	(not available)

### Gross global combined Scope 1 and 2 emissions for 2020 in tonnes CO2e per unit currency total revenue

KGHM Polska Miedź S.A.

	2021	2020
# Intensity figure	0,000578211	0,000701631
# Metric numerator (Gross global combined Scope 1 and 2 emissions) [in tonnes CO2e]	3 109 616	3 030 346
Metric denominator	unit total revenue	Unit total revenue
Metric denominator: Unit total	5 378 000 000	4 319 000 000
Scope 2 figure used	Location-based	Location-based
% change from previous year	24,4	9,5
Direction of change	Decreased	Decreased
Reason for change		Reduction of total emission

## Gross global Scope 3 emissions

KGHM Polska Miedź S.A

[in tonnes CO <sub>2</sub> e]	2021	2020	
Purchased goods and services	1 719 599	870 697	(1)
Capital goods	112 483	94 690	(2)
Fuel-and-energy-related activities (not included in Scope 1 or 2) (not included in Scope 1 or 2)	67 368	58 543	(3)
Upstream transportation and distribution	124 045	43 276	(4)
Waste generated in operations	Not relevant	Not relevant, calculated	(5)
Business travel	231	290	(6)
Employee commuting	18637	Not relevant, calculated	(7)
Upstream leased assets	Not relevant	Not relevant	(8)
Downstream transportation and distribution	14549	Not evaluated	
Processing of sold products	Not evaluated	Not relevant	(9)
Use of sold products	Not evaluated	Not relevant	(10)
End of life treatment of sold products	Not evaluated	Not relevant	(11)
Downstream leased assets	Not relevant	Not relevant	(12)
Franchises	Not relevant	Not relevant	(13)
Investments	Not evaluated	Not relevant	(14)
Other		-	

(1) Calculation based on GHG Protocol Scope 3 Standard using specific regional emission factors for primary raw materials from LCA databases, and hybrid physical/financial model for other materials

(2) Calculation based on GHG Protocol Scope 3 Standard, using monetary-based emission factors

(3) Calculation based on GHG Protocol Scope 3 Standard, using physical emission factors

(4) Calculation based on GHG Protocol Scope 3 Standard, using physical emission factors

(5) Not relevant, calculated. Calculation based on GHG Protocol Scope 3 Standard, using physical emission factors.

(6) Not relevant, calculated. Calculation based on GHG Protocol Scope 3 Standard, using physical emission factors and reported data from service providers.

(7) Not relevant, calculated. Calculation based on GHG Protocol Scope 3 Standard. Using physical emission factors and average distances and modal splits.

(8) There are no significant upstream leased assets to be accounted for

(9) KGHM is a producer of base materials. Due to the nature of our products and the innumerable variants of processing and end-of-life treatment it is impossible to make valid assumptions about the related emissions. It is therefore regarded as not relevant based on the criteria established by the Greenhouse Gas Protocol Standard.

(10) KGHM is a producer of base materials that do not cause any direct use phase emissions.

(11) KGHM is a producer of base materials. Due to the nature of our products and the innumerable variants of processing and end-of-life treatment, it is impossible to make valid assumptions about the related emissions. It is therefore regarded as not relevant based on the criteria established by the Greenhouse Gas Protocol Standard.

(12) There are no significant downstream leased assets to be accounted for

(13) There are no franchises to be accounted for.

(14) There are no significant investments that are not already covered in the other scopes and categories.

## Emissions breakdowns

KGHM Polska Miedź S.A.

### Total gross global Scope 1 emissions\* by greenhouse gas type and the source of each used greenhouse warming potential (GWP)

\*in tonnes CO<sub>2</sub>e

Greenhouse gas	2021	2020	GWP Reference
	Scope 1 emissions	Scope 1 emissions	
CO <sub>2</sub>	1 425 252,00	1 384 629,50	IPCC Fourth Assessment Report (AR4 - 100 year)
SF <sub>6</sub>	not evaluated	57,00	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	30 482,00	26 208,10	IPCC Fourth Assessment Report (AR4 - 100 year)
N <sub>2</sub> O	1 466,00	1 586,38	IPCC Fourth Assessment Report (AR4 - 100 year)
CH <sub>4</sub>	699,00	531,02	IPCC Fourth Assessment Report (AR4 - 100 year)

### Total gross global Scope 1 and Scope 2 (location-based) emissions\* by business facility

\*in tonnes CO<sub>2</sub>e

Facility	2021				2020			
	Scope 1 emissions	Scope 2 emissions	Latitude	Longitude	Scope 1 emissions	Scope 2 emissions	Latitude	Longitude
Rudna Mine Division	68 506,00	300 019,00	51,51646	16,14642	65 869,69	303 871,61	51.51646	16.14642
Lubin Mine Division	26 303,00	111 536,00	51,43506	16,15866	not evaluated	not evaluated	not evaluated	not evaluated
Polkowice-Sieroszowice Mine Division	55 212,00	258 854,00	51,554139	16,158548	49 431,59	241 411,59	51.554139	16.158548
Head Office	333,00	not evaluated	51,40881	16,19657	not evaluated	not evaluated	not evaluated	not evaluated
Concentrators Division	33 428,00	363 356,00	51,487868	16,065927	33 641,80	140 947,45	51.487868	16.065927
Tailings Division	1 951,00	60 291,00	51,511461	16,24489	1 862,81	382 622,57	51.511461	16.24489
Legnica Smelter and Refinery Division	36 129,00	72 551,00	51,189243	16,121198	36 570,84	66 563,00	51.189243	16.121198
Głogów Smelter and Refinery Division	1 008 261,00	464 996,00	51,688651	15,978235	932 177,51	320 509,55	51.688651	15.978235
Cedynia Wire Rod Division	18 370,00	15 775,00	51,573574	16,346828	16 189,72	414 725,21	51.573574	16.346828
Gas-Steam Blocks	209 406,00	4 339,00	51,408879	16,196755	251 444,60	15 082,86	51.408879	16.196755

### Total gross global Scope 1 and Scope 2 (location-based) emissions\* by business activity

\*in tonnes CO<sub>2</sub>e

Activity	2021		2020	
	Scope 1 emissions	Scope 2 emissions	Scope 1 emissions	Scope 2 emissions
Mining	185 401,00	1 094 056,00	176 745,66	1 135 415,69
Metallurgy	1 062 760,00	553 322,00	984 938,07	750 317,61
Energy Production	209 406,00	4 339,00	251 445,60	4 558,93

## Verification

KGHM Polska Miedź S.A.

### The verification/assurance status that applies to your reported emissions

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Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	No third-party verification or assurance
Scope 3	No third-party verification or assurance

Source: CDP questionnaires

**Please note:**

Above is current data on greenhouse gas emissions reported in the CDP questionnaires. The numbers presented in the integrated reports are based on emission estimates based on energy consumption and indicators from previous years.

**Uwaga:**

Powyżej aktualne dane dotyczące emisji gazów cieplarnianych przekazane w kwestionariuszach CDP. Wartości przedstawione w raportach zintegrowanych bazują na szacunkach emisji w oparciu o zużycie energii i wskaźniki z lat poprzednich.

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