Inventory of emissions of greenhouse gases

[PKO Bank Polski Spółka Akcyjna]
[2021]

REQUIRED INFORMATION

Have any establishments, operations and/or sources been excluded from the inventory? If any, please indicate.
"No."
The reporting period for the inventory
From 01/01/2021 to 31/12/2021[1]

ORGANISATIONAL BOUNDARIES

Specify the consolidation method (indicate every mode of consolidation, for which the organisation reports emissions). If the organisation reports on the basis of more than one consolidation method, please fill out and attach an additional inventory according to each consolidation method.		
Share in capital ☐	Financial control ☐	Operating control ✓

OPERATIONAL BOUNDARIES

Are Scope 3 emissions included in the inventory?
Yes ✓ No ☐
If they are, which types of activity were included in Scope 3?
Emissions in Scope 3 include: • domestic business trips (airplane, train, taxi, public transport, passenger cars, motorcycle). The distance covered for each mode of transport was specified on the basis of an internal register and routes defined on its basis. No trips by company cars were included, as these emissions are included in full in fuel consumption in Scope 1, and such inclusion would result in doubling of the associated emission values. • emission due to employees of bank PKO BP commuting to work. These were included for the first time in the reporting period. Data concerning the means of transport and the distance covered was determined on the basis of questionnaires filled out by the bank employees and does not include emissions caused by employees of other capital group companies commuting to work.

EMISSION INFORMATION

The table below refers to emissions independent of any GHG transactions, that is, sale, purchase, transfer or depositing of allowances.

EMISSIONS	**TOTAL**	CO_2	CH_4	N_2O	HFCs	PFCs	SF_6
	($MgCO_2e$)	(Mg)	(Mg)	(Mg)	(Mg)	(Mg)	(Mg)
Scope 1	**13,388.10**	**12,808.07**	**0.51**	**0.01**	**0.00**	**0.00**	**0.00**
Scope 2[2]	**85,395.98**	**85,395.98**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 2[3]	**37,303.78**	**37,303.78**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 3	**3,536.31**	**3,536.31**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Direct CO_2 emissions from biogenic combustion ($MgCO_2$)
0 $MgCO_2$

[1] With the exceptions described in the report, applicable to the reporting period for emissions related to consumption of electricity, heat and natural gas.
[2] Calculated in accordance with the location-based method.
[3] Calculated in accordance with the market-based method.

REQUIRED INFORMATION

BASE YEAR

Base year
2019[4] for Scope 1 and 2. PKO Bank Polski S.A. Capital Group prepares reports of Scope 3 emissions: • for the second time with regard to business trips of employees of PKO BP S.A.; • for the first time for emissions related to PKO BP S.A. employees commuting to work.
Clarification of the base year recalculation policy established by the company
Year 2019 was the first year, for which the calculation was conducted, and a greenhouse gas emission inventory was developed by the PKO Bank Polski S.A. Capital Group. The emission inventory for year 2019 was assumed to be the base year, considering the results after the recalculation. The company activity profile generates no untypical greenhouse gas emission fluctuations in individual years; therefore, one year is sufficiently representative and it is not necessary to determine the average annual emission level for several years. Due to the necessity to verify the need for potential recalculations of base year emissions and lack of a documented corporate policy in this regard, general criteria have been applied as specified in *The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard Revised Edition*[5] (hereinafter: the *GHG Protocol*). For each of the criteria, the authors of this report have proposed a mode of assessment, which specifies the cases, in which recalculation of greenhouse gas emissions for the base year should take place. The criteria indicating the necessity for recalculation of greenhouse gas emission for the base year: **Criterion 1.** Structural changes, which exert substantial impact on emissions in the base year. **Description of the criterion:** A structural change is related to transfer of the right of ownership or possibility of exerting control over activity generating emissions. Unlike a single structural change, the accumulated effect of a number of smaller changes may exert substantial impact on emissions in the base year. Structural changes should be understood as: mergers, takeovers, disposals and outsourcing and insourcing of activities causing emissions. Recalculation of base year emissions is not caused by broadening of the scope of services and opening or closing of operating units owned or controlled by the company (the so-called organic growth). Base year emissions will not be recalculated also if the company purchases a facility established after the base year defined by the company. **Criterion 2.** Changes in the methodology used to calculate or measure emissions or improvement of data accuracy. **Description of the criterion:** Substantial changes in methodology and quality of data are taken into account. Any changes in indicators and actual emission changes (related e.g. to a change in the type of fuel used) do not make it necessary to recalculate the base year. **Criterion 3.** Detection of errors in base year calculations. **Description of the criterion:** The errors detected must be substantial, or their accumulation must lead to substantial inaccuracies requiring an adjustment. **The authors of the report for year 2021 decided it would be necessary to recalculate emissions of greenhouse gases for the base year of the PKO Bank Polski S.A. Capital Group.** The context of the recalculation has been presented in the subsequent clause of the report, entitled: "The context of all substantial emission changes, which make it necessary to recalculate the base year emissions."

[4] Due to the fact that the authors of this report have found it necessary to recalculate the value of greenhouse gas emissions of the PKO Bank Polski S.A. Capital Group for the base year, all comparisons used in this report pertain to the indicators, fuel consumption and emissions for the base year after the base year recalculation conducted by the authors of the report, unless clearly stated otherwise. A comparison of energy and fuel consumption for the base year before and after the base year recalculation has been table 2.1 section "Non-compulsory information" of this report (page 25).

[5] https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf

REQUIRED INFORMATION

The context of all substantial emission changes, which make it necessary to recalculate the base year emissions

The Company and its Capital Group, for which this report was prepared, did not undergo structural changes with regard to the nature of emission sources and resources owned on the scale necessary to conduct recalculation on the basis of Criterion 1.

The authors of the report for year 2021 decided it would be necessary to recalculate emissions of greenhouse gases for the base year of the PKO Bank Polski S.A. Capital Group based on Criterion 2.

In the opinion of authors of the report, a failure to recalculate the values for the base years would make it impossible to provide a reliable comparison of the report results for the current period against the base period - in particular, in terms of changes in emission levels and their structure.

Changes in the methodology:
the methodology of estimated consumption of electricity has changed for those facilities, in which the actual consumption level is unknown. A decrease in the electrical energy consumption is due to more precise calculation of energy consumption for those locations, for which source data is not available. The estimation was based on a coefficient determined for locations with similar modes of use. At present, locations, which may interfere with the end result, have been eliminated (mainly server rooms with high energy consumption per unit of area - higher than standard branches and office space). Therefore, the decision was made to recalculate the base year data; however, energy consumption in 2020 was also recalculated. For year 2020, an electrical energy consumption coefficient was also determined for locations with similar consumption patterns.

Adjustment of data accuracy:
in the case of scope 1 emission, originally, emissions related to release of refrigeration agents were not included. In the recalculation, the proper values were included in the breakdown of emissions.

Summing up:
The emission recalculation for the base year was conducted for:

- Scope 1: the recalculation included emission from release of refrigeration agents, excluded from the original report,
- Scope 2: the recalculation included a change in the methodology of determination of the coefficient serving as a basis for estimation of electricity consumption in facilities, in which the actual consumption values are unknown.

The recalculation result:
The table below presents a breakdown of greenhouse gas emissions of the PKO Bank Polski S.A. Capital Group:
- for the base year (2019) before and after the recalculation,
- for year 2020 before and after the recalculation.

REQUIRED INFORMATION

YEAR 2019 (base year)

EMISSIONS	**TOTAL (MgCO2e)**	CO2 (Mg)	CH4 (Mg)	N2O (Mg)	HFCs (Mg)	PFCs (Mg)	SF6 (Mg)
2019 - before recalculation							
Scope 1	**15,487.03**	**15,466.81**	**0.56**	**0.02**	**0.00**	**0.00**	**0.00**
Scope 2 (L-B) [6]	**99,009.80**	**99,009.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 2 (M-B)[7]	**99,009.80**	**99,009.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 3	-	-	-	-	-	-	-
2019 - after recalculation							
Scope 1	**16,399.50**	**15,466.81**	**0.56**	**0.02**	**0.00**	**0.00**	**0.00**
Scope 2 (L-B)	**97,111.69**	**97,111.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 2 (M-B)	**97,111.69**	**97,111.69**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 3	-	-	-	-	-	-	-

In the base year:

- emission levels reported in Scope 1 increased. This increase is due to inclusion in the breakdown of emissions related to release of refrigeration agents. Scope 1 emissions increased by 5.89%.
- emission levels reported in Scope 2 decreased. This reduction is due to more precise calculation of energy consumption for those locations, for which real data is not available. Scope 2 emissions decreased by 1.92%.

ROK 2020

EMISSIONS	**TOTAL (MgCO2e)**	CO2 (Mg)	CH4 (Mg)	N2O (Mg)	HFCs (Mg)	PFCs (Mg)	SF6 (Mg)
2020 - before recalculation							
Scope 1	**13,509.48**	**12,708.37**	**0.52**	**0.01**	**0.00**	**0.00**	**0.00**
Scope 2 (L-B)	**96,628.66**	**96,628.66**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 2 (M-B)	**64,376.66**	**64,376.66**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 3	**288.67**	**288.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
2020 - after recalculation							
Scope 1	**13,501.01**	**12,699.95**	**0.52**	**0.01**	**0.00**	**0.00**	**0.00**
Scope 2 (L-B)	**89,689.63**	**89,689.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 2 (M-B)	**57,437.63**	**57,437.63**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Scope 3	**288.67**	**288.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

In the year 2020:

- emission levels reported in Scope 2 were altered. The changes are due to:
  - more accurate calculation of energy consumption for those locations, for which real data is not available.
  - modification of the benchmark applied to electrical energy. The emission level reported in 2020 for Scope 2 decreased due to taking advantage of the opportunity of applying the best available emission benchmark for electricity for calculation purposes (in accordance with the GHG Protocol). The emission benchmark for end recipients of electricity was applied in the calculations,
  - from adjustment of real data (diesel oil consumption by power generators) for PKO BP S.A.,
  - from adjustment of real data (consumption of district heat and diesel oil for power generators) for the capital group companies in Ukraine.

Scope 1 emissions decreased by 0.06, while Scope 2 emissions decreased by 7.18% (using the location-based method).

EMISSION METHODOLOGIES AND FACTORS

[6] Calculated in accordance with the location-based method.
[7] Calculated in accordance with the market-based method.

REQUIRED INFORMATION

Methods used for calculation or measurement of emissions other than specified in the GHG protocol (provide a reference or link to any calculation tool used, not included in the GHG protocol)

I. Basic information on the greenhouse gas emission calculation methodology and the indicators used

Greenhouse gas emissions for Scope 1 and 3 were calculated using the *GHG Protocol* methodology and calculation tools[8] made available in the *GHG Protocol.* Greenhouse gas emissions for Scope 2 were calculated using the *GHG Protocol* and *GHG Protocol Scope 2 Guidance* methodology*.*
The following benchmarks were used to calculate GHG emissions in Scope 2.

For electricity:

- in Poland:

The location-based method		
	Benchmark	Additional information
PKO Bank Polski S.A.	698 $kgCO_2/MWh$	The benchmark on the basis of information provided by the NCEBM[9].
subsidiaries	698 $kgCO_2/MWh$	The benchmark on the basis of information provided by the NCEBM[10].
The market-based method		
	Benchmark	Additional information
PKO Bank Polski S.A.	0 $kgCO_2/MWh$	The benchmark for electricity generated by water sources in RES installations.
	698 $kgCO_2/MWh$	The benchmark on the basis of information provided by the NCEBM[11].
subsidiaries	698 $kgCO_2/MWh$	The benchmark on the basis of information provided by the NCEBM[12].

- in Ukraine: 420 kg CO_2/MWh[13],
- in Germany: 366 kg CO_2/MWh[14],
- in the Czech Republic: 384 kg CO_2/MWh[15],
- in Slovakia: 76.3 kg CO_2/MWh[16],

For heat energy:

- in Poland: 347.4 kg CO_2/MWh (96.5 Mg CO_2/TJ)[17],

[8] World Resources Institute (2015). GHG Protocol tool for stationary combustion. Version 4.1. and World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6.
[9] Source: benchmarks for CO_2, SO_2, NO_x, CO and particulate matter for electricity on the basis of information contained in the National database of emissions of greenhouse gases and other substances for year 2020, NCEBM, December 2021, page 3
[10] ibidem
[11] Source: as in footnote 10.
[12] ibidem
[13] Source: Наказ 11.07.2018 № 169 Про затвердження Методики визначення енергетичної ефективності будівель, Міністерство Регіонального Розвитку, Будівництва Та Житлово-Комунального Господарства України, Додаток 10 до Методики визначення енергетичної ефективності будівель (пункт 5 розділу XI), https://zakon2.rada.gov.ua/laws/show/z0822-18 as amended наказу Міністерства розвитку громад та територій України від 27.10.2020 р. № 261)
[14] Source: https://www.umweltbundesamt.de/themen/klima-energie/energieversorgung/strom-waermeversorgung-in-zahlen?sprungmarke=Strommix#Strommix
[15] Source: https://www.mpo.cz/cz/energetika/statistika/elektrina-a-teplo/hodnota-emisniho-faktoru-co2-z-vyroby-elektriny-za-leta-2010_2020--260559/
[16] Source: https://www.seas.sk/o-nas/zivotne-prostredie/ochrana-ovzdusia/emisie-co2/
[17] Source: Heat energy in numbers - 2019, the Polish Energy Regulatory Office, Warsaw, September 2020, p. 22

- in Germany: 175 kg CO_2/MWh[18],
- in Ukraine: 260 kg CO_2/MWh[19],

II. Information on source data and estimates

The reported data for fuel and energy consumption is based on purchase invoices. Due to the dispersed structure of the bank and the fact that data for energy settled (in particular, electricity and district heating), as well as natural gas is based mainly on invoices issued by suppliers, in many cases, the settlement periods considered are longer than one month. At the time of preparation of this report, complete data for the full year 2021 was therefore not available.

Due to the above, for electricity and heat (district heating and natural gas), the reporting period is 10.2020 - 09.2021. Use of real data available eliminates the necessity of further scaling, which is subject to a risk of error.

A consumption estimation was carried out for locations with no source data available. Consumption was not estimated for locations, which have no utility connections, such as parking lots, transformer stations, undeveloped land. Heat or natural gas consumption was not estimated for ATMs and payment machines.

In the case of some of the locations, the premises used by PKO Bank Polski S.A. have changed (that is, the leased area has changed, a facility was opened or closed during the reporting period)> In order to take these changes into account, **for the purpose of determination of unit energy consumption indicators [kWh/m^2/year] and estimation of energy consumption for locations that required such estimation, the authors used the average weighted areas from the period from October 2020 until November 2021 (for months, in which a given facility was open), where the weights were the numbers of days per month.** The number of days, during which a given location was used from October 2020 until November 2021, was also taken into account. It was possible to use this estimation method, as the usable area for specific locations was provided for each month.

Consumption was analysed for locations belonging to PKO Bank Polski S.A., as well as those rented and used by PKO Bank Polski S.A.

Net area was used to determine the energy consumption value in all locations of PKO Bank Polski S.A Consumption of all energy types was reduced accordingly by values measured on behalf of the sub-lessees, or proportionally to the area used directly by PKO Bank Polski S.A. and its sub-lessees, when data on energy consumption by sub-lessees was not available.

III. Electricity (included in Scope 2)[20]

Annual electricity consumption was determined on the basis of data from the seller for the period of October 2020 until September 2021. It was assumed that source data for the subsequent 12 months would reflect the annual electricity consumption.

In locations, in which invoices for electricity consumption are issued every two months and apply to periods other than the reported period, consumption was divided proportionally among individual months on the basis of the number of days in a given settlement period. For instance, if the invoice for electricity included the period from September to October, consumption was assigned to individual quarters on the basis of the ratio of days in the two months. This was particularly significant in the case of invoices, which encompassed e.g., one month from the third quarter and one month from the fourth quarter of year 2020 (it was the beginning of the analysed period). This approach was the same as used in the base year.

[18] Source: https://www.mainova.de/resource/blob/38990/595f2d3df98f9cf7b92d19e7fe51a088/pm-30092019-fw-campusmeile-inbetriebnahme-data.pdf
[19] ibidem
[20] All comparisons between year 2021 and year 2020 refer to year 2020 after the recalculation

Consumption estimation

In locations, for which electricity consumption was unknown, and which failed to meet the criteria allowing for an assumption that they consumed no electricity (the criterion as specified in clause II above) and were not identified as ATMs or payment machines, estimation was conducted on the basis of the indicator determined for a location of PKO Bank Polski S.A., for which the consumption value was known. In determining the benchmark, specific locations were eliminated, in which high consumption levels are generated e.g., by server rooms - energy consumption in such facilities is not similar to the remaining branches and offices. The benchmark determined was 68.18 kWh/m^2/year. Facility area decreased by sub-leased area was used for calculation purposes.

ATMs and payment machines

A different methodology was applied to ATMs and payment machines. It was assumed that energy consumption by facilities of this kind was not directly proportional to the area assigned to them in the real estate register. Therefore, it was not possible to use the established coefficient for the company to estimate electricity consumption for facilities, for which consumption was unknown or settled on a flat-rate basis. For these facilities, an additional coefficient was introduced, specifying the typical electricity consumption per single device. Facilities were selected, for which electricity consumption was known for the entire year.

In order to determine the typical electricity consumption value for a single ATM, the best-fitting distribution was determined. For the data set held, approximation was conducted for typical statistical distributions. It was determined that the best-fitting distribution would be the log-normal distribution. The coefficient is equal to the average value for the function determined and to the average for the data set, and it amounts to 6.60 kWh/day per facility. The final estimation of electricity consumption by facilities of this type was determined as the product of the total number of days in months and the established coefficient.

The electricity consumption benchmark

The electricity consumption benchmark per area unit determined on the basis of real data this year was lower by 3.46 kWh/m^2 (4.83%) in comparison with the previous year, which was due, among other things, to implementation of pro-effectiveness measures (e.g., successive replacement of lighting system with energy-saving ones).

Overall electricity consumption by the bank (for all locations, ATMs and payment machines) was reduced by 6.60%, which is also due to reduction of total average weighted area (described in clause II above) of the bank branches and outlets in the reporting year (by about 2%).

IV. Heat - district heating (Scope 2) and natural gas (Scope 1)

The annual real heat consumption was determined on the basis of data from invoices, approximately encompassing the period from October 2020 to November 2021.

To determine the volume of energy generated from fuel purchased, the heat of combustion values were used amounting to 39.5 MJ/m^3 for methane-rich natural gas and 31.0 MJ/m^3 for high-nitrogen natural gas. Then, due to the *GHG Protocol* reporting standard, energy consumption values determined on the basis of the heat of combustion were recalculated according to calorific value assumed on the basis of averaged data published by the Gas Transmission Pipelines Operator GAZ-SYSTEM S.A. for all measurement points reported in Poland for high-nitrogen and methane-rich natural gas.

The heat consumption indicator

On the basis of data on real consumption of district heat and natural gas, provided more or less for 12 subsequent months, the average heat consumption indicator was calculated, amounting to 109.918 kWh/m^2/year.

Consumption estimation

The heat consumption indicator related to heating amounted to 108.527 kWh/year, while the heat consumption indicator related to preparation of hot tap water was 3.198 kWh/year. The indicators were used to estimate heat consumption in facilities, for which data was unknown.

In locations, in which real data was not available:

- and in which the energy type (natural gas or heat) was unknown, which failed to meet the criteria enabling the assumption that they consumed no heat (criterion according to clause II above) - the volume of heat estimated on the basis of average weighted area and the time of its use in the period from October 2020 to November 2021 was divided into district heating and natural gas proportionally to the share of these utilities in actual heat consumption (76.34% for district heating and 23.66% for natural gas).
- for which the type of energy was known (natural gas or district heating) - the volume of heat consumed was estimated on the basis of the average weighed area and time of its ale in the period from October 2020 to November 2021 and assigned to the appropriate source of energy.

V. Fuels used in vehicles (included in Scope 1)

Greenhouse gas emissions for Scope were calculated using the *GHG Protocol* methodology and calculation tools made available in the *GHG Protocol: GHG Emissions from Transport or Mobile Sources. Mobile Combustion GHG Emissions Calculation Tool Version 2.6* [21].

Fuel calorific values were applied on the basis of data provided by the National Centre of Emission Balancing and Management[22].

The diesel fuel parameters were applied on the basis of data made available by the manufacturer[23].

Gasoline parameters were based on manufacturer data[24] (the manufacturer has provided the same density for standard and premium fuel).

The period included in vehicle fuel calculations was from January to December of 2021. The data on fuel consumption volumes was obtained from the dedicated application, used by PKO Bank Polski S.A.

All data concerning diesel fuel and gasoline comes from source data. No consumption estimates were prepared.

VI. Other fuels - for heating purposes (included in Scope 1)

Greenhouse gas emissions were calculated using the *GHG Protocol* methodology and calculation tools made available in the *GHG Protocol: World Resources Institute (2015). GHG Protocol tool for stationary combustion. Version 4.1* [25].

Heating oil, hard coal and LPG are fuels used for interior heating and production of hot tap water. All data on consumption of these energy sources comes from source data. No consumption estimates were prepared.

Fuel calorific values were applied on the basis of data provided by the National Centre of Emission Balancing and Management[26].

VII. Refrigerants (included in Scope 1)

Greenhouse gas emissions were calculated using the *GHG Protocol* methodology and calculation tools made available in the *GHG Protocol: World Resources Institute (2015): Calculating HFC and PFC Emissions from the Manufacturing, Installation, Operation and Disposal of Refrigeration & Airconditioning Equipment (Version 1.0)* [27].

VIII. Business trips (included in Scope 3)

Greenhouse gas emissions were calculated using the *GHG Protocol* methodology and calculation tools made available in the *GHG Protocol: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6* [28].

In year 2020, it was decided that the scope of the inventory of greenhouse gas emissions would be broadened by adding Scope 3 analyses concerning the carbon footprint related to domestic business trips of employees. Analysis and determination of emission was conducted using the same tool as for calculation of emission related to consumption of fuel by the company car fleet (gasoline and diesel oil). In the report for 2021, emission was once again calculated on the basis of reported consumption of gasoline and diesel oil in the period from January 2021 until December 2021, considering domestic and foreign business trips.

Greenhouse gas emissions were calculated using the distance-based method on the basis of available data. The basic information on domestic and foreign business trips (concerning the mode of transport, objective of the business trip, the starting and ending point) were obtained from the dedicated applications developed for PKO Bank Polski S.A. (source data). The business trip length was determined on the basis of the distance between centres of cities, to and from which the indicated fragments of trips took place using a given vehicle type during the business trip, and then summed up for vehicles of the same type.

In the case of travel fragments within the same city, the exact starting and ending point addresses were unknown; therefore, it was assumed that the average distance covered in such case would be 5 km.
Business trips, for which a company car was the indicated mode of transport, were removed from the scope of emission calculations based on employee business trips. Otherwise, emissions included in Scope 1 (direct emissions) would be included twice, leading to an ungrounded overestimation of greenhouse gas emissions.

IX. Commuting to work (included in Scope 3)

In year 2021, it was decided that the scope of Scope 3 emissions would be broadened by adding emissions caused by employees commuting to work. For this purpose, employees filled out a special questionnaire, specifying, e.g., the means of transport used for commuting, the distance covered, whether the same means of transport were used on the way back, the number of commuting days and the number of PKO BP employees participating in a given form of transport. The initial questionnaire excluded company cars used for commuting to work, which could result in doubling of emission levels included in Scope 1 (direct emissions), leading to an unjustified overestimation of greenhouse gas emissions.

The emission calculations were conducted using aggregated data on commuting, grouped according to the means of transport reported by respondents. Greenhouse gas emissions were calculated using the *GHG Protocol* methodology and calculation tools made available in the *GHG Protocol: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6* [29]. Greenhouse gas emissions were calculated using the distance-based method on the basis of available data.

[21] https://ghgprotocol.org/sites/default/files/Transport_Tool_v2_6.xlsx
[22] https://www.kobize.pl/uploads/materialy/download/WO_i_WE_do_monitorowania-ETS-2020.pdf
[23] https://www.orlen.pl/PL/DlaBiznesu/Paliwa/OlejeNapedowe/Strony/OlejNapedowyEkodieselUltra.aspx
[24] https://www.orlen.pl/PL/DlaBiznesu/Paliwa/Benzyny/Strony/BenzynaBezolowiowa95.aspx
[25] https://ghgprotocol.org/sites/default/files/Stationary_combustion_tool_%28Version4-1%29.xlsx
[26] https://www.kobize.pl/uploads/materialy/materialy_do_pobrania/monitorowanie_raportowanie_weryfikacja_emisji_w_eu_ets/WO_i_WE_do_monitorowania-ETS-2021.pdf
[27] https://ghgprotocol.org/sites/default/files/hfc-pfc_0.xls
[28] Emissions, calorific values due to combustion of fuels by sources owned by the company - company cars: https://ghgprotocol.org/sites/default/files/Transport_Tool_v2_6.xlsx
[29] Emissions, calorific values due to combustion of fuels by sources owned by the company - company cars: https://ghgprotocol.org/sites/default/files/Transport_Tool_v2_6.xlsx

X. Calculation of greenhouse gas emissions by subsidiaries of PKO Bank Polski S.A.

The rules of reporting and estimation of data on consumption of energy were the same for the PKO Bank Polski S.A. Capital Group, that is, for PKO Bank Polski S.A. and for all subsidiaries.

Greenhouse gas emission calculations, data estimation and inventory of emissions of greenhouse gases for the Capital Group of PKO Bank Polski S.A. were conducted by experts of Ellipsis Energy. Authors: Natalia Klauza, Jan Kucowski, Paweł Wultański, Bartosz Dobrowolski.

NON-COMPULSORY INFORMATION

ORGANISATIONAL BOUNDARIES

The list of all legal entities or establishments, in which the reporting organisation has shares in capital, exercises financial or operating control	The share in capital of the legal entity (%)	Does the reporting organisation exercise financial control? (Yes/No)	Does the reporting organisation exercise operating control? (Yes/No)
PKO Bank Polski SA	100.00% (parent entity of the Capital Group)	Yes	Yes
PKO Bank Hipoteczny SA	100,00%	Yes	Yes
PKO Towarzystwo Funduszy Inwestycyjnych SA	100,00%	Yes	Yes
PKO BP BANKOWY PTE SA	100,00%	Yes	Yes
PKO Leasing SA	100,00%	Yes	Yes
PKO BP Finat sp. z o.o.	100,00%	Yes	Yes
PKO Życie Towarzystwo Ubezpieczeń SA	100,00%	Yes	Yes
PKO Towarzystwo Ubezpieczeń SA	100,00%	Yes	Yes
PKO Finance AB	100,00%	Yes	Yes
KREDOBANK SA	100,00%	Yes	Yes
Finansowa Kompania „Idea Kapitał" sp. z o.o.	100,00%	Yes	Yes
Merkury – Closed-end Investment Fund of Non-Public Assets	100,00%	Yes	Yes
NEPTUN – Closed-end Investment Fund of Non-Public Assets	100,00%	Yes	Yes
Bankowe Towarzystwo Kapitałowe SA	100,00%	Yes	Yes
„Inter-Risk Ukraina" spółka z dodatkową odpowiedzialnością	100,00%	Yes	Yes
Finansowa Kompania „Prywatne Inwestycje" sp. z o.o.	100,00%	Yes	Yes
„Sopot Zdrój" sp. z o.o.	72,98%	Yes	Yes
Qualia sp. z o.o.	100,00%	Yes	Yes
Sarnia Dolina sp. z o.o.	100,00%	Yes	Yes
PKO VC – Closed-end Investment Fund of Non-Public Assets	100,00%	Yes	Yes

If the dominant company of the reporting entity reports no emissions, attach an organisational chart, which specifies clearly the relationship between the reporting subsidiary and other subsidiaries.
Not applicable.

EMISSION INFORMATION

Emission according to source (in $MgCO_2e$)	
Scope 1: Direct emissions from operations held/ controlled	
a. Direct emissions from a stationary combustion source	**5,478.09**
b. Direct emissions from a mobile combustion source	**7,348.20**
c. Direct emissions from processing sources	**0.00**

NON-COMPULSORY INFORMATION

d. Direct emissions from fugitive sources	**561.81**
e. Direct emissions from agricultural sources	**0.00**
Scope 2: Indirect emissions from use of purchased electricity, process steam, heating energy and refrigeration	
a. Indirect emissions from electricity purchased/ acquired	**10,895.07**
b. Indirect emissions from process steam purchased/ acquired	**0.00**
c. Indirect emissions from heat energy purchased/ acquired	**26,408.70**
d. Indirect emissions from refrigeration purchased/ acquired	**0.00**

Emissions according to establishment (recommended for individual establishments with stationary exhaust emission above 10.000 $mtCO_2e$)	
Establishment	Emissions in Scope 1
Not applicable.	None of the individual locations generates emissions exceeding 10 thousand $MtCO_2e$

Emission according to country (in $MgCO_2e$)	
Country	Emission (specify the scopes included)
The location-based method	
Poland (Scope 1+2+3)	**98,806.44**
the Czech Republic (Scope 1+2+3)	**31.10**
Slovakia (Scope 1+2+3)	**1.21**
Germany (Scope 1+2+3)	**12.76**
Ukraine (Scope 1+2)	**3,468.88**
The market-based method	
Poland (Scope 1+2+3)	**50,714.24**
the Czech Republic (Scope 1+2+3)	**31.10**
Slovakia (Scope 1+2+3)	**1.21**
Germany (Scope 1+2+3)	**12.76**
Ukraine (Scope 1+2)	**3,468.88**

Emissions related to internal production of electricity, heat or process steam, sold or transferred to another organisation
0 $MgCO_{2\,e}$

Emissions related to internal production of electricity, heat or process steam, purchased to be resold to intermediate recipients
0 $MgCO_{2\,e}$

Greenhouse gas emissions not included in the Kyoto Protocol (e.g., CFCs, NOx,)
Not applicable.

Information on causes of emission changes, which did not make it necessary to recalculate emissions in the base year (e.g., changes in processes, improved effectiveness, closing of establishments).
Changes in emission in year 2021 related to change in area due to opening or closing of branches do not result in the necessity to recalculate the greenhouse gas emissions for the base year. In accordance with Criterion 1 specified in the base year emission recalculation policy and the guidelines (the criteria and guidelines specified on the basis of the *GHG Protocol*), the occurrence of changes of this type is treated as normal development of the organisation and does not result in the necessity to recalculate the base year emissions.

Data on emission of greenhouse gases for all years between the base year and the reporting year (considering the details or reasons for recalculations, if any)

Year 2019 was the first year, for which the greenhouse gas emission inventory was developed by the PKO Bank Polski S.A. Capital Group. In year 2021, a recalculation of the base year was conducted as described in the chapter "The context for all significant emission changes".

The table below provides information on greenhouse gas emissions for all years between the base year and the reporting year.

Market-based					
Year	Scope 1, $MgCO_2e$	Scope 2, $MgCO_2e$	Scope 1+2, $MgCO_2e$	Scope 3, $MgCO_2e$	Scope 1+2+3, $MgCO_2e$
2019 (base year) - after recalculation	**16,399.50**	**97,111.69**	**113,511.19**	-	**113,511.19**
2020 - after recalculation	**13,501.01**	**57,437.63**	**70,938.64**	**288.67**	**71,227.31**
2021	**13,388.10**	**37,303.78**	**50,691.87**	**3,536.31**	**54,228.19**

Location-based					
Year	Scope 1, $MgCO_2e$	Scope 2, $MgCO_2e$	Scope 1+2, $MgCO_2e$	Scope 3, $MgCO_2e$	Scope 1+2+3, $MgCO_2e$
2019 (base year) - after recalculation	**16,399.50**	**97,111.69**	**113,511.19**	-	**113,511.19**
2020 - after recalculation	**13,501.01**	**89,689.63**	**103,190.64**	**288.67**	**103,479.31**
2021	**13,388.10**	**85,395.98**	**98,784.07**	**3,536.31**	**102,320.39**

Scope 1:

for all reporting periods (year 2019, 2020, 2021), the following were reported in scope 1:

- emissions from fugitive refrigeration agents,
- emissions from fuels used in buildings,
- emissions from fuels used in vehicles (use of company cars).

Scope 2:

for all reporting periods (year 2019, 2020, 2021), the following were reported in scope 2:

- emissions from electricity consumption,
- emissions from district heat consumption.

Scope 3:

- in 2019 (base year), this scope was not reported,
- in the year 2020, emissions due to domestic and foreign business trips were reported for the first time in Scope 3,
  in the year 2021, apart form business trips, the report included emissions due to employees of bank PKO BP commuting to work (questionnaires filled out by employees of the bank's locations in Poland).

NON-COMPULSORY INFORMATION

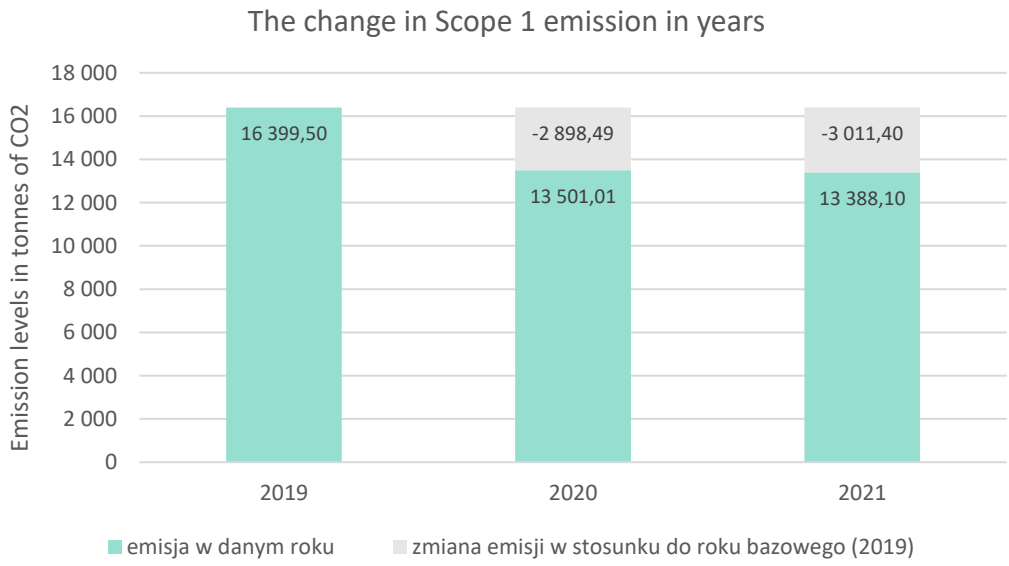
The subsequent table presents the annual emission changes.

Market-based					
Year	Scope 1, $MgCO_2e$	Scope 2, $MgCO_2e$	Scope 1+2, $MgCO_2e$	Scope 3, $MgCO_2e$	Scope 1+2+3, $MgCO_2e$
Change in year 2020 in relation to year 2019	**-2,898.49**	**-39,674.06**	**-42,572.55**	**288.67**	**-42,283.88**
Change in year 2021 in relation to year 2020	**-112.91**	**-20,133.86**	**-20,246.76**	**3,247.64**	**-16,999.12**
Change in year 2021 in relation to base year (2019)	**-3,011.40**	**-59,807.91**	**-62,819.31**	**3,536.31**	**-59,283.00**

Location-based					
Year	Scope 1, $MgCO_2e$	Scope 2, $MgCO_2e$	Scope 1+2, $MgCO_2e$	Scope 3, $MgCO_2e$	Scope 1+2+3, $MgCO_2e$
Change in year 2020 in relation to year 2019	**-2,898.49**	**-7,422.06**	**-10,320.55**	**288.67**	**-10,031.88**
Change in year 2021 in relation to year 2020	**-112.91**	**-4,293.66**	**-4,406.56**	**3,247.64**	**-1,158.92**
Change in year 2021 in relation to base year (2019)	**-3,011.40**	**-11,715.71**	**-14,727.11**	**3,536.31**	**-11,190.80**

Presented below is a discussion of emission changes for each scope reported for the market-based method.

Scope 1



NON-COMPULSORY INFORMATION

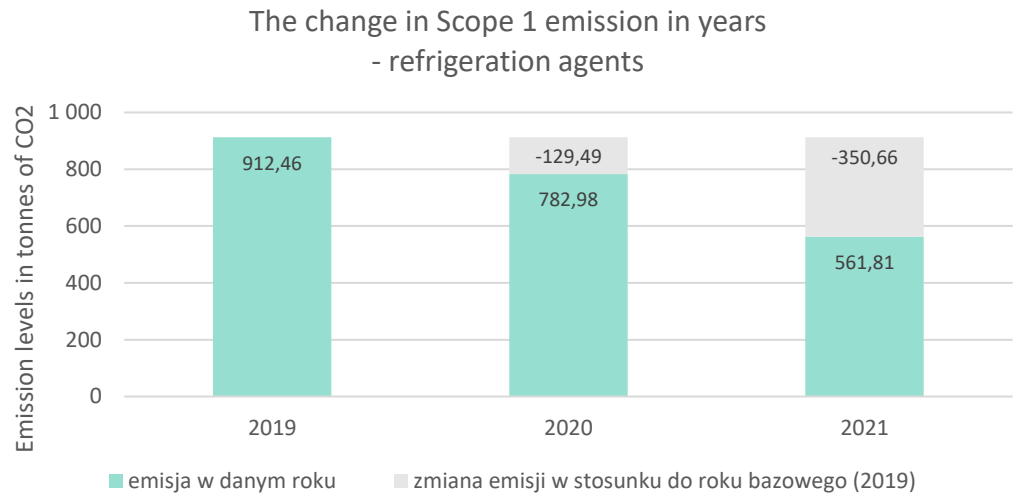
For scope 1:

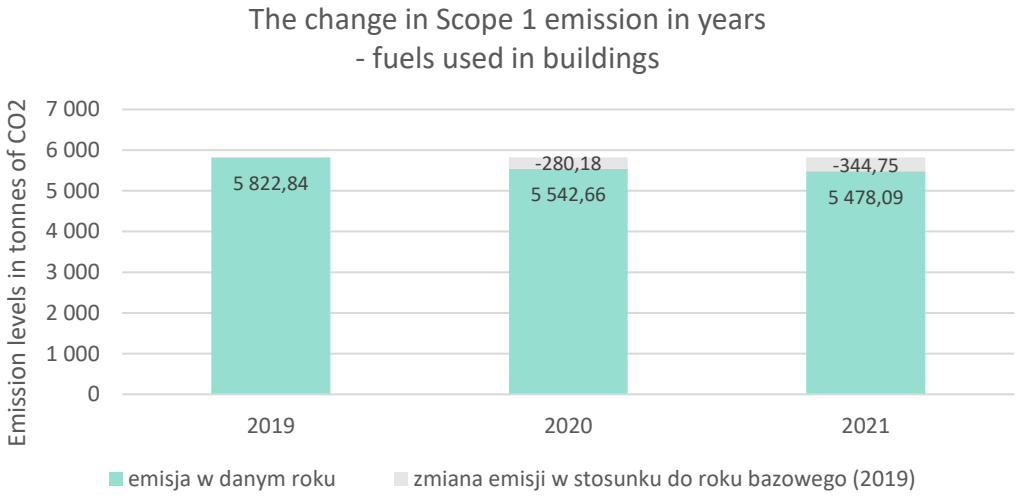
- the emission reduction in year 2020 (in comparison with 2019) was mainly due to reduced use of company cars. In 2020, emission from fuels used in vehicles dropped by 25.75% in relation to year 2019, which results in emission reduction by 2,488.82 tCO2. Therefore, reduction in scope 1 emissions is caused in 85.87% by reduced use of company cars, in 9.67% - by reduced use of fuels in buildings, and in 4.46% - by reduction of emissions from fugitive refrigeration agents.
- in the year 2021, use of company cars was at the level similar to the year 2020 (increase by 2.41%). Emissions from fuels used in buildings decreased by 1.16%, while emissions from fugitive refrigeration agents were reduced by 28.25%.

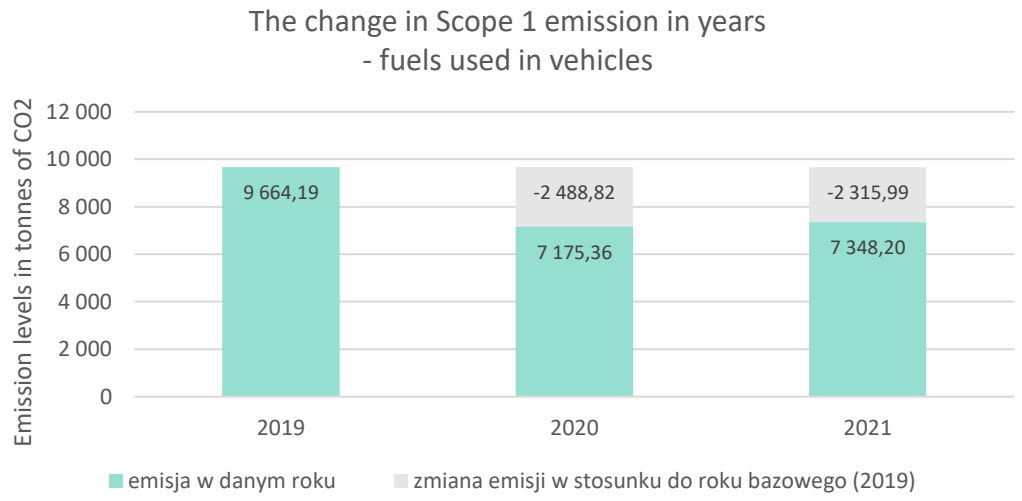
In comparison with the base year (2019), Scope 1 emissions decreased in 2021 by 18.36%:

- emissions from fugitive refrigeration agents decreased by 38.43% (350.66 tonnes of CO_2),
- emissions from fuels used in buildings decreased by 5.92% (344.75 tonnes of CO_2),
- emissions from fuels used in vehicles decreased by 23.96% (2,315.99 tonnes of CO_2),

Presented below are charts for individual emission types reported in Scope 1.

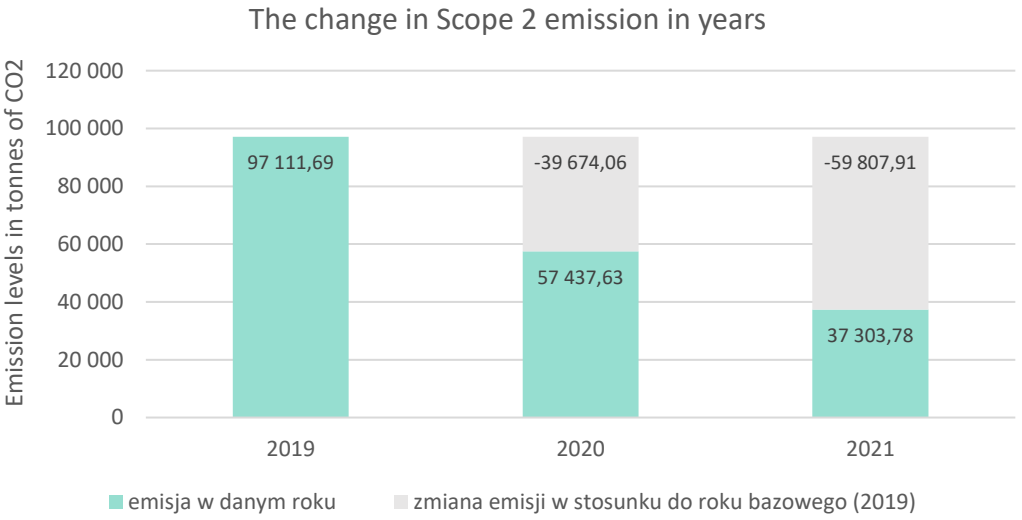






In 2020, emission from fuels used in vehicles decreased by 25.75% in relation to 2019, which was due to reduced use of company cars. In the year 2021, use of company cars was similar as in 2020.

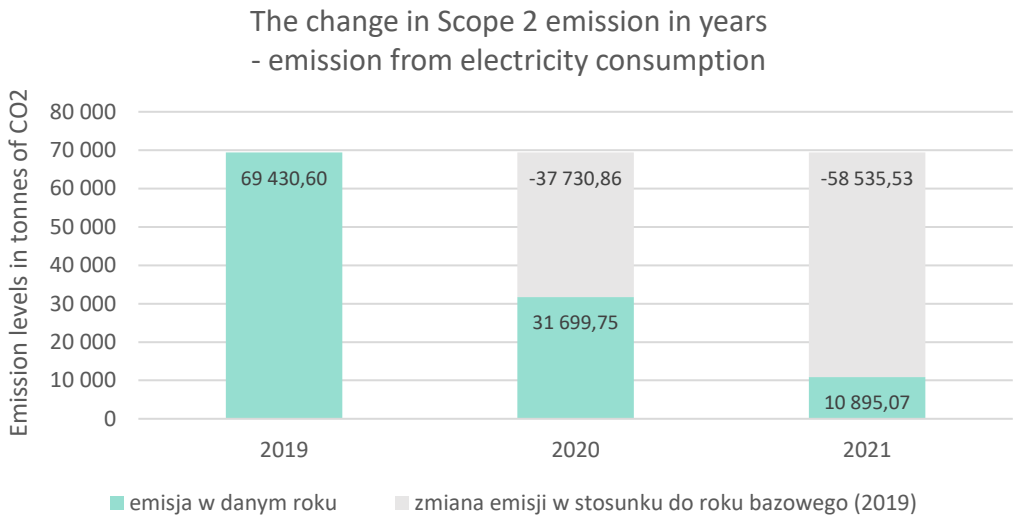
Scope 2



In comparison with the base year (2019), Scope 2 emissions decreased in 2021 by 61.59%:

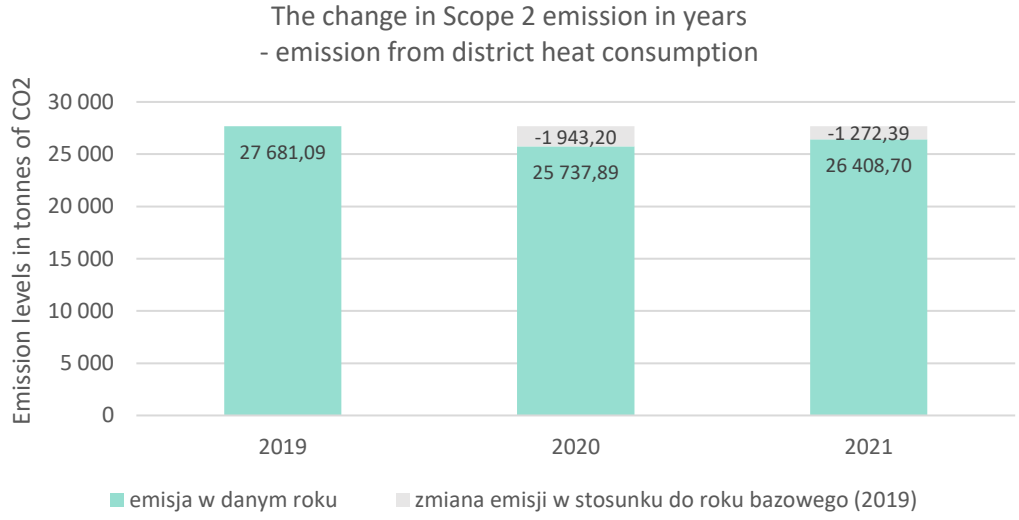
- emissions from electricity consumption decreased by 84.31% (58,535.53 tonnes of CO_2),
- emissions from district heat consumption decreased by 4.60% (1,272.39 tonnes of CO_2),

Presented below are charts for individual emission types reported in Scope 2.



The annual high reduction of greenhouse gas emissions from electricity consumption is due to:

- in the year 2020: obtaining by PKO Bank Polski S.A. of electricity from a low-emission source - high-efficiency cogeneration. 73.3 GWh was encompassed by guarantees of origin (PKO Bank Polski S.A. consumed more than 80.8 GWh).
- in the year 2021: purchase by PKO Bank Polski S.A. of electricity from water sources in a renewable energy source installation. 68.9 GWh was encompassed by guarantees of origin (PKO Bank Polski S.A. consumed more than 75.4 GWh). Moreover, overall electricity consumption by the bank (for all locations, ATMs and payment machines) was reduced by 6.60%, which is due to implementation of pro-effectiveness measures and reduction of total average weighted area (described in clause) of the bank branches and outlets in the reporting year (by about 2%).

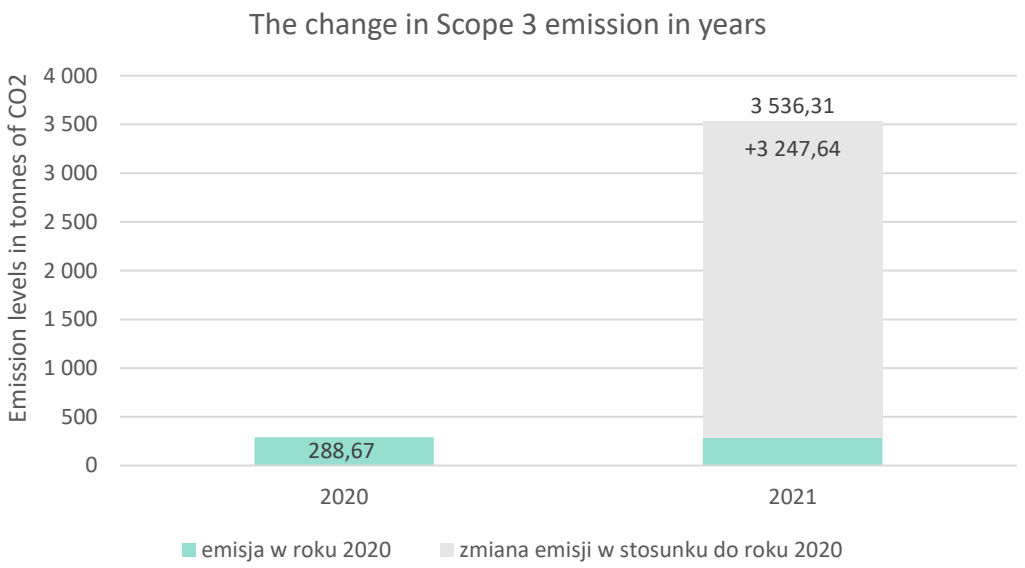


The annual level of greenhouse gas emissions from district heat consumed is caused by:

- in 2020: by adjustment of the heat demand indicator and reduced heated area,

- in 2021: by different weather conditions (lower outdoor temperatures) and reduction in the heated area. The heat demand, unlike, e.g., demand for electricity, is subject to seasonal changes, which are mainly determined by outdoor temperatures. In the reported period, the average temperatures in Poland were lower than in the analogous period in the previous year, which resulted in an increase in the number of degree-days by 14% in relation to the year 2020. The resulting heat demand indicator thus increased by about 10% (despite the reduction of the average total of heated area by about 2%). The above resulted in increase in total heat consumption in the reported period.

Scope 3

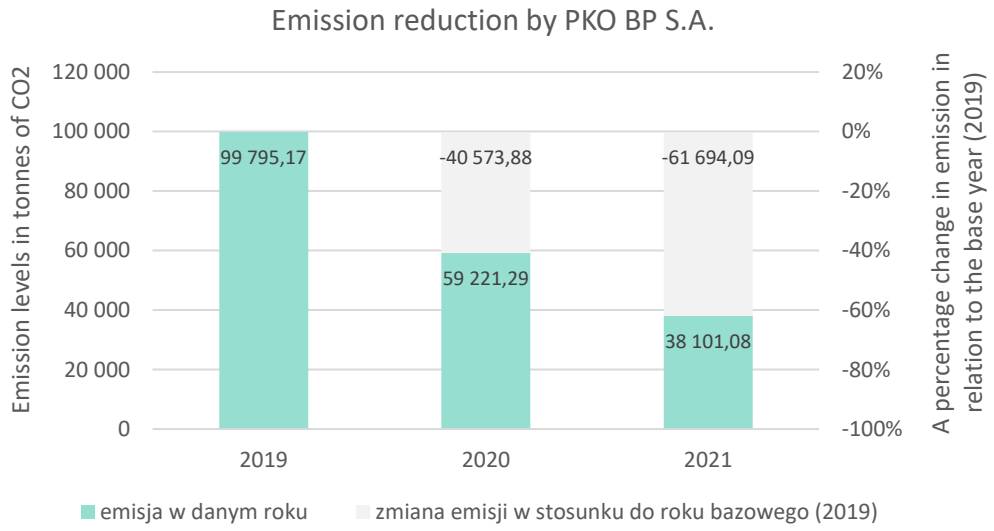


Scope 3:

- in 2019 (base year), this scope was not reported,
- in the year 2020, Scope 3 for the first time included emissions caused by domestic and foreign business trips - in the year 2021, these emissions dropped by 32.42% (93.58% tonnes of CO2),
- in 2021, the Scope 3 emissions reported increased due to the fact that the Bank broadened the scope of emissions reported, which since 2021 has included not only emissions related to business trips, but also those related to employees commuting to work.

Bank PKO S.A. has successively broadened the Scope 3 emissions reported. The annual increase in scope 3 emissions is therefore caused by broadening of the catalogue and fuller reporting of indirect emissions, related to operating activity of the bank and not to increase in emission levels in the areas analysed.

NON-COMPULSORY INFORMATION

A summary of the strategy or the emission reduction programmes
In September 2020, PKO Bank Polski S.A. for the first time obtained electrical energy generated by a cogeneration unit supplied with natural gas (a low-emission source). A guarantee of origin of electricity from high-efficiency cogeneration is a document confirming to the end recipient that the volume of electricity specified in the document, fed into the distribution or transmission network, was produced by high-efficiency cogeneration. in 2021, Year PKO Bank Polski S.A. purchased electricity from water sources generated in a renewable energy source installation. The purchase of a guarantee of origin proves support for energy production in renewable sources, influencing reduction of CO_2 emission to the environment. In the year 2021, PKO Bank Polski adopted the ESG indicators, including them in the scope of non-financial objectives of the Bank's Capital Group for the following years. One of the objectives defined is to limit emissions of greenhouse gases by the bank to 40 thousand CO_2e (Scope 1 & 2) in 2025, that is, by 60% in comparison with emissions generated in the base year (2019).[30]      Emission reduction in the year 2021 in relation to the base year (2019) was **61.82%.**

ADDITIONAL INFORMATION

Information concerning any contractual provisions concerning risks and commitments related to greenhouse gas emissions.
In year 2021, neither PKO Bank Polski S.A. nor its subsidiaries were parties to agreements related to risks or obligations concerning greenhouse gas emissions.

Information concerning any contractual provisions concerning risks and commitments related to greenhouse gas emissions.
Not applicable.
Information on quality of the records (e.g., information on the causes and scale of uncertainty in emission estimates) and the outline of the existing policies aimed at improving the quality of records
The data on consumption of energy can be divided into two main groups: measured and estimated. Measurement data is based on verified billing metres or statements received from energy suppliers.

[30] https://www.pkobp.pl/relacje-inwestorskie/esg-w-grupie-pko-banku-polskiego/emisje-gazow-cieplarnianych/

Energy consumption has to be partially estimated as it is not directly measured. This is due to the mode of settlement with suppliers or shared consumption with other entities. For example, this applies to facilities located in shopping centres. They may be settled on the basis of a flat rate (e.g., based on leased area), regardless of their actual consumption. In addition, such facility uses common space, which also consumes energy and is jointly used by other entities.

As a result of the calculation and estimation processes conducted (described in the chapter on methodology), the data certainty indicator has been achieved[31], referred to as "good" in the *GHG Protocol* standard methodology.

Data certainty indicator - PKO Bank Polski S.A.

In 2021, the data certainty indicator for PKO Bank Polski S.A. was:

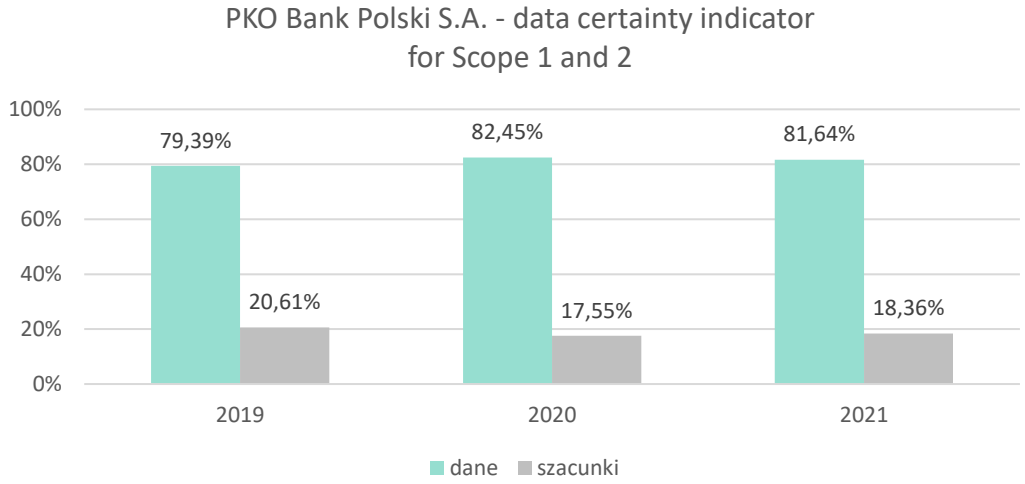
- in the case of calculation of the data certainty indicator on the basis of emission data: 85.23% for Scope 1+2 emissions, where the indicator amounted to:
  - 88.16% for scope 1 emissions,
  - 84.85% for scope 2 emissions.
- in the case of calculation of the data certainty indicator on the basis of energy data: 81.64% for Scope 1+2 emissions, where the indicator amounted to:
  - 85.90% for Scope 1 data,
  - 80.40% for Scope 2 data.

In 2019 (after recalculation), the indicator value was:

- 81.28% for Scope 1+2 emissions,
- 79.39% for Scope 1+2 energy, respectively.

A direct comparison can be conducted for indicators related to energy, as they are based on the quantity of data reported on energy consumption. This is due to the fact that PKO Bank Polski S.A. does not conduct direct measurements of greenhouse gas emissions, and the entire emission inventory is based directly on determination of consumption of individual types of energy.

The chart below presents a change in the data certainty indicator for energy consumption by Bank Polski PKO S.A. over the years.



[31] As a percentage share of data obtained from sources in overall data used for calculation purposes, including data obtained from sources and estimated.

The data certainty indicator for energy consumption increased from 79.39% in 2019 to 81.64% in 2021, that is, by 2.83%. This is due to increased intensity of data collection by units of PKO Bank Polski S.A.

Over the years, the data certainty indicator has maintained a similarly high level.

Data certainty indicator - the Capital Group

In 2021, the data certainty indicator for the Capital Group of PKO Bank Polski S.A. was:

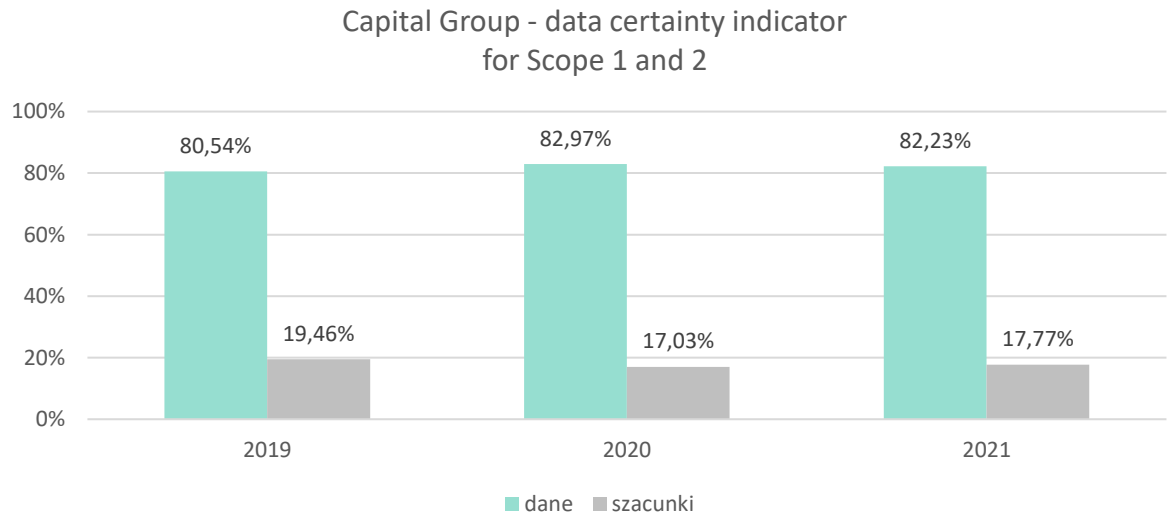
- in the case of calculation of the data certainty indicator on the basis of emission data: 85.23% for Scope 1+2 emissions, where the indicator amounted to:
  - 90.45% for scope 1 emissions,
  - 84.42% for scope 2 emissions.
- in the case of calculation of the data certainty indicator on the basis of energy data: 82.23% for Scope 1+2 emissions, where the indicator amounted to:
  - 88.64% for Scope 1 data,
  - 80.04% for Scope 2 data.

In 2019 (after recalculation), the indicator value was:

- 82.35% for Scope 1+2 emissions,
- 80.54% for Scope 1+2 energy, respectively.

A direct comparison can be conducted for indicators related to energy, as they are based on the quantity of data reported on energy consumption. This is due to the fact that the Capital Group of PKO Bank Polski S.A. does not conduct direct measurements of greenhouse gas emissions, and the entire emission inventory is based directly on determination of consumption of individual types of energy.

The chart below presents a change in the data certainty indicator for energy consumption by the Capital Group over the years.



The data certainty indicator for energy consumption increased from 80.54% in 2019 to 82.23% in 2021, that is, by 2.10%. This is due to increased intensity of data collection by units of the Capital Group.

Over the years, the data certainty indicator has maintained a similarly high level.

Emission removal information

NON-COMPULSORY INFORMATION

Not applicable.

COMPENSATION INFORMATION

Information on compensations purchased or developed outside the recording limits		
Volume of GHGs ($mtCO_2e$)	Compensation type	Were the compensation measures verified/ certified and/or accepted by an external greenhouse gas programme (e.g., CDM)

Information on reductions within recording limits, which were sold/ transferred as compensations to a third party		
Volume of GHGs ($mtCO_2e$)	Compensation type	Were the compensation measures verified/ certified and/or accepted by an external greenhouse gas programme (e.g., CDM)

NON-COMPULSORY INFORMATION

ANNEX TO THE REPORT ON EMISSIONS OF GREENHOUSE GASES OF PKO BANK POLSKI S.A. FOR YEAR 2021

List of tables

Table 1.1.
Greenhouse gas emissions in 2021 according to organisation - the market-based method [in $MgCO_2e$]

Emissions	TOTAL of (MgCO2e)	CO2 (Mg)	CH4 (Mg)	N2O (Mg)	HFCs (Mg)	PFCs (Mg)	SF6 (Mg)
PKO BP							
Scope 1	10,000.465	9,422.875	0.442	0.013	0.000	0.000	0.000
Scope 2	28,100.612	28,100.612	0.000	0.000	0.000	0.000	0.000
Total Scope 1 and 2	38,101.077	37,523.487	0.442	0.013	0.000	0.000	0.000
Scope 3	3,536.311	3,536.311	0.000	0.000	0.000	0.000	0.000
Total Scope 1, 2 and 3	41,637.388	41,059.798	0.442	0.013	0.000	0.000	0.000
subsidiaries							
Scope 1	3,387.633	3,385.194	0.072	0.002	0.000	0.000	0.000
Scope 2	9,203.164	9,203.164	0.000	0.000	0.000	0.000	0.000
Total Scope 1 and 2	12,590.798	12,588.359	0.072	0.002	0.000	0.000	0.000
Scope 3[32]	-	-	-	-	-	-	-
Total Scope 1, 2 and 3	12,590.798	12,588.359	0.072	0.002	0.000	0.000	0.000
Total CG							
Scope 1	13,388.098	12,808.069	0.514	0.014	0.000	0.000	0.000
Scope 2	37,303.777	37,303.777	0.000	0.000	0.000	0.000	0.000
Total Scope 1 and 2	50,691.875	50,111.846	0.514	0.014	0.000	0.000	0.000
Scope 3	3,536.311	3,536.311	0.000	0.000	0.000	0.000	0.000
Total Scope 1, 2 and 3	54,228.186	53,648.157	0.514	0.014	0.000	0.000	0.000

[32] In year 2021, Scope 3 for subsidiaries is not reported.

Table 1.2.
Greenhouse gas emissions according to organisation - difference in emission in year 2021 compared to base year (2019) after recalculation, the market-based method [in $MgCO_2e$]

Emissions	TOTAL of (MgCO2e)	CO2 (Mg)	CH4 (Mg)	N2O (Mg)	HFCs (Mg)	PFCs (Mg)	SF6 (Mg)
PKO BP							
Scope 1	**-2,727.67**	**-2,374.57**	**-0.058**	**-0.003**	**0.00**	**0.00**	**0.00**
Scope 2	**-58,966.42**	**-58,966.42**	**0.000**	**0.000**	**0.00**	**0.00**	**0.00**
Total Scope 1 and 2	**-61,694.09**	**-61,340.99**	**-0.058**	**-0.003**	**0.00**	**0.00**	**0.00**
Scope 3	-	-	-	-	-	-	-
Total Scope 1, 2 and 3	-	-	-	-	-	-	-
subsidiaries							
Scope 1	**-283.73**	**-284.17**	**0.014**	**0.000**	**0.00**	**0.00**	**0.00**
Scope 2	**-841.49**	**-841.49**	**0.000**	**0.000**	**0.00**	**0.00**	**0.00**
Total Scope 1 and 2	**-1,125.22**	**-1,125.66**	**0.014**	**0.000**	**0.00**	**0.00**	**0.00**
Scope 3	-	-	-	-	-	-	-
Total Scope 1, 2 and 3	-	-	-	-	-	-	-
Total CG							
Scope 1	**-3,011.40**	**-2,658.74**	**-0.045**	**-0.003**	**0.00**	**0.00**	**0.00**
Scope 2	**-59,807.91**	**-59,807.91**	**0.000**	**0.000**	**0.00**	**0.00**	**0.00**
Total Scope 1 and 2	**-62,819.31**	**-62,466.65**	**-0.045**	**-0.003**	**0.00**	**0.00**	**0.00**
Scope 3	-	-	-	-	-	-	-
Total Scope 1, 2 and 3	-	-	-	-	-	-	-

Reduction in Scope 1 emissions (3 011.40 tonnes of CO_2) is mainly due to reduction in use of company cars - in 2021, emission from fuels used in vehicles was reduced by 23.96%, that is, by 2,315.99 tonnes of CO_2 (in comparison with the base year). The emission reduction was also caused by reduction in the number of locations, in which heat is generated by burning heating oil (consumption of heating oil in the Capital Group in 2021 dropped by 34.70% in comparison with the base year). In 2021, one real estate property was sold (Bytom), one was connected to the gas network (Krosno Odrzańskie), while two locations were connected to the district heating network (Wadowice and Łosice). In 2020, four locations heated with oil were liquidated (located in Katowice, Gubin, Jaworzno and Kazimierza Wielka).

High reduction in Scope 2 greenhouse gas emissions (59,807.91 tonnes of CO_2) resulted, among other things, from purchase by PKO Bank Polski S.A. of electricity generated by water sources in a renewable source energy installation (2021) and obtaining of electricity from a low-emission source - high-efficiency cogeneration (2020).

No differences were recorded in Scope 3, as in the base year (2019) it was not reported.

Table 2.1A
Fuel consumption: absolute values - comparison of the base year (2019) before and after recalculation[33] [in kWh]

	PKO BP			subsidiaries			CG		
	2019 after recalculation	**2019**	difference	2019 after recalculation	**2019**	difference	2019 after recalculation	**2019**	difference
Fuels used in buildings									
natural gas	**20,465,060.09**	**20,465,060.09**	**0.00**	**2,939,802.29**	**2,939,802.29**	**0.00**	**23,404,862.38**	**23,404,862.38**	**0.00**
heating oil	**3,367,591.00**	**3,367,591.00**	**0.00**	**132,432.55**	**132,432.55**	**0.00**	**3,500,023.55**	**3,500,023.55**	**0.00**
diesel oil	**81,469.00**	**81,469.00**	**0.00**	**16,759.20**	**16,759.20**	**0.00**	**98,228.20**	**98,228.20**	**0.00**
LPG of	**0.00**	**0.00**	**0.00**	**5,718.04**	**5,718.04**	**0.00**	**5,718.04**	**5,718.04**	**0.00**
brown coal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
hard coal	**207,666.67**	**207,666.67**	**0.00**	**0.00**	**0.00**	**0.00**	**207,666.67**	**207,666.67**	**0.00**
Total fuel used in buildings	**24,121,786.76**	**24,121,786.76**	**0.00**	**3,094,712.08**	**3,094,712.08**	**0.00**	**27,216,498.84**	**27,216,498.84**	**0.00**
Fuels used in vehicles									
diesel oil	**1,211,092.62**	**1,211,092.62**	**0.00**	**4,093,034.42**	**4,093,034.42**	**0.00**	**5,304,127.04**	**5,304,127.04**	**0.00**
LPG of	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
gasoline	**27,485,590.87**	**27,485,590.87**	**0.00**	**5,810,136.11**	**5,810,136.11**	**0.00**	**33,295,726.98**	**33,295,726.98**	**0.00**
Total fuel used in vehicles	**28,696,683.49**	**28,696,683.49**	**0.00**	**9,903,170.53**	**9,903,170.53**	**0.00**	**38,599,854.02**	**38,599,854.02**	**0.00**
Total fuels corresponding with Scope 1 emissions	**52,818,470.25**	**52,818,470.25**	**0.00**	**12,997,882.61**	**12,997,882.61**	**0.00**	**65,816,352.86**	**65,816,352.86**	**0.00**
Energy purchased									
electricity[34]	**81,675,347.78**	**84,078,819.15**	**-2,403,471.37**	**11,034,126.46**	**11,111,845.94**	**-77,719.48**	**92,709,474.24**	**95,190,665.09**	**-2,481,190.85**
heat energy	**68,774,176.29**	**68,774,176.29**	**0.00**	**8,938,718.85**	**8,938,718.85**	**0.00**	**77,712,895.14**	**77,712,895.14**	**0.00**
Total energy purchased, corresponding with Scope 2 emissions	**150,449,524.07**	**152,852,995.44**	**-2,403,471.37**	**19,972,845.31**	**20,050,564.79**	**-77,719.48**	**170,422,369.38**	**172,903,560.23**	**-2,481,190.86**
Total energy corresponding with Scope 1 and 2 emissions	**203,267,994.32**	**205,671,465.69**	**-2,403,471.37**	**32,970,727.92**	**33,048,447.40**	**-77,719.48**	**236,238,722.23**	**238,719,913.09**	**-2,481,190.86**

[33] The scope of recalculation conducted is presented in the chapter "The context of all significant emission changes (page 4).
[34] A decrease in the electrical energy consumption is due to more precise calculation of energy consumption for those locations, for which source data is not available. The estimation was based on a coefficient determined for locations with similar modes of use. At present, locations, which may interfere with the end result, have been eliminated (mainly server rooms with high energy consumption per unit of area - higher than standard branches and office space).

Table 2.1B
Fuel consumption: absolute values - comparison of the year 2020 before and after recalculation [in kWh]

	PKO BP			subsidiaries			CG		
	2020 after recalculation	**2020**	difference	2020 after recalculation	**2020**	difference	2020 after recalculation	**2020**	difference
Fuels used in buildings									
natural gas	**20,866,063.70**	**20,866,063.70**	**0.00**	**3,731,701.14**	**3,731,701.14**	**0.00**	**24,597,764.84**	**24,597,764.84**	**0.00**
heating oil	**1,672,103.26**	**1,672,103.26**	**0.00**	**94,407.17**	**94,407.17**	**0.00**	**1,766,510.42**	**1,766,510.42**	**0.00**
diesel oil	**55,754.61**	**93,699.96**	**-37,945.35**	**10,182.40**	**3,818.40**	**6,364.00**	**65,937.01**	**97,518.36**	**-31,581.35**
LPG of	**0.00**	**0.00**	**0.00**	**34,371.33**	**34,371.33**	**0.00**	**34,371.33**	**34,371.33**	**0.00**
brown coal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
hard coal	**171,333.33**	**171,333.33**	**0.00**	**0.00**	**0.00**	**0.00**	**171,333.33**	**171,333.33**	**0.00**
Total fuel used in buildings	**22,765,254.90**	**22,803,200.25**	**-37,945.35**	**3,870,662.04**	**3,864,298.04**	**6,364.00**	**26,635,916.93**	**26,667,498.28**	**-31,581.35**
Fuels used in vehicles									
diesel oil	**815,358.36**	**815,358.36**	**0.00**	**4,479,416.65**	**4,479,416.65**	**0.00**	**5,294,775.01**	**5,294,775.01**	**0.00**
LPG of	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
gasoline	**17,584,638.10**	**17,584,638.10**	**0.00**	**5,700,617.31**	**5,700,617.31**	**0.00**	**23,285,255.41**	**23,285,255.41**	**0.00**
Total fuel used in vehicles	**18,399,996.47**	**18,399,996.47**	**0.00**	**10,180,033.96**	**10,180,033.96**	**0.00**	**28,580,030.42**	**28,580,030.42**	**0.00**
Total fuels corresponding with Scope 1 emissions	**41,165,251.36**	**41,203,196.71**	**-37,945.35**	**14,050,696.00**	**14,044,332.00**	**6,364.00**	**55,215,947.36**	**55,247,528.71**	**-31,581.35**
Energy purchased									
electricity[35]	**80,828,671.63**	**81,546,728.76**	**-718,057.12**	**10,003,566.15**	**10,290,782.93**	**-287,216.78**	**90,832,237.78**	**91,837,511.69**	**-1,005,273.90**
heat energy	**66,959,065.08**	**66,959,065.08**	**0.00**	**7,469,310.29**	**6,751,796.29**	**717,514.00**	**74,428,375.38**	**73,710,861.38**	**717,514.00**
Total energy purchased, corresponding with Scope 2 emissions	**147,787,736.71**	**148,505,793.84**	**-718,057.12**	**17,472,876.45**	**17,042,579.23**	**430,297.22**	**165,260,613.16**	**165,548,373.06**	**-287,759.90**
Total energy corresponding with Scope 1 and 2 emissions	**188,952,988.08**	**189,708,990.55**	**-756,002.47**	**31,523,572.44**	**31,086,911.22**	**436,661.22**	**220,476,560.52**	**220,795,901.77**	**-319,341.25**

[35] A decrease in the electrical energy consumption is due to more precise calculation of energy consumption for those locations, for which source data is not available. The estimation was based on a coefficient determined for locations with similar modes of use. At present, locations, which may interfere with the end result, have been eliminated (mainly server rooms with high energy consumption per unit of area - higher than standard branches and office space).

Table 2.2.
Fuel consumption: absolute values in year 2021 [in kWh]

	PKO BP			subsidiaries			CG		
	data	estimates	total	data	estimates	total	data	estimates	total
Fuels used in buildings									
natural gas	13,858,871.66	5,847,018.30	19,705,889.97	3,280,964.38	468,054.97	3,749,019.35	17,139,836.04	6,315,073.27	23,454,909.31
heating oil	2,187,942.24	0.00	2,187,942.24	97,586.11	0.00	97,586.11	2,285,528.36	0.00	2,285,528.36
diesel oil	48,741.93	0.00	48,741.93	12,461.40	0.00	12,461.40	61,203.33	0.00	61,203.33
LPG of	0.00	0.00	0.00	29,873.91	0.00	29,873.91	29,873.91	0.00	29,873.91
brown coal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hard coal	179,166.67	0.00	179,166.67	0.00	0.00	0.00	179,166.67	0.00	179,166.67
Total fuel used in buildings	16,274,722.51	5,847,018.30	22,121,740.81	3,420,885.80	468,054.97	3,888,940.77	19,695,608.31	6,315,073.27	26,010,681.58
Fuels used in vehicles									
diesel oil	1,124,237.91	0.00	1,124,237.91	4,096,741.24	0.00	4,096,741.24	5,220,979.15	0.00	5,220,979.15
LPG of	189.35	0.00	189.35	0.00	0.00	0.00	189.35	0.00	189.35
gasoline	18,231,177.83	0.00	18,231,177.83	6,126,970.22	0.00	6,126,970.22	24,358,148.05	0.00	24,358,148.05
Total fuel used in vehicles	19,355,605.09	0.00	19,355,605.09	10,223,711.46	0.00	10,223,711.46	29,579,316.55	0.00	29,579,316.55
Total fuels corresponding with Scope 1 emissions	35,630,327.60	5,847,018.30	41,477,345.90	13,644,597.26	468,054.97	14,112,652.23	49,274,924.86	6,315,073.27	55,589,998.13
Energy purchased									
electricity	70,370,657.99	5,123,025.40	75,493,683.39	10,196,496.96	928,294.95	11,124,791.91	80,567,154.95	6,051,320.35	86,618,475.30
heat energy	44,747,345.77	22,939,958.67	67,687,304.44	5,158,514.59	3,547,833.50	8,706,348.10	49,905,860.36	26,487,792.18	76,393,652.54
Total energy purchased, corresponding with Scope 2 emissions	115,118,003.76	28,062,984.07	143,180,987.83	15,355,011.55	4,476,128.45	19,831,140.01	130,473,015.31	32,539,112.52	163,012,127.84
Total energy corresponding with Scope 1 and 2 emissions	150,748,331.36	33,910,002.37	184,658,333.74	28,999,608.81	4,944,183.43	33,943,792.24	179,747,940.17	38,854,185.80	218,602,125.97

Table 2.3.
Fuel consumption: absolute values - year 2021 in comparison with year 2019 after recalculation [in kWh]

	PKO BP			subsidiaries			CG		
	2021	**2019** after recalculation	difference	**2021**	**2019** after recalculation	difference	**2021**	**2019** after recalculation	difference
Fuels used in buildings									
natural gas	**19,705,889.97**	**20,465,060.09**	**-759,170.13**	**3,749,019.35**	**2,939,802.29**	**809,217.06**	**23,454,909.31**	**23,404,862.38**	**50,046.94**
heating oil[36]	**2,187,942.24**	**3,367,591.00**	**-1,179,648.76**	**97,586.11**	**132,432.55**	**-34,846.44**	**2,285,528.36**	**3,500,023.55**	**-1,214,495.19**
diesel oil	**48,741.93**	**81,469.00**	**-32,727.07**	**12,461.40**	**16,759.20**	**-4,297.80**	**61,203.33**	**98,228.20**	**-37,024.87**
LPG of	**0.00**	**0.00**	**0.00**	**29,873.91**	**5,718.04**	**24,155.87**	**29,873.91**	**5,718.04**	**24,155.87**
brown coal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
hard coal	**179,166.67**	**207,666.67**	**-28,500.00**	**0.00**	**0.00**	**0.00**	**179,166.67**	**207,666.67**	**-28,500.00**
Total fuel used in buildings	**22,121,740.81**	**24,121,786.76**	**-2,000,045.95**	**3,888,940.77**	**3,094,712.08**	**794,228.70**	**26,010,681.58**	**27,216,498.84**	**-1,205,817.26**
Fuels used in vehicles									
diesel oil	**1,124,237.91**	**1,211,092.62**	**-86,854.71**	**4,096,741.24**	**4,093,034.42**	**3,706.82**	**5,220,979.15**	**5,304,127.04**	**-83,147.89**
LPG of	**189.35**	**0.00**	**189.35**	**0.00**	**0.00**	**0.00**	**189.35**	**0.00**	**189.35**
gasoline	**18,231,177.83**	**27,485,590.87**	**-9,254,413.04**	**6,126,970.22**	**5,810,136.11**	**316,834.11**	**24,358,148.05**	**33,295,726.98**	**-8,937,578.93**
Total fuel used in vehicles[37]	**19,355,605.09**	**28,696,683.49**	**-9,341,078.40**	**10,223,711.46**	**9,903,170.53**	**320,540.93**	**29,579,316.55**	**38,599,854.02**	**-9,020,537.47**
Total fuels corresponding with Scope 1 emissions	**41,477,345.90**	**52,818,470.25**	**-11,341,124.35**	**14,112,652.23**	**12,997,882.61**	**1,114,769.62**	**55,589,998.13**	**65,816,352.86**	**-10,226,354.72**
Energy purchased									
electricity	**75,493,683.39**	**81,675,347.78**	**-6,181,664.39**	**11,124,791.91**	**11,034,126.46**	**90,665.45**	**86,618,475.30**	**92,709,474.24**	**-6,090,998.94**
heat energy	**67,687,304.44**	**68,774,176.29**	**-1,086,871.84**	**8,706,348.10**	**8,938,718.85**	**-232,370.76**	**76,393,652.54**	**77,712,895.14**	**-1,319,242.60**
Total energy purchased, corresponding with Scope 2 emissions	**143,180,987.83**	**150,449,524.07**	**-7,268,536.23**	**19,831,140.01**	**19,972,845.31**	**-141,705.30**	**163,012,127.84**	**170,422,369.38**	**-7,410,241.54**
Total energy corresponding with Scope 1 and 2 emissions	**184,658,333.74**	**203,267,994.32**	**-18,609,660.58**	**33,943,792.24**	**32,970,727.92**	**973,064.32**	**218,602,125.97**	**236,238,722.23**	**-17,636,596.26**

[36] Reduced consumption of heating oil by Bank PKO BP S.A. is caused by reduction of the number of locations, in which heat was generated by burning heating oil (consumption of heating oil by Bank PKO BP S.A. in 2021 decreased by 35.03% in comparison with the base year). In 2021, one real estate property was sold (Bytom), one was connected to the gas network (Krosno Odrzańskie), while two locations were connected to the district heating network (Wadowice and Łosice). In 2020, four locations heated with oil were liquidated (located in Katowice, Gubin, Jaworzno and Kazimierza Wielka).
[37] The change is due to reduced use of company cars - applicable to both year 2021 and 2020.

Table 3.1.
Fuel consumption in year 2019 after recalculation: data and estimate percentages [in %]

	PKO BP		subsidiaries		Total CG	
	data	estimates	data	estimates	data	estimates
Fuels used in buildings						
natural gas	67,67%	32,33%	70,01%	29,99%	67,97%	32,03%
heating oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	0,00%	0,00%	100,00%	0,00%	100,00%	0,00%
brown coal	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
hard coal	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
Total fuel used in buildings	72,57%	27,43%	71,51%	28,49%	72,45%	27,55%
Fuels used in vehicles						
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
gasoline	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total fuel used in vehicles	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total fuels corresponding with Scope 1 emissions	87,47%	12,53%	93,22%	6,78%	88,61%	11,39%
Energy purchased						
electricity	85,80%	14,20%	97,59%	2,41%	87,20%	12,80%
heat energy	65,57%	34,43%	67,19%	32,81%	65,75%	34,25%
Total energy purchased, corresponding with Scope 2 emissions	76,55%	23,45%	83,99%	16,01%	77,42%	22,58%
Total energy corresponding with Scope 1 and 2 emissions	79,39%	20,61%	87,62%	12,38%	80,54%	19,46%

Table 3.2.
Fuel consumption in year 2021: data and estimate percentages [in %]

	PKO BP		subsidiaries		Total CG	
	data	estimates	data	estimates	data	estimates
Fuels used in buildings						
natural gas	70,33%	29,67%	87,52%	12,48%	73,08%	26,92%
heating oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	0,00%	0,00%	100,00%	0,00%	100,00%	0,00%
brown coal	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
hard coal	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
Total fuel used in buildings	73,57%	26,43%	87,96%	12,04%	75,72%	24,28%
Fuels used in vehicles						
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
gasoline	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total fuel used in vehicles	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total fuels corresponding with Scope 1 emissions	85,90%	14,10%	96,68%	3,32%	88,64%	11,36%
Energy purchased						
electricity	93,21%	6,79%	91,66%	8,34%	93,01%	6,99%
heat energy	66,11%	33,89%	59,25%	40,75%	65,33%	34,67%
Total energy purchased, corresponding with Scope 2 emissions	80,40%	19,60%	77,43%	22,57%	80,04%	19,96%
Total energy corresponding with Scope 1 and 2 emissions	81,64%	18,36%	85,43%	14,57%	82,23%	17,77%

Table 4.1A
Base year emissions: a comparison of the base year (2019) before and after the recalculation [in $MgCO_2e$]

	PKO BP			subsidiaries			CG		
	2019 after recalculation	**2019**	difference	2019 after recalculation	**2019**	difference	2019 after recalculation	**2019**	difference
Refrigeration[38]	**912.46**	**0.00**	**912.46**	**0.00**	**0.00**	**0.00**	**912.46**	**0.00**	**912.46**
Emission from fuels used in buildings									
natural gas	**4,145.06**	**4,145.06**	**0.00**	**595.44**	**595.44**	**0.00**	**4,740.50**	**4,740.50**	**0.00**
heating oil	**943.59**	**943.59**	**0.00**	**37.11**	**37.11**	**0.00**	**980.70**	**980.70**	**0.00**
diesel oil	**21.86**	**21.86**	**0.00**	**4.50**	**4.50**	**0.00**	**26.36**	**26.36**	**0.00**
LPG of	**0.00**	**0.00**	**0.00**	**1.30**	**1.30**	**0.00**	**1.30**	**1.30**	**0.00**
brown coal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
hard coal	**73.99**	**73.99**	**0.00**	**0.00**	**0.00**	**0.00**	**73.99**	**73.99**	**0.00**
Total emission from fuels used in buildings	**5,184.50**	**5,184.50**	**0.00**	**638.34**	**638.34**	**0.00**	**5,822.84**	**5,822.84**	**0.00**
Emission from fuels used in vehicles									
diesel oil	**352.37**	**352.37**	**0.00**	**1,155.54**	**1,155.54**	**0.00**	**1,507.92**	**1,507.91**	**0.00**
LPG of	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
gasoline	**6,278.80**	**6,278.80**	**0.00**	**1,877.48**	**1,877.48**	**0.00**	**8,156.27**	**8,156.28**	**0.00**
Total emission from fuels used in vehicles	**6,631.17**	**6,631.17**	**0.00**	**3,033.02**	**3,033.02**	**0.00**	**9,664.19**	**9,664.19**	**0.00**
Total emissions in Scope 1	**12,728.13**	**11,815.67**	**912.46**	**3,671.36**	**3,671.36**	**0.00**	**16,399.50**	**15,487.03**	**912.46**
Emissions from purchased energy									
electricity[39]	**62,481.64**	**64,320.30**	**-1,838.66**	**6,948.96**	**7,008.42**	**-59.46**	**69,430.60**	**71,328.72**	**-1,898.12**
heat energy	**24,585.39**	**24,585.39**	**0.00**	**3,095.70**	**3,095.70**	**0.00**	**27,681.09**	**27,681.09**	**0.00**
Total emissions in Scope 2	**87,067.03**	**88,905.69**	**-1,838.66**	**10,044.66**	**10,104.12**	**-59.46**	**97,111.69**	**99,009.81**	**-1,898.12**
Total emissions in Scope 1 and 2	**99,795.17**	**100,721.36**	**-926.19**	**13,716.02**	**13,775.48**	**-59.46**	**113,511.19**	**114,496.84**	**-985.65**
Emissions from employee business trips									
Domestic and foreign business trips	-	-	-	-	-	-	-	-	-
Employees commuting to work	-	-	-	-	-	-	-	-	-
Total emissions in Scope 3[40]	-	-	-	-	-	-	-	-	-
Total emissions in Scope 1, 2 and 3	-	-	-	-	-	-	-	-	-

[38] The base year recalculation was conducted due to improved data accuracy and inclusion of emissions related to fugitive refrigeration agents, which influence the increase in scope 1 emissions reported.
[39] The base year recalculation was conducted due to more accurate determination of energy consumption estimated for locations, for which source data is not available. The estimation was based on a coefficient determined for locations with similar modes of use.
[40] This emission value was not reported in the year 2019.

Table 4.1B
Emissions: comparison of the year 2020 before and after recalculation of greenhouse gas emissions - the market-based method

	PKO BP			subsidiaries			CG		
	2020 after recalculation	**2020**	difference	2020 after recalculation	**2020**	difference	2020 after recalculation	**2020**	difference
Refrigeration	**782.98**	**782.98**	**0.00**	**0.00**	**0.00**	**0.00**	**782.98**	**782.98**	**0.00**
Emission from fuels used in buildings									
natural gas	**4,226.28**	**4,226.28**	**0.00**	**755.83**	**755.83**	**0.00**	**4,982.11**	**4,982.11**	**0.00**
heating oil	**448.66**	**448.66**	**0.00**	**25.33**	**25.33**	**0.00**	**473.99**	**473.99**	**0.00**
diesel oil	**14.96**	**25.14**	**-10.18**	**2.73**	**1.02**	**1.71**	**17.69**	**26.17**	**-8.47**
LPG of	**0.00**	**0.00**	**0.00**	**7.83**	**7.83**	**0.00**	**7.83**	**7.83**	**0.00**
brown coal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
hard coal	**61.04**	**61.04**	**0.00**	**0.00**	**0.00**	**0.00**	**61.04**	**61.04**	**0.00**
Total emission from fuels used in buildings	**4,750.94**	**4,761.12**	**-10.18**	**791.72**	**790.01**	**1.71**	**5,542.66**	**5,551.14**	**-8.47**
Emission from fuels used in vehicles									
diesel oil	**219.45**	**219.45**	**0.00**	**1,205.62**	**1,205.62**	**0.00**	**1,425.07**	**1,425.07**	**0.00**
LPG of	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
gasoline	**4,342.53**	**4,342.53**	**0.00**	**1,407.77**	**1,407.77**	**0.00**	**5,750.29**	**5,750.29**	**0.00**
Total emission from fuels used in vehicles	**4,561.98**	**4,561.98**	**0.00**	**2,613.39**	**2,613.39**	**0.00**	**7,175.36**	**7,175.36**	**0.00**
Total emissions in Scope 1	**10,095.90**	**10,106.08**	**-10.18**	**3,405.11**	**3,403.40**	**1.71**	**13,501.01**	**13,509.48**	**-8.47**
Emissions from purchased energy									
electricity[41]	**25,863.81**	**32,333.01**	**-6,469.19**	**5,835.93**	**6,492.31**	**-656.38**	**31,699.75**	**38,825.32**	**-7,125.58**
heat energy	**23,261.58**	**23,261.58**	**0.00**	**2,476.31**	**2,289.75**	**186.55**	**25,737.89**	**25,551.33**	**186.55**
Total emissions in Scope 2	**49,125.39**	**55,594.59**	**-6,469.19**	**8,312.24**	**8,782.07**	**-469.83**	**57,437.63**	**64,376.66**	**-6,939.02**
Total emissions in Scope 1 and 2	**59,221.29**	**65,700.67**	**-6,479.38**	**11,717.35**	**12,185.47**	**-468.12**	**70,938.64**	**77,886.14**	**-6,947.50**
Emissions from employee business trips									
Domestic and foreign business trips	**288.67**	**288.67**	**0.00**	-	-	-	**288.67**	**288.67**	**0.00**
Employees commuting to work	**0.00**	**0.00**	**0.00**	-	-	-	**0.00**	**0.00**	**0.00**
Total emissions in Scope 3[42]	**288.67**	**288.67**	**0.00**	-	-	-	**288.67**	**288.67**	**0.00**
Total emissions in Scope 1, 2 and 3	**59,509.96**	**65,989.34**	**-6,479.38**	-	-	-	**71,227.31**	**78,174.81**	**-6,947.50**

[41] The recalculation was due to more accurate determination of energy consumption estimated for locations, for which source data is not available, and due to a change in the emission benchmark for electricity. The emission value was recalculated on the basis of the electricity emission benchmark as in the base year, that is, the emission benchmark for end recipients of electricity (for the year 2019, it was the benchmark published in December 2019, while for the year 2020, it was the benchmark published in December 2020).

[42] For the Capital Group Companies, this emission was not reported.

Table 4.2.
Emissions in year 2021: a comparison of the market-based method and the location-based method [in $MgCO_2e$]

	PKO BP			subsidiaries			CG		
	market-based	location-based	difference	market-based	location-based	difference	market-based	location-based	difference
Refrigeration	561.81	561.81	0.00	0.00	0.00	0.00	561.81	561.81	0.00
Emission from fuels used in buildings									
natural gas	3,991.29	3,991.29	0.00	759.34	759.34	0.00	4,750.63	4,750.63	0.00
heating oil	613.06	613.06	0.00	27.34	27.34	0.00	640.40	640.40	0.00
diesel oil	13.08	13.08	0.00	3.34	3.34	0.00	16.42	16.42	0.00
LPG of	0.00	0.00	0.00	6.80	6.80	0.00	6.80	6.80	0.00
brown coal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hard coal	63.84	63.84	0.00	0.00	0.00	0.00	63.84	63.84	0.00
Total emission from fuels used in buildings	4,681.26	4,681.26	0.00	796.83	796.83	0.00	5,478.09	5,478.09	0.00
Emission from fuels used in vehicles									
diesel oil	299.88	299.88	0.00	1,092.78	1,092.78	0.00	1,392.66	1,392.66	0.00
LPG of	0.04	0.04	0.00	0.00	0.00	0.00	0.04	0.04	0.00
gasoline	4,457.47	4,457.47	0.00	1,498.02	1,498.02	0.00	5,955.49	5,955.49	0.00
Total emission from fuels used in vehicles	4,757.39	4,757.39	0.00	2,590.80	2,590.80	0.00	7,348.20	7,348.20	0.00
Total emissions in Scope 1	10,000.46	10,000.46	0.00	3,387.63	3,387.63	0.00	13,388.10	13,388.10	0.00
Emissions from purchased energy									
electricity[43]	4,589.90	52,682.10	-48,092.20	6,305.17	6,305.17	0.00	10,895.07	58,987.27	-48,092.20
heat energy	23,510.71	23,510.71	0.00	2,897.99	2,897.99	0.00	26,408.70	26,408.70	0.00
Total emissions in Scope 2	28,100.61	76,192.81	-48,092.20	9,203.16	9,203.16	0.00	37,303.78	85,395.98	-48,092.20
Total emissions in Scope 1 and 2	38,101.08	86,193.28	-48,092.20	12,590.80	12,590.80	0.00	50,691.87	98,784.07	-48,092.20
Emissions from employee business trips									
Domestic and foreign business trips	195.09	195.09	0.00	-	-	-	195.09	195.09	0.00
Employees commuting to work	3,341.23	3,341.23	0.00	-	-	-	3,341.23	3,341.23	0.00
Total emissions in Scope 3[44]	3,536.31	3,536.31	0.00	-	-	-	3,536.31	3,536.31	0.00
Total emissions in Scope 1, 2 and 3	41,637.39	89,729.59	-48,092.20	-	-	-	54,228.19	102,320.39	-48,092.20

[43] High reduction of greenhouse gas emission in Scope 2 results, among other things, from purchase by PKO Bank Polski S.A. of electricity generated by water sources in a renewable energy source installation. 68.9 GWh was encompassed by guarantees of origin (PKO Bank Polski S.A. consumed more than 75.4 GWh).
[44] For the Capital Group Companies, this emission was not reported.

Table 4.3.
Emissions in 2021 according to source: source data and estimates - the market-based method [in $MgCO_2e$]

	PKO BP			subsidiaries			CG		
	data	estimates	total	data	estimates	total	data	estimates	total
Refrigeration	561.81	0.00	561.81	0.00	0.00	0.00	561.81	0.00	561.81
Emission from fuels used in buildings									
natural gas	2,807.02	1,184.27	3,991.29	664.54	94.80	759.34	3,471.56	1,279.08	4,750.63
heating oil	613.06	0.00	613.06	27.34	0.00	27.34	640.40	0.00	640.40
diesel oil	13.08	0.00	13.08	3.34	0.00	3.34	16.42	0.00	16.42
LPG of	0.00	0.00	0.00	6.80	0.00	6.80	6.80	0.00	6.80
brown coal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hard coal	63.84	0.00	63.84	0.00	0.00	0.00	63.84	0.00	63.84
Total emission from fuels used in buildings	3,496.99	1,184.27	4,681.26	702.03	94.80	796.83	4,199.02	1,279.08	5,478.09
Emission from fuels used in vehicles									
diesel oil	299.88	0.00	299.88	1,092.78	0.00	1,092.78	1,392.66	0.00	1,392.66
LPG of	0.04	0.00	0.04	0.00	0.00	0.00	0.04	0.00	0.04
gasoline	4,457.47	0.00	4,457.47	1,498.02	0.00	1,498.02	5,955.49	0.00	5,955.49
Total emission from fuels used in vehicles	4,757.39	0.00	4,757.39	2,590.80	0.00	2,590.80	7,348.20	0.00	7,348.20
Total emissions in Scope 1	8,816.19	1,184.27	10,000.46	3,292.83	94.80	3,387.63	12,109.02	1,279.08	13,388.10
Emissions from purchased energy									
electricity	1,014.03	3,575.87	4,589.90	5,727.45	577.72	6,305.17	6,741.48	4,153.59	10,895.07
heat energy	15,541.37	7,969.34	23,510.71	1,712.93	1,185.06	2,897.99	17,254.30	9,154.40	26,408.70
Total emissions in Scope 2	16,555.40	11,545.21	28,100.61	7,440.38	1,762.79	9,203.16	23,995.78	13,308.00	37,303.78
Total emissions in Scope 1 and 2	25,371.59	12,729.49	38,101.08	10,733.21	1,857.59	12,590.80	36,104.80	14,587.07	50,691.87
Emissions from employee business trips									
Domestic and foreign business trips	195.09	0.00	195.09	0.00	0.00	0.00	195.09	0.00	195.09
Employees commuting to work	3,341.23	0.00	3,341.23	0.00	0.00	0.00	3,341.23	0.00	3,341.23
Total emissions in Scope 3	3,536.31	0.00	3,536.31	0.00	0.00	0.00	3,536.31	0.00	3,536.31
Total emissions in Scope 1, 2 and 3	28,907.90	12,729.49	41,637.39	10,733.21	1,857.59	12,590.80	39,641.11	14,587.07	54,228.19

Table 4.4.
Emission according to source: source data and estimates - in year 2021 in comparison with year 2019 after recalculation - the market-based method [in $MgCO_2e$]

	PKO BP			subsidiaries			CG		
	2021	**2019** after recalculation	difference	**2021**	**2019** after recalculation	difference	**2021**	**2019** after recalculation	difference
Refrigeration	**561.81**	**912.46**	**-350.66**	**0.00**	**0.00**	**0.00**	**561.81**	**912.46**	**-350.66**
Emission from fuels used in buildings									
natural gas	**3,991.29**	**4,145.06**	**-153.76**	**759.34**	**595.44**	**163.90**	**4,750.63**	**4,740.50**	**10.14**
heating oil	**613.06**	**943.59**	**-330.54**	**27.34**	**37.11**	**-9.76**	**640.40**	**980.70**	**-340.30**
diesel oil	**13.08**	**21.86**	**-8.78**	**3.34**	**4.50**	**-1.15**	**16.42**	**26.36**	**-9.93**
LPG of	**0.00**	**0.00**	**0.00**	**6.80**	**1.30**	**5.50**	**6.80**	**1.30**	**5.50**
brown coal	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
hard coal	**63.84**	**73.99**	**-10.15**	**0.00**	**0.00**	**0.00**	**63.84**	**73.99**	**-10.15**
Total emission from fuels used in buildings	**4,681.26**	**5,184.50**	**-503.24**	**796.83**	**638.34**	**158.49**	**5,478.09**	**5,822.84**	**-344.75**
Emission from fuels used in vehicles									
diesel oil	**299.88**	**352.37**	**-52.49**	**1,092.78**	**1,155.54**	**-62.76**	**1,392.66**	**1,507.92**	**-115.26**
LPG of	**0.04**	**0.00**	**0.04**	**0.00**	**0.00**	**0.00**	**0.04**	**0.00**	**0.04**
gasoline	**4,457.47**	**6,278.80**	**-1,821.33**	**1,498.02**	**1,877.48**	**-379.45**	**5,955.49**	**8,156.27**	**-2,200.78**
Total emission from fuels used in vehicles[45]	**4,757.39**	**6,631.17**	**-1,873.78**	**2,590.80**	**3,033.02**	**-442.21**	**7,348.20**	**9,664.19**	**-2,315.99**
Total emissions in Scope 1	**10,000.46**	**12,728.13**	**-2,727.67**	**3,387.63**	**3,671.36**	**-283.73**	**13,388.10**	**16,399.50**	**-3,011.40**
Emissions from purchased energy									
electricity[46]	**4,589.90**	**62,481.64**	**-57,891.74**	**6,305.17**	**6,948.96**	**-643.79**	**10,895.07**	**69,430.60**	**-58,535.53**
heat energy	**23,510.71**	**24,585.39**	**-1,074.68**	**2,897.99**	**3,095.70**	**-197.70**	**26,408.70**	**27,681.09**	**-1,272.39**
Total emissions in Scope 2	**28,100.61**	**87,067.03**	**-58,966.42**	**9,203.16**	**10,044.66**	**-841.49**	**37,303.78**	**97,111.69**	**-59,807.91**
Total emissions in Scope 1 and 2	**38,101.08**	**99,795.17**	**-61,694.09**	**12,590.80**	**13,716.02**	**-1,125.22**	**50,691.87**	**113,511.19**	**-62,819.31**
Emissions from business trips and employees commuting to work									
Domestic and foreign business trips	**195.09**	**0.00**	**195.09**	-	-	-	**195.09**	**0.00**	**195.09**
Employees commuting to work	**3,341.23**	**0.00**	**3,341.23**	-	-	-	**3,341.23**	**0.00**	**3,341.23**
Total emissions in Scope 3[47]	**3,536.31**	**0.00**	**3,536.31**	-	-	-	**3,536.31**	**0.00**	**3,536.31**
Total emissions in Scope 1, 2 and 3	**41,637.39**	**99,795.17**	**-58,157.78**	-	-	-	**54,228.19**	**113,511.19**	**-59,283.00**

[45]The change is due to reduced use of company cars - applicable to both year 2021 and 2020.
[46] High reduction in Scope 2 greenhouse gas emissions resulted, among other things, from purchase by PKO Bank Polski S.A. of electricity generated by water sources in a renewable source energy installation (in 2021) and obtaining of electricity from a low-emission source - high-efficiency cogeneration (in 2020).
[47] For the Capital Group Companies, this emission was not reported.

Table 5.1.
Emissions in year 2019 after recalculation according to source: data and estimate percentages [in %]

	PKO BP		subsidiaries		Total CG	
	data	estimates	data	estimates	data	estimates
Refrigeration	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
Emission from fuels used in buildings						
natural gas	67,67%	32,33%	70,01%	29,99%	67,97%	32,03%
heating oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	0,00%	0,00%	100,00%	0,00%	100,00%	0,00%
brown coal	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
hard coal	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
Total emission from fuels used in buildings	74,15%	25,85%	72,02%	27,98%	73,92%	26,08%
Emission from fuels used in vehicles						
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
gasoline	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total emission from fuels used in vehicles	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total emissions in Scope 1	89,47%	10,53%	95,14%	4,86%	90,74%	9,26%
Emissions from purchased energy						
electricity	85,80%	14,20%	97,08%	2,92%	86,93%	13,07%
heat energy	65,57%	34,43%	68,33%	31,67%	65,88%	34,12%
Total emissions in Scope 2	80,09%	19,91%	88,22%	11,78%	80,93%	19,07%
Total emissions in Scope 1 and 2	81,28%	18,72%	90,07%	9,93%	82,35%	17,65%
Emissions from business trips and employees commuting to work						
Total emissions in Scope 3[48]	-	-	-	-	-	-
Total emissions in Scope 1, 2 and 3	-	-	-	-	-	-

[48] This emission value was not reported in the base year.

Table 5.2.
Emissions in year 2021 according to source: data and estimate percentages [in %] – - the location-based method

	PKO BP		subsidiaries		Total CG	
	data	estimates	data	estimates	data	estimates
Refrigeration	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
Emission from fuels used in buildings						
natural gas	70,33%	29,67%	87,52%	12,48%	73,08%	26,92%
heating oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	0,00%	0,00%	100,00%	0,00%	100,00%	0,00%
brown coal	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
hard coal	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
Total emission from fuels used in buildings	74,70%	25,30%	88,10%	11,90%	76,65%	23,35%
Emission from fuels used in vehicles						
diesel oil	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
LPG of	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
gasoline	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total emission from fuels used in vehicles	100,00%	0,00%	100,00%	0,00%	100,00%	0,00%
Total emissions in Scope 1	88,16%	11,84%	97,20%	2,80%	90,45%	9,55%
Emissions from purchased energy						
electricity	93,21%	6,79%	90,84%	9,16%	92,96%	7,04%
heat energy	66,10%	33,90%	59,11%	40,89%	65,34%	34,66%
Total emissions in Scope 2	84,85%	15,15%	80,85%	19,15%	84,42%	15,58%
Total emissions in Scope 1 and 2	85,23%	14,77%	85,25%	14,75%	85,23%	14,77%
Emissions from business trips and employees commuting to work						
Total emissions in Scope 3	100,00%	0,00%	0,00%	0,00%	100,00%	0,00%
Total emissions in Scope 1, 2 and 3	85,81%	14,19%	85,25%	14,75%	85,74%	14,26%

Table 6.1.
Dynamics of changes in fuel consumption - PKO BP [in kWh]

	2021 vs. 2019	2021	change	2020	change	2019 after recalculation
Fuels used in buildings						
natural gas	-3,71%	**19,705,889.97**	-5,56%	**20,866,063.70**	1,96%	**20,465,060.09**
heating oil	-35,03%	**2,187,942.24**	30,85%	**1,672,103.26**	-50,35%	**3,367,591.00**
diesel oil	-40,17%	**48,741.93**	-12,58%	**55,754.61**	-31,56%	**81,469.00**
LPG of	0,00%	**0.00**	0,00%	**0.00**	0,00%	**0.00**
brown coal	0,00%	**0.00**	0,00%	**0.00**	0,00%	**0.00**
hard coal	-13,72%	**179,166.67**	4,57%	**171,333.33**	-17,50%	**207,666.67**
Total fuel used in buildings	-8,29%	**22,121,740.81**	-2,83%	**22,765,254.90**	-5,62%	**24,121,786.76**
Fuels used in vehicles						
diesel oil	-7,17%	**1,124,237.91**	37,88%	**815,358.36**	-32,68%	**1,211,092.62**
LPG of	0,00%	**189.35**	0,00%	**0.00**	0,00%	**0.00**
gasoline	-33,67%	**18,231,177.83**	3,68%	**17,584,638.10**	-36,02%	**27,485,590.87**
Total fuel used in vehicles	-32,55%	**19,355,605.09**	5,19%	**18,399,996.47**	-35,88%	**28,696,683.49**
Total fuels corresponding with Scope 1 emissions	-21,47%	**41,477,345.90**	0,76%	**41,165,251.36**	-22,06%	**52,818,470.25**
Energy purchased						
electricity	-7,57%	**75,493,683.39**	-6,60%	**80,828,671.63**	-1,04%	**81,675,347.78**
heat energy	-1,58%	**67,687,304.44**	1,09%	**66,959,065.08**	-2,64%	**68,774,176.29**
Total energy purchased, corresponding with Scope 2 emissions	-4,83%	**143,180,987.83**	-3,12%	**147,787,736.71**	-1,77%	**150,449,524.07**
Total energy corresponding with Scope 1 and 2 emissions	-9,16%	**184,658,333.74**	-2,27%	**188,952,988.08**	-7,04%	**203,267,994.32**

Table 6.2.
Dynamics of changes in fuel consumption - subsidiaries [in kWh]

	2021 vs. 2019	**2021**	change	**2020**	change	2019 after recalculation
Fuels used in buildings						
natural gas[49]	27,53%	**3,749,019.35**	0,46%	**3,731,701.14**	26,94%	**2,939,802.29**
heating oil	-26,31%	**97,586.11**	3,37%	**94,407.17**	-28,71%	**132,432.55**
diesel oil	-25,64%	**12,461.40**	22,38%	**10,182.40**	-39,24%	**16,759.20**
LPG of	422,45%	**29,873.91**	-13,08%	**34,371.33**	501,10%	**5,718.04**
brown coal	0,00%	**0.00**	0,00%	**0.00**	0,00%	**0.00**
hard coal	0,00%	**0.00**	0,00%	**0.00**	0,00%	**0.00**
Total fuel used in buildings	25,66%	**3,888,940.77**	0,47%	**3,870,662.04**	25,07%	**3,094,712.08**
Fuels used in vehicles						
diesel oil	0,09%	**4,096,741.24**	-8,54%	**4,479,416.65**	9,44%	**4,093,034.42**
LPG of	0,00%	**0.00**	0,00%	**0.00**	0,00%	**0.00**
gasoline	5,45%	**6,126,970.22**	7,48%	**5,700,617.31**	-1,88%	**5,810,136.11**
Total fuel used in vehicles	3,24%	**10,223,711.46**	0,43%	**10,180,033.96**	2,80%	**9,903,170.53**
Total fuels corresponding with Scope 1 emissions	8,58%	**14,112,652.23**	0,44%	**14,050,696.00**	8,10%	**12,997,882.61**
Energy purchased						
electricity[50]	0,82%	**11,124,791.91**	11,21%	**10,003,566.15**	-9,34%	**11,034,126.46**
heat energy[51]	-2,60%	**8,706,348.10**	16,56%	**7,469,310.29**	-16,44%	**8,938,718.85**
Total energy purchased, corresponding with Scope 2 emissions	-0,71%	**19,831,140.01**	13,50%	**17,472,876.45**	-12,52%	**19,972,845.31**
Total energy corresponding with Scope 1 and 2 emissions	2,95%	**33,943,792.24**	7,68%	**31,523,572.44**	-4,39%	**32,970,727.92**

[49] The changes in natural gas consumption and district heat consumption result, among other things, from changes in weather conditions, the value of the heat consumption indicator applied to estimate the consumption level, a change in the area of the space used and more accurate information on the heat transfer media used in individual locations.
[50] In some of the companies, significant differences in electricity consumption are also due to periodic downtimes due to the restrictions implemented in the reporting period due to the pandemic or remote working.
[51] idem.

Table 6.3.
Dynamics of changes in fuel consumption - the Capital Group [in kWh]

	2021 vs. 2019	2021	change	2020	change	2019 after recalculation
Fuels used in buildings						
natural gas	0,21%	**23,454,909.31**	-4,65%	**24,597,764.84**	5,10%	**23,404,862.38**
heating oil	-34,70%	**2,285,528.36**	29,38%	**1,766,510.42**	-49,53%	**3,500,023.55**
diesel oil	-37,69%	**61,203.33**	-7,18%	**65,937.01**	-32,87%	**98,228.20**
LPG of	422,45%	**29,873.91**	-13,08%	**34,371.33**	501,10%	**5,718.04**
brown coal	0,00%	**0.00**	0,00%	**0.00**	0,00%	**0.00**
hard coal	-13,72%	**179,166.67**	4,57%	**171,333.33**	-17,50%	**207,666.67**
Total fuel used in buildings	-4,43%	**26,010,681.58**	-2,35%	**26,635,916.93**	-2,13%	**27,216,498.84**
Fuels used in vehicles						
diesel oil	-1,57%	**5,220,979.15**	-1,39%	**5,294,775.01**	-0,18%	**5,304,127.04**
LPG of	0,00%	**189.35**	0,00%	**0.00**	0,00%	**0.00**
gasoline	-26,84%	**24,358,148.05**	4,61%	**23,285,255.41**	-30,07%	**33,295,726.98**
Total fuel used in vehicles	-23,37%	**29,579,316.55**	3,50%	**28,580,030.42**	-25,96%	**38,599,854.02**
Total fuels corresponding with Scope 1 emissions	-15,54%	**55,589,998.13**	0,68%	**55,215,947.36**	-16,11%	**65,816,352.86**
Energy purchased						
electricity	-6,57%	**86,618,475.30**	-4,64%	**90,832,237.78**	-2,02%	**92,709,474.24**
heat energy	-1,70%	**76,393,652.54**	2,64%	**74,428,375.38**	-4,23%	**77,712,895.14**
Total energy purchased, corresponding with Scope 2 emissions	-4,35%	**163,012,127.84**	-1,36%	**165,260,613.16**	-3,03%	**170,422,369.38**
Total energy corresponding with Scope 1 and 2 emissions	-7,47%	**218,602,125.97**	-0,85%	**220,476,560.52**	-6,67%	**236,238,722.23**

ANNEX NO. 2 TO THE REPORT ON EMISSIONS OF GREENHOUSE GASES OF PKO BANK POLSKI S.A. FOR YEAR 2021

Abbreviations used in the report:

- CH_4 – methane;
- CO_2 – carbon dioxide;
- HFCs – hydrofluorocarbons;
- kg – kilogram;
- kWh – kilowatt hour (amount of power used during 1 hour by a device with a capacity of 1 kW);
- MgCO2e – megagram (tonne) of carbon dioxide equivalent;
- MJ – mega joule;
- MWh – megawatt-hour (amount of power used during 1 hour by a device with a capacity of 1 MW, equal to 1000 kWh);
- N_2O – di-nitrous oxide;
- PFCs – perfluorocarbons
- SF_6 – sulphur hexafluoride

Definitions:

- carbon dioxide equivalent – amount that defines the concentration of carbon dioxide, the emission of which to the atmosphere has an identical effect as a given concentration of a comparable greenhouse gas;
- greenhouse gases – gaseous components of the atmosphere involved in the greenhouse effect;
- GHG Protocol – The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard Revised Edition, guidelines pertaining to reporting the organisation's carbon footprint;
- GHG Protocol Scope 2 Guidance – guidelines concerning Scope 2 that standardise the way in which particular organisations measure emissions from the purchased or acquired electric power, heat and cold;
- location-based method – method of quantitative determination of greenhouse gas emission under Scope 2 on the basis of emission factors for specific locations, considering for example national borders;
- market-based method – method of quantitative determination of greenhouse gas emission under Scope 2 on the basis of emitted greenhouse gas emissions by generators, from which under a contract the applicant purchases electric power associated with guarantees of origin of power or, separately, power origin guarantees;
- recalculation of base year emission – recalculation of base year emission arising from meeting of criteria specified in the policy adopted by the organisation regarding the conversion of emission of base year or in general criteria specified in the GHG Protocol;
- base year – specific year or mean value from several years, in relation to which the organisation compares the reported emissions;
- carbon footprint of the organisation– total sum of greenhouse gases emission caused either directly or indirectly by the organisation;
- emission factor – average value of greenhouse gas emission per unit of consumed power;
- Scope 1 – this scope comprises direct emissions generated as a result of fuel combustion in stationary or mobile sources owned by an organisation or supervised by such an organisation, emissions arising from technological processes, as well as caused by the release of cooling agents;
- Scope 2 – this scope comprises indirect emissions generated as a result of consumption of electric power (purchased from other entities), heat and cold;
- Scope 3 – this scope comprises other indirect emissions generated in the entire supply chain, e.g., as a result of generation and transport of raw materials or semi-products, waste management, business trips of staff members, and also the use of products by final users. This scope is non-compulsory.