

## UPDATED ENVIRONMENTAL STATEMENT 2022

for the ProCredit institutions located in  
Germany



## Information about this statement

This updated Environmental Statement covers the calendar year 2022 and is based on the third full statement for the ProCredit institutions based in Germany which was issued in January 2023. In accordance with the defined scope, every three years a full statement covering all aspects of the environmental management system is published for all ProCredit institutions located in Germany. In the years following the full reports, the Environmental Statement is updated with the most important developments that took place during the respective calendar year. Since the first reporting year, which was 2015, the Environmental Statement has been published by ProCredit Holding AG & Co. KGaA on an annual basis. A detailed overview of the ProCredit group's environmental management system can be found in the most recently published Impact report and full [Environmental Statement 2021](#), where you can also read the sections which have remained unchanged

The scope of the statement and EMAS validation covers the following four institutions:

- ProCredit Holding AG & Co. KGaA, Rohmerplatz 33-37, 60486 Frankfurt am Main
- ProCredit Bank AG, Rohmerplatz 33-37, 60486 Frankfurt am Main, Germany
- ProCredit Academy GmbH, Hammelbacher Straße 2, 64658 Fürth-Weschnitz
- Quipu GmbH, Koenigsberger Straße 1, 60487 Frankfurt am Main

Further information on our group-wide comprehensive commitment to environmental, social and governance issues, including the previously published Environmental Statements and the ProCredit Group Impact Report, can be downloaded from the [ProCredit Holding website](#).

The next updated Environmental Statement is expected to be validated and published in 2024.

**List of abbreviations and names**

<b>CO<sub>2</sub>eq</b>	Carbon dioxide equivalent
<b>CRR</b>	Capital Requirement Regulation
<b>E&amp;S</b>	Environmental and social
<b>EE</b>	Energy efficiency
<b>EMS</b>	Environmental Management System
<b>ESG</b>	Environmental Social Governance
<b>EU</b>	European Union
<b>EUR</b>	Euro
<b>FFM</b>	Frankfurt am Main
<b>FES</b>	Frankfurter disposal and service GmbH
<b>FTE</b>	Full-time equivalent
<b>GEM</b>	Group Environmental Management
<b>GHG</b>	Greenhouse gas
<b>GR</b>	Environmentally friendly projects, environmental protection measures
<b>GRI</b>	Global Reporting Initiative
<b>IPC</b>	Internationale Projekt Consult GmbH
<b>SME</b>	Small and medium-sized enterprises
<b>kWh</b>	Kilowatt hours
<b>LED</b>	Light-emitting diode
<b>OS</b>	Overnight stay
<b>PCA</b>	ProCredit Academy
<b>PCAF</b>	Partnership for Carbon Accounting Financials
<b>PCB</b>	ProCredit Bank
<b>PCBG</b>	ProCredit Bank Germany
<b>PP</b>	Per person
<b>PCH</b>	ProCredit Holding
<b>PLA</b>	Polylactic acid
<b>PV</b>	Photovoltaic
<b>RE</b>	Renewable energy

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## 1 Foreword

2022 was a challenging year for the entire ProCredit group. Our bank, our staff and our clients were and continue to be directly impacted by the war in Ukraine. We feel a strong sense of solidarity with our colleagues there, and many employees have given their time and energy to support and host refugees fleeing the upheaval and destruction. For example, accommodations were provided at the outbreak of the war at the ProCredit Academy in Fürth, where we welcomed our Ukrainian colleagues with open arms and helped them settle in.

Despite the impact of the war, we continued to do all we could to improve our environmental performance on group level, including the institutions in Germany. General consumption of electricity, water, and especially emissions from flights have increased over the last year as a result of our operations going back to normal. However, the total or full-time equivalent (FTE) consumption has remained significantly lower than the levels in 2019, the last year before the pandemic struck.

We will continue to reduce our environmental footprint by continuously analysing and monitoring the impact of our activities. We have set group-wide targets specifically designed to reduce emissions through energy efficiency, renewable energy, and reduced resource consumption. An important step to reducing our carbon footprint is to gradually convert the vehicle fleets at each institution to e-mobility. As an example, ProCredit Holding invested in more electric cars in 2022 to create a greater incentive for employees to make the transition from fossil fuel cars to e-transport.

We are also very pleased to report that our goal to increase the relative size of the group's green loan portfolio to 20% of the total loan portfolio was reached at the end of 2022. The share of green loans has been rising consistently since 2015, and now that it accounts for 20.2% of total loans, we aim to further increase the green share to 25% of the total loan portfolio in the medium term while maintaining its high quality.

As our annual environmental plan shows, we continuously strive to improve our performance, knowing that every effort made to address environmental, social and governance (ESG) topics is a good investment in the long term – for us and for society.

### 1.1 Relevant changes at the institutions

In 2022, all our institutions returned to pre-pandemic operations. For example, last year was a fully operational year at the Academy after the closures in 2020 and 2021. However, when war broke out in Ukraine at the beginning of 2022, the Academy offered the premises as a safe haven for refugees from the brutal conflict.

In this report, we have decided not to report the number of employees occupying offices, as by the middle of the year most of our staff had returned to work at the office instead of working from home. Throughout the report, we will also be comparing some 2022 consumption values



with the data from 2019, this was the last year before COVID-19 regulations went into force; it is therefore more meaningful to use the data from that year as a benchmark. The data for 2019 can be found in the full statement from 2021.

Quipu began renting an additional workspace consisting of 581 m<sup>2</sup> in the same building at Koenigsberger Str. 1 in July 2022. The new work area was renovated and set up to comply with social distancing and other safety requirements.

## 1.2 Significant environmental requirements and their implementation

The ProCredit locations in Germany are subject to various legal requirements. The following are the most relevant environmental regulations:

- German Regulation on Hazardous Substances - Regulation on Protection against Hazardous Substances (GefStoffV)

This regulation describes the requirements for risk assessment, basic obligations and protective measures depending on the hazard. The aim of the regulation is to protect people and the environment from the effects of harmful substances.

- German Regulation on Facilities for Handling Substances that are Hazardous to Water (AwSV)

This regulation serves to protect bodies of water against hazardous substances. Each substance is classified according to its hazard potential and, on that basis, requirements are laid down for facilities and handling.

- EU Regulation 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing EC Regulation 842/2006 (EU F Gas Regulation)

This regulation sets out bans, restrictions and maintenance requirements relating to fluorinated greenhouse gases (F-gases) in the EU. The aim is to reduce emissions in order to meet the obligations of the Montreal Protocol.

- German Regulation on the Management of Commercial Municipal Waste and of Certain Construction and Demolition Waste (GewAbfV)

In order to ensure that waste is recycled in the best possible way, GewAbfV regulates the separation of waste from commercial enterprises. Waste is separated according to paper, glass, plastics, metal, organic waste, wood and textiles.

- First regulation for the implementation of the German Federal Emissions Control Act - Regulation on Small and Medium Combustion Plants (1. BImSchV)

In order to reduce air pollution, this document regulates the operation of combustion plants, which are not subject to approval according to section 4 BImSchV. The regulation also promotes efficient use of energy.

- German Chimney and Flue Cleaning and Inspection Regulation (KÜO)

The KÜO governs fire protection and safety for operators of gas, oil and solid fuel combustion plants. It regulates maintenance needs and requirements for installations and heating safety inspectors (*Bezirksschornsteinfeger*).

- Wastewater Ordinance (AbwV)

The Wastewater Ordinance (AbwV) regulates the minimum requirements to be set for permits to discharge wastewater. Annex 31 of the Wastewater Ordinance (AbwV) deals with the requirements for the discharge of wastewater in connection with water treatment, cooling systems and steam generation. It applies to wastewater discharges of more than 10 m<sup>3</sup> per week from swimming pool water treatment.

The provisions of 1 BImSchV, KÜO and AwSV are only relevant for ProCredit Academy. For the other locations, this responsibility lies with the building owner, and we simply monitor implementation.

The regulations are implemented as follows:

**GefStoffV:** The existing substances are recorded in a hazardous substance register with a risk assessment showing the degree of hazard they pose. Protective equipment (e.g. safety goggles) is provided for handling the substances. The substances are stored in a safe environment and disposed of by suitable service providers.

**AwSV:** The underground oil-fired boiler at PCA is regularly inspected by an expert. The relevant records, certificates and reports are retained. If defects are found during the inspection, they will be rectified by competent service providers in a verifiable and timely manner.

**EU F Gases Regulation:** Refrigeration systems are subject to regular leakage tests by suitable service providers. PCA retains reports of these tests and complies with testing intervals. At the other locations, this responsibility lies with the respective building owner, but implementation is also monitored by the institutions.

**GewAbfV:** Waste is collected at all locations and separated into paper, glass, organic waste, plastics and, if necessary, wood, metal and textiles. For PCA, the disposal company certificates are also documented. For the other locations, the responsibility lies with the respective building owner.

**1. BImSchV and KÜO:** At PCA, the existing (oil) combustion installations are tested and maintained in accordance with the statutory provisions. The relevant documentation on heating system inspections and maintenance is retained in order to ensure compliance with threshold values, maintenance intervals, etc.

**AbwV:** The discharge of wastewater from the water treatment of the PCA swimming pool is subject to Annex 31 of the Wastewater Ordinance. In accordance with Annex 31 of the

Wastewater Ordinance (AbwV), the PCA has the necessary authorization for the discharge of wastewater in connection with water treatment.

Compliance with the legal requirements at all institutions is managed within the framework of the legal register, which is an essential component of our environmental management system.

## **2 Current status of environmental aspects and impacts**

Environmental aspects are elements or characteristics of the business activities of an organisation that can have an impact on the environment. The definition of and evaluation criteria for direct and indirect aspects remained the same.

### **2.1 Direct and indirect aspects**

The relevance of the direct and indirect environmental aspects is determined by each institution as part of its environmental audit. Due to their different business models and building types, the degree of environmental relevance and control of each aspect varies from institution to institution. The weighting of the aspects for each institution in 2022 remains the same as in the complete environmental statement from 2021.

A detailed overview of the different levels of control and environmental relevance of the direct and indirect aspects of the four ProCredit institutions in Germany can be found in last year's full environmental statement. There were no changes in 2022.

### 3 Environmental data

#### 3.1 Complete overview of ProCredit



In 2022, the total number of staff employed by the ProCredit institutions based in Germany increased by 1% in comparison to the previous year, from 373 to 376. The increase took place at PCH (4%) and PCA (1%), whereas PCB and Quipu saw a slight decline in staff numbers (3% and 1%, respectively).

With the relaxation of the COVID-19 measures, most of our employees have taken the opportunity to return to work in the office.

**Table 1: Number of employees**

Indicator	Unit	PCH			PCBD			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Employees <sup>1</sup>	No	122	132	137	65	69	67	141	146	144	30	26	28
Employees	FTE	111	121	122	58	60	58	124	132	136	15	18	27



The almost complete in-office presence was accompanied by increased electricity consumption (16%) compared to 2021. However, electricity consumption decreased by 11% compared to 2019, when our in-office attendance was not yet influenced by COVID-19 regulations. This decline can be explained by more efficient appliances and conscious consumption after the pandemic period.

In heating and fuel consumption, a reduction of at least 5 % was achieved compared to the previous year.

<sup>1</sup> Data for employees represent the average number of employees or full-time equivalents for the respective year and refer to all persons working in Germany, including participants in the staff exchange programme but excluding staff on maternity or parental leave. The figures for Quipu only include employees working at its Frankfurt headquarters. There was a slight update in the number of employees in 2020 and 2021, leading to changes regarding relative data in the other sections.

**Table 2: Total energy consumption**

Energy <sup>2</sup>					
Indicator	Unit	2020	2021	2022	Difference 2021/2022
Total energy consumption	kWh	1,559,244	1,586,950	1,595,935	1%
Relative energy consumption	kWh/FTE	5,066	4,796	4,649	-10%
<i>Electricity</i>	kWh	463,965	462,713	536,941	+16%
<i>Heating energy</i>	kWh	828,290	977,515	802,913	-18%
<i>Heating energy (weather-adjusted)</i>	kWh	1,046,174	1,072,419	1,022,681	-5%
<i>Fuel</i>	kWh	43,199	44,656	27,906	-38%



The total amount of fresh water consumed by the institutions increased by 30% compared to 2021, which is again related to the higher office presence and the complete reopening of the Academy. At 5.8 m<sup>3</sup>, the relative water consumption per FTE at our institutions in Germany (excluding the Academy) is below the benchmark of excellence<sup>3</sup> and decreased by 33% in comparison to 2019.

**Table 3: Total water consumption**

Water consumption					
Indicator	Unit	2020	2021	2022	Difference 2021/2022
Total water consumption	m <sup>3</sup>	5,703	6,014	7,814	+30%
Relative water consumption	m <sup>3</sup> /FTE	18.5	18.2	22.8	+26%



The total and relative amount of household waste, including non-separated waste, plastic waste, paper waste and organic waste, has increased significantly. This can also be explained by the reopening of the Academy and the physical presence in the offices of the other institutions. If we compare the results from 2022 to the data from 2019, the amount of waste has either decreased or remained the same. Compared to the EMAS

<sup>2</sup> The energy consumption figures for 2020 and 2021 differ slightly from those published in the EMAS 2021 statement as a result of small adjustments made during the year.

<sup>3</sup> The benchmark of excellence can be found under 6.8 Indicators and benchmarks for comparison.

benchmark for offices, which is 200 kg/FTE/year, our waste production of 60 kg/FTE/year is not considerable. In all institutions, the waste separation system in the office kitchens has been optimised and the goal for next year is to decrease the amount of waste by continuing to raise awareness about food waste and reusable packaging.

**Table 4: Total waste generation**

Waste generation					
Indicator	Unit	2020	2021	2022	Difference 2021/2022
Total household waste volume	kg	34,735	13,632	37,431	175%
Relative household waste volume	kg/FTE	113	41	109	165%
Total E-waste volume	kg	876	1,499	1,254	-16%



Paper consumption was reduced by 16% in 2022, an achievement that can be attributed to the use of Adobe Sign, our digital signature software. Because this product enables us to sign digitally within our institutions, printing is only used in cases that explicitly require it, as in the case of legal provisions requiring contracts to be kept in paper form. All of our institutions aim to continuously reduce paper consumption and to use recycled paper wherever possible.

**Table 5: Total paper consumption**

Paper consumption					
Indicator	Unit	2020	2021	2022	Difference 2020/2021
Total paper consumption	kg	1,265	1,176	991	-16%
Relative paper consumption	kg/FTE	4.1	3.6	2.9	-18%

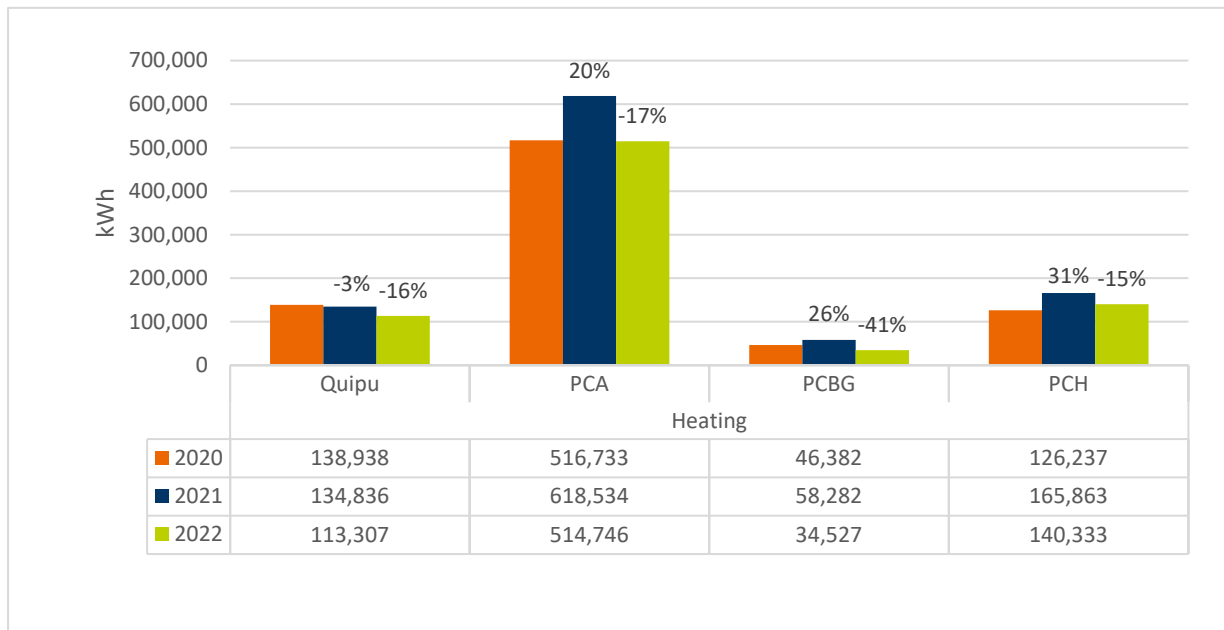
### 3.2 Direct aspects per institution

#### 3.2.1 Energy consumption



Energy consumption comprises figures for electricity, heating energy, company vehicle fuel consumption and the energy required for cooking. With regard to heating energy consumption, the reduced number of employees in the larger offices in 2021 required more heating energy to reach the optimum temperature. Having more employees physically present in the offices in 2022 therefore resulted in a decrease of heating use at Quipu, PCBG and PCH.

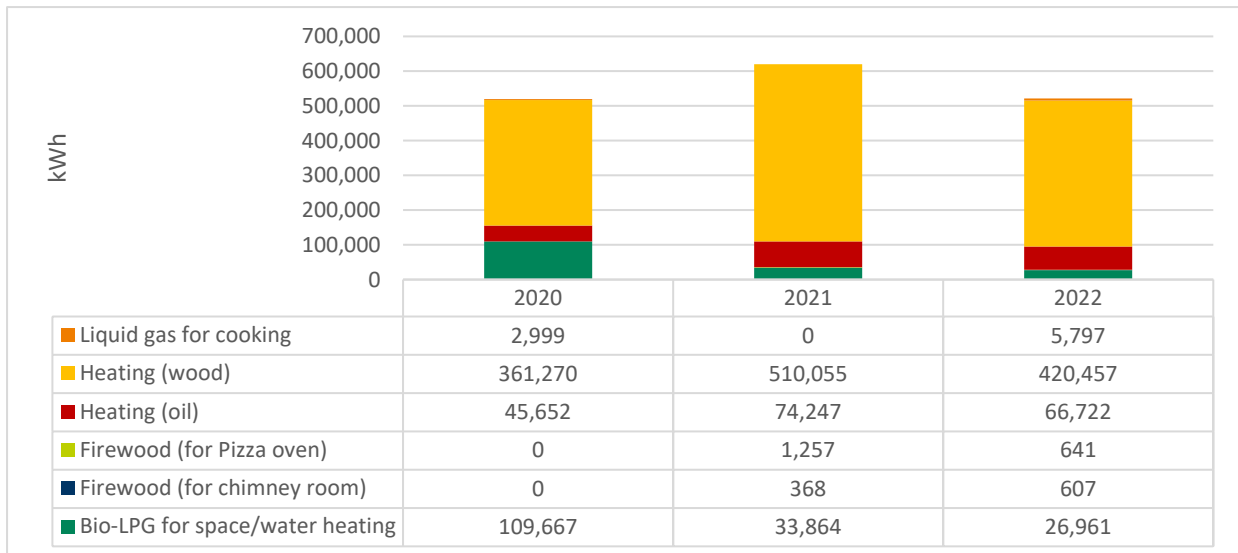
Compared to 2019, all institutions were able to save at least 20% in heating energy last year.



**Figure 1: Heating consumption<sup>4</sup>**

It should be noted that most of the energy consumed at the Academy is used to heat the swimming pool, which was operational again in 2022. The water needs to be maintained at a temperature between 26-28 degrees at all times and the water must be circulated to prevent contamination; both of these processes require a considerable amount of energy. Additionally, the swimming pool was emptied and refilled with fresh water, which had to be reheated from 3 degrees to 28 degrees. In comparison to 2019, the Academy’s heating consumption per overnight stay was reduced by 29%, which reflects more conscious consumption thanks to training and awareness-raising measures.

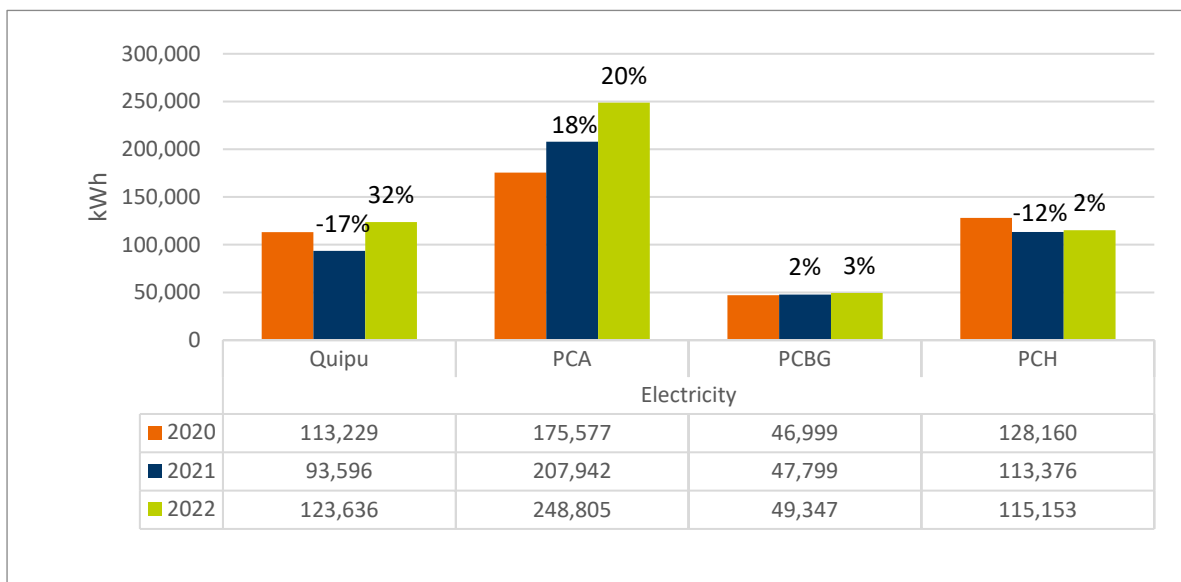
<sup>4</sup> The percentages indicate the respective thermal energy consumption compared to the previous year. This applies to all the following charts.



**Figure 2: Energy consumption for heating and cooking at PCA**

All institutions showed an increase in electricity use in 2022. This reflects the renewed office presence, which entails the use of computers, monitors and lights at the offices. At PCB, an electricity-intensive renovation started in mid-November.

At the Academy, the main source of electricity is the solar PV plant and green electricity purchased from a local energy provider. The installation of air purifiers in all seminar rooms and blue light filters in the HVAC systems might have affected electricity consumption. Accordingly, energy consumption per overnight stay in 2022 was 11 kWh, which is below the EU benchmark of 15 kWh and below the base year 2019.



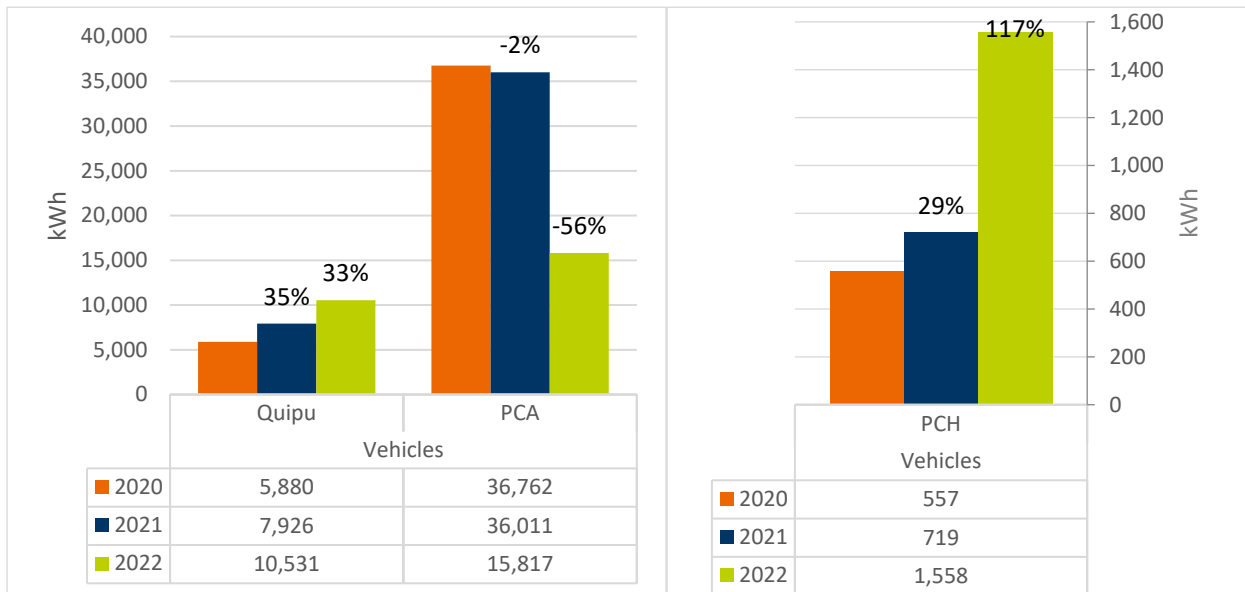
**Figure 3: Electricity consumption<sup>5</sup>**

<sup>5</sup> The values shown from 2021 deviate from the ones published last year due to revisions made during the year.



Energy consumption for vehicles has increased both at PCH and Quipu. PCH promoted its leased electric cars to businesses and also for personal use with the aim of incentivising employees to use electric vehicles instead of gasoline or diesel cars. After the promotional activity, there was a strong increase in the use of the EVs. The Academy has also seen a reduction in the use of diesel cars and an increase in the use of electric cars.<sup>6</sup>

As a group-wide target, we are looking for options to improve commuting and carpooling. Our goal is to support employees who are unable to use public transport on their commutes (due, for example, to complicated travel routes) by providing them with energy-saving and low-emission options.



**Figure 4: Fuel consumption of vehicles**

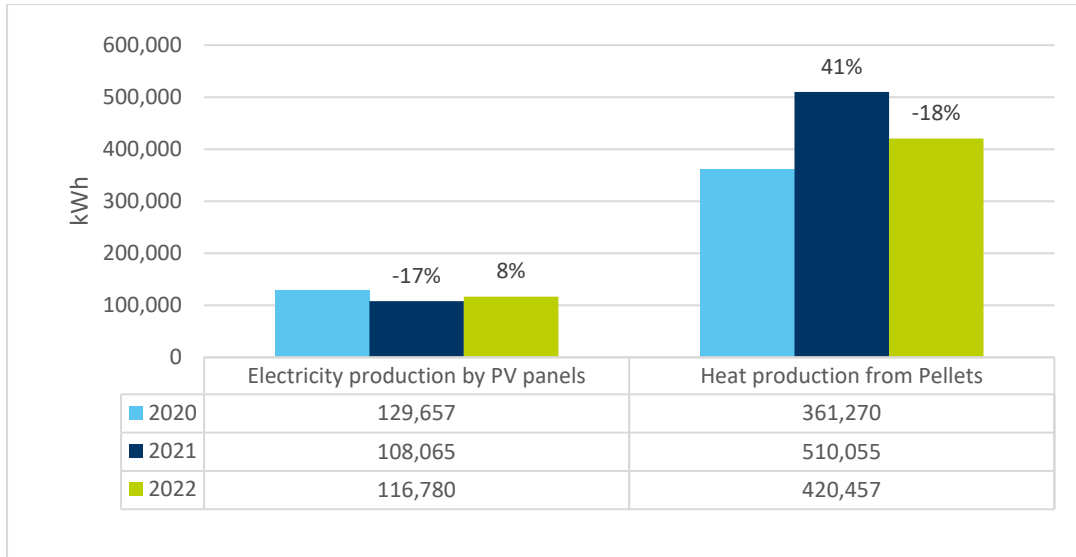
### 3.2.2 Renewable energy generation



After a decrease in electricity production in 2021 due to a malfunction in the PV system during August and September, production resumed and increased by 8%.

The wood pellet heating system also had a defect and remained idle for a few months, whereupon BioLPG was used as a backup; the malfunction is reflected in the data, which shows a decline in heat production from pellets of 18%.

<sup>6</sup> The values shown for the year 2020 for PCA deviate from the ones published last year due to revisions made during the year.



**Figure 5: Energy production at PCA**

### 3.2.3 Emissions

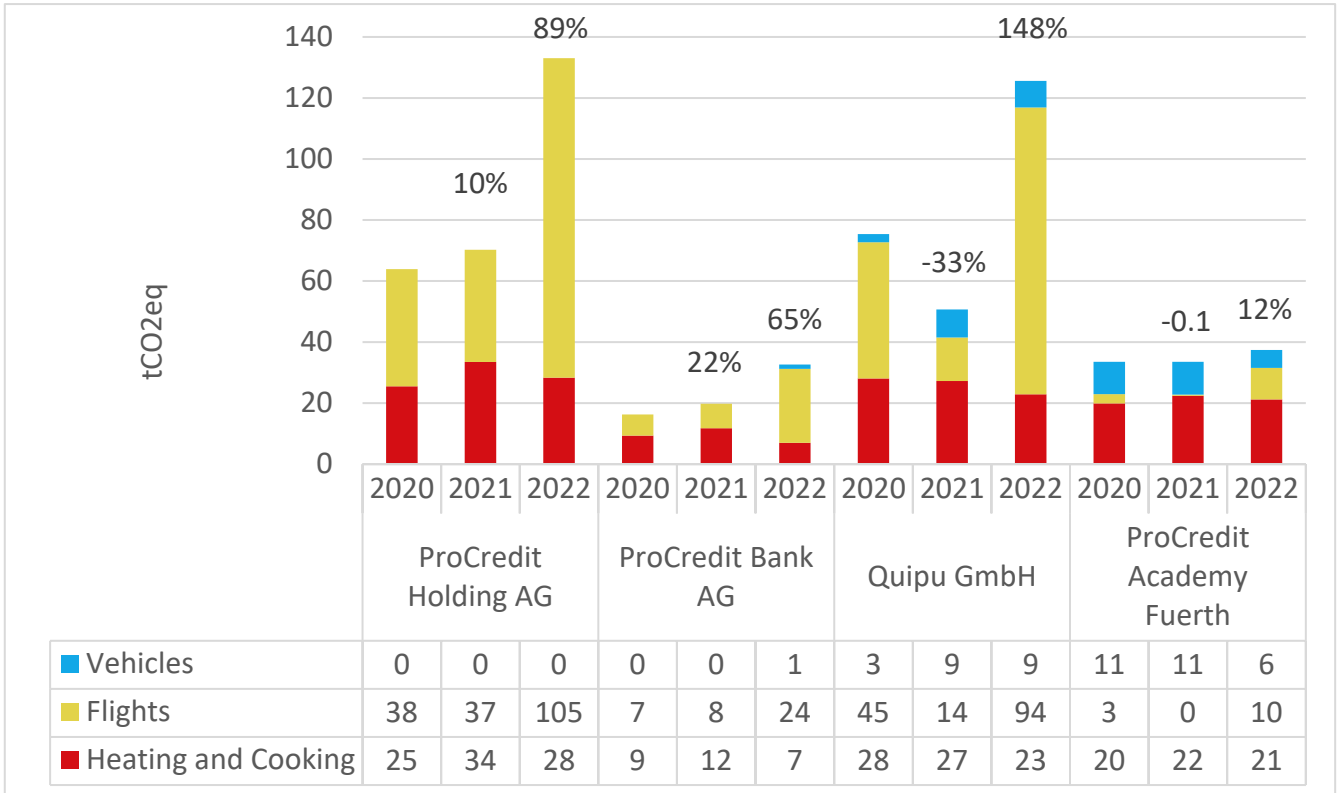


In line with GHG Protocol standards and guidelines, our GHG emissions<sup>7</sup> are reported under the following three scopes:

- Scope 1 comprises emissions from stationary combustion to produce energy for heating and cooking, emissions from the use of fossil-fuel-powered company cars as well as fugitive emissions from air conditioning and refrigeration systems. Scope 1 also covers other emissions such as NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub><sup>8</sup> as required by EMAS regulations (EU commission regulation EU 2018/2026).
- Scope 2 comprises emissions from purchased electricity. In our case there are no direct emissions from the electricity consumption, as electricity is either generated by PCA's own photovoltaic systems or has been purchased by all institutions from certified renewable electricity suppliers since 2016.
- Scope 3 comprises emissions resulting from business air travel. These are represented as CO<sub>2</sub>eq and are estimated via atmosfair GmbH's web-based calculator. We have been calculating our portfolio emissions as a group since 2021. The results for the whole group are presented in section 3.1.

<sup>7</sup> Total GHG emissions include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HCFCs, HFC, PFC, NF<sub>3</sub> and SF<sub>6</sub> and are based on International Energy Agency (2021), Emission Factors and the Intergovernmental Panel on Climate Change (IPCC) 2006 Guidelines for National Greenhouse Gas Inventories, apart from BioLPG and wood pellets. CO<sub>2</sub> emissions from wood pellets are not included in our gross emission calculation (we consider non-CO<sub>2</sub> emissions only, using a factor of 0.3g CO<sub>2</sub>eq/MJ for the combustion of wood pellets according to the Renewable Energy Directive (RED II), Directive (EU) 2018/2001). The emission factor for BioLPG is 0.0603kg CO<sub>2</sub>eq and is based on the World LPG Association (WLPGA) report "Role of LPG and BioLPG in Europe" (2019).

<sup>8</sup> The other air emissions are based on the emission factors from the GEMIS 4.95 Database. For BioLPG, the emission factors for LPG are used due to the lack of separate data for BioLPG.



**Figure 6: CO<sub>2</sub>eq emissions by source for all institutions**

**3.2.3.1 Scope 1 emissions**

At PCH, PCBG and Quipu, natural gas is the source of heating energy. PCA’s main source of heating is BioLPG, wood pellets and oil.

Emissions in this scope are correlated with heating energy consumption. Therefore, a decrease was observed at all institutions. Nevertheless, PCH is looking for alternatives to replace natural gas with carbon-neutral gas from organic sources, and the owner of the building is also willing to make this change in the interest of sustainability. However, success is highly dependent on the other tenants in the building, namely their willingness to pay the additional costs to obtain gas from renewable sources.

**Table 6: Emissions from heating**

Indicator Total heating emissions	Unit	PCH			PCBG			Quipu			PCA <sup>9</sup>		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
CO <sub>2</sub> eq	tCO <sub>2</sub> eq	25.5	33.5	28.3	9.4	11.8	7.0	28.1	27.2	22.9	19.2	22.4	19.9
NO <sub>x</sub>	kgNO <sub>x</sub>	21.0	27.5	23.3	7.7	9.7	5.7	23.1	22.4	18.8	135.6	171.0	142.0
SO <sub>x</sub>	kgSO <sub>x</sub>	1.5	2.0	1.7	0.6	0.7	0.4	1.7	1.6	1.4	60.9	87.3	73.5
PM <sub>10</sub>	kgPM <sub>10</sub>	0.9	1.2	1.0	0.3	0.4	0.2	1.0	0.9	0.8	25.3	35.2	29.1

Emissions from cooking have increased at PCA due to its reopening.

**Table 7: Emissions from cooking**

Indicator Total emissions from cooking <sup>10</sup>	Unit	PCA		
		2020	2021	2022
CO <sub>2</sub> eq	tCO <sub>2</sub> eq	1.34	1.34	1.76
NO <sub>x</sub>	kgNO <sub>x</sub>	0.91	1.59	1.32
SO <sub>x</sub>	kgSO <sub>x</sub>	0.48	1.50	0.71
PM <sub>10</sub>	kgPM <sub>10</sub>	0.09	1.58	0.24

As shown in **Table 8**, emissions from vehicles only account for a small part of the Scope 1 emissions. All institutions are aiming to reduce their use of fossil-fuel-powered vehicles and switch to electric vehicles. As for Quipu, it is looking for options on the market to replace its VW Caddy with electric cars. PCH replaced its privately owned e-vehicle with two leased e-vehicles, which are also available for employees to rent outside of working hours at an advantageous price. The aim is to limit the use of fossil-fuel-powered rental cars for personal needs and to discourage employees from buying a car if they do not already own one.

<sup>9</sup> The difference in the CO<sub>2</sub>eq emissions in comparison to the data presented in last year's Updated Environmental Statement for 2021 is due to the newly read meter described in section 3.2.1.

<sup>10</sup> The difference in the data in this table compared to the data presented in last year's Updated Environmental Statement comes from the correction of the placement of firewood use in the report. Firewood used for cooking was erroneously included in heating emissions rather than in the cooking section in last year's report.

**Table 8: Emissions from vehicles**

Indicator Emissions from vehicles	Unit	PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
CO <sub>2</sub> eq	tCO <sub>2</sub> eq	-	-	-	-	-	-	1.5	2.0	2.7	9.2	8.7	3.2
NO <sub>x</sub>	kgNO <sub>x</sub>	-	-	-	-	-	-	0.5	0.8	1.0	3.0	2.8	0.9
SO <sub>x</sub>	kgSO <sub>x</sub>	-	-	-	-	-	-	0.1	0.1	0.1	0.3	0.3	0.1
PM <sub>10</sub>	kgPM <sub>10</sub>	-	-	-	-	-	-	0.01	0.02	0.02	0.1	0.1	0.01

### 3.2.3.2 Emissions from electricity (Scope 2)

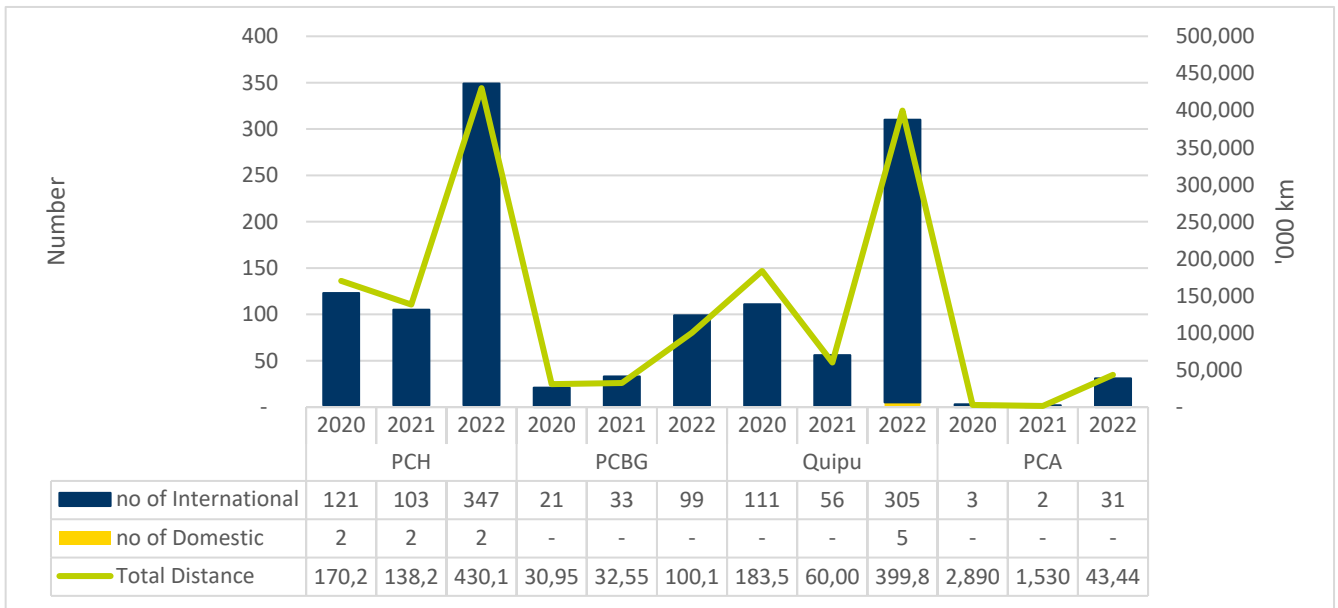
As all four ProCredit institutions have been using electricity from renewable sources since 2016, Scope 2 emissions are considered to be zero.

### 3.2.3.3 Emissions from business travel (Scope 3)

As seen in Figure 6, CO<sub>2</sub>eq emissions generally come from air travel, apart from PCA. Due to the travel restrictions in 2020-2021, the group expanded the use of online tools and reconsidered the structure of meetings. Our flight emissions increased in 2022, partly due to our operations going back to normal after the pandemic, but also driven by the need to respond to the humanitarian and operational requirements arising from the war in Ukraine. In comparison to 2019, only half as many flights were taken last year, and the associated CO<sub>2</sub> emissions were 67% lower, which demonstrates that we have not returned to our previous habits with respect to air travel. As a group, we decided to continue to offer hybrid meetings and we only invite colleagues to attend in person if it is truly necessary. Essential business trips, such as strategic meetings, Academy training events and client visits should be planned ahead and combined if feasible.

**Table 9: CO<sub>2</sub>eq emissions from flights**

Indicator Emissions from flights	Unit	PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
CO <sub>2</sub>	tCO <sub>2</sub>	14.9	14.3	41.6	2.7	3.6	9.9	16.8	5.8	37.0	2.1	0.2	4.1
Other GHG emissions	tCO <sub>2</sub> eq	23.5	22.5	63.1	4.3	4.4	14.3	27.8	8.5	57.0	0.9	0.2	6.2



**Figure 7: Number of flights and total travelled distance**

**3.2.4 Food consumption**

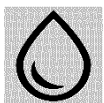


Food consumption is particularly relevant for PCA. However, the other institutions also take great care to ensure that the food and drink provided at events and meetings is sustainably sourced. As detailed in section 3.3.4, the most important sustainability criterion for food suppliers is organic cultivation methods. If this is not possible due to high costs or unavailability, then regional or local food suppliers are considered to be more sustainable.

In some cases, we consider regional producers with good environmental practices to be preferable to certified organic products from further away. This particularly applies to PCA, because there are many small local producers nearby that use organic practices but have no certification due to the size of their farms. In order to support local producers and the regional economy, we prefer to buy from these suppliers rather than from organically certified but unknown brands.

Unfortunately, some of PCA’s suppliers went out of business due to lower demand in the area during the pandemic. Since reopening, PCA has been trying to strengthen the regional market and is supporting its previous suppliers, such as the nearby Hüttenthal dairy, from which the Academy buys milk and other dairy products on a weekly basis.

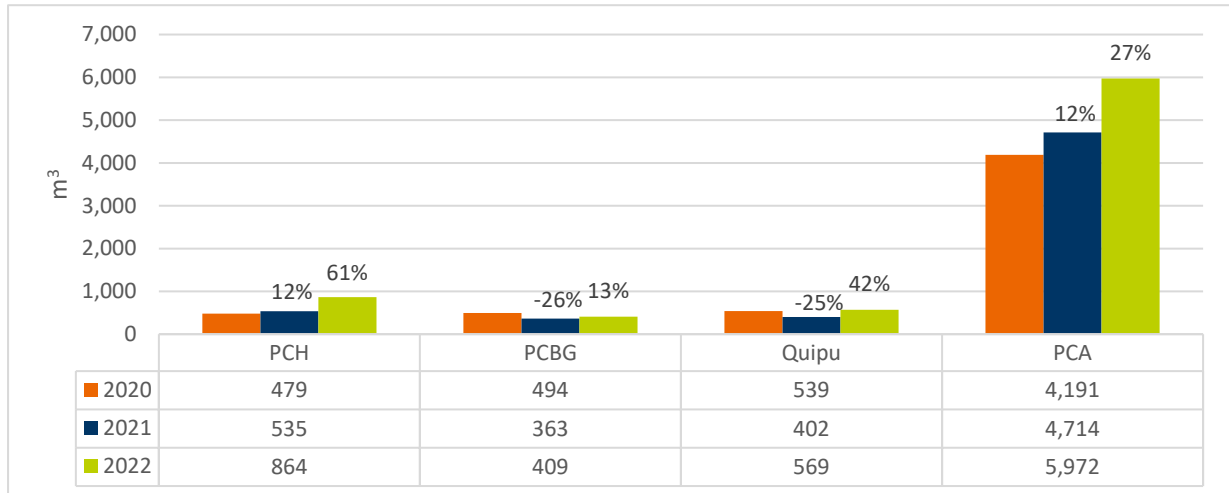
**3.2.5 Water consumption**



Water consumption increased at all institutions and is directly correlated to the number of employees in our offices. The more significant increase of 61% at PCH can additionally be explained by the new drinking water tap. The water from this tap is filtered and offers the option of carbonation. As a result, our employees no longer feel a need

to purchase water in disposable bottles. As of 2021, bottled sparkling water is only used in the meeting rooms at PCH. The same conditions apply to Quipu, which has taken the further step of replacing water bottles with glass pitchers at all meetings.

The majority of water is consumed by the swimming pool at the Academy, whose volume is approximately 2,000m<sup>3</sup>. In 2022, the pool was drained and refilled with around 300,000 litres of fresh water.

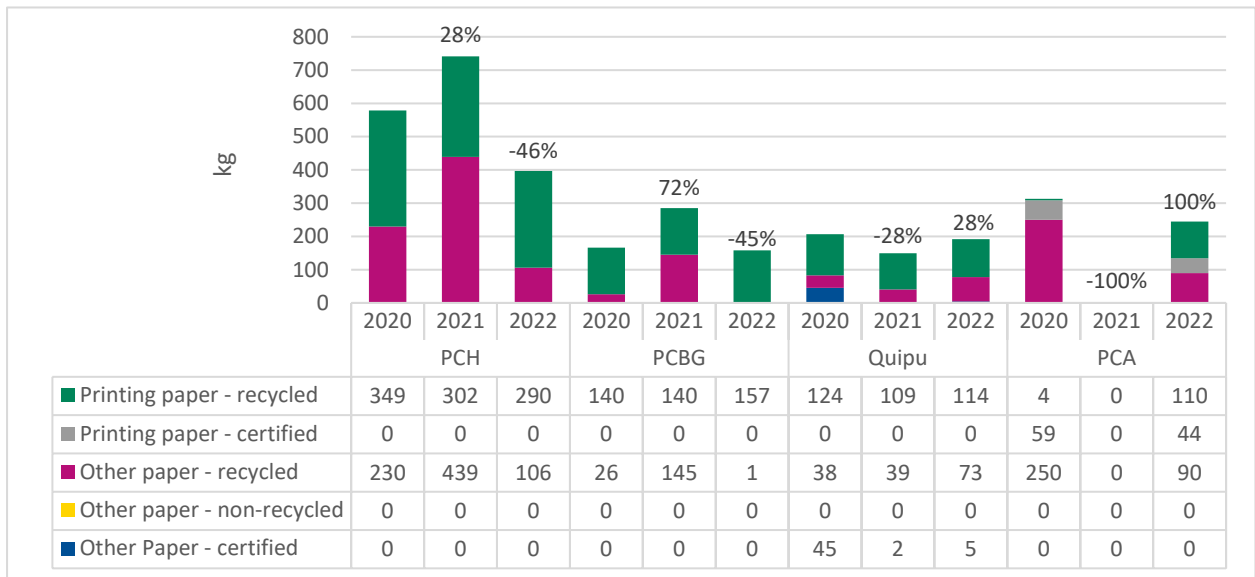


**Figure 8: Water consumption<sup>11</sup>**

### 3.2.6 Paper consumption

All of our institutions are exploring possibilities to further reduce paper use, and digitalising internal processes is one of the best measures to achieve this goal. The success of the transition that took place over the last three years can be seen in the 64% reduction in the paper consumption per FTE (in kg). Using printers with printing statistics per department and user helps to monitor paper consumption and address possible improvements. At Quipu, paper consumption at meetings was slightly higher than in 2021, but total consumption was reduced. The Academy calculates paper consumption by the quantities ordered. In 2021, the unused paper from previous years was used up and no new paper was ordered, which is why there was no new consumption to report. With the reopening of the Academy in 2022, consumption of notebooks, flipcharts, moderation papers and printing paper was recorded again. In 2023 we will develop a method to report the printed amount of paper rather than the ordered amount.

<sup>11</sup> Academy updated water consumption from 2021.



**Figure 9: Paper consumption**

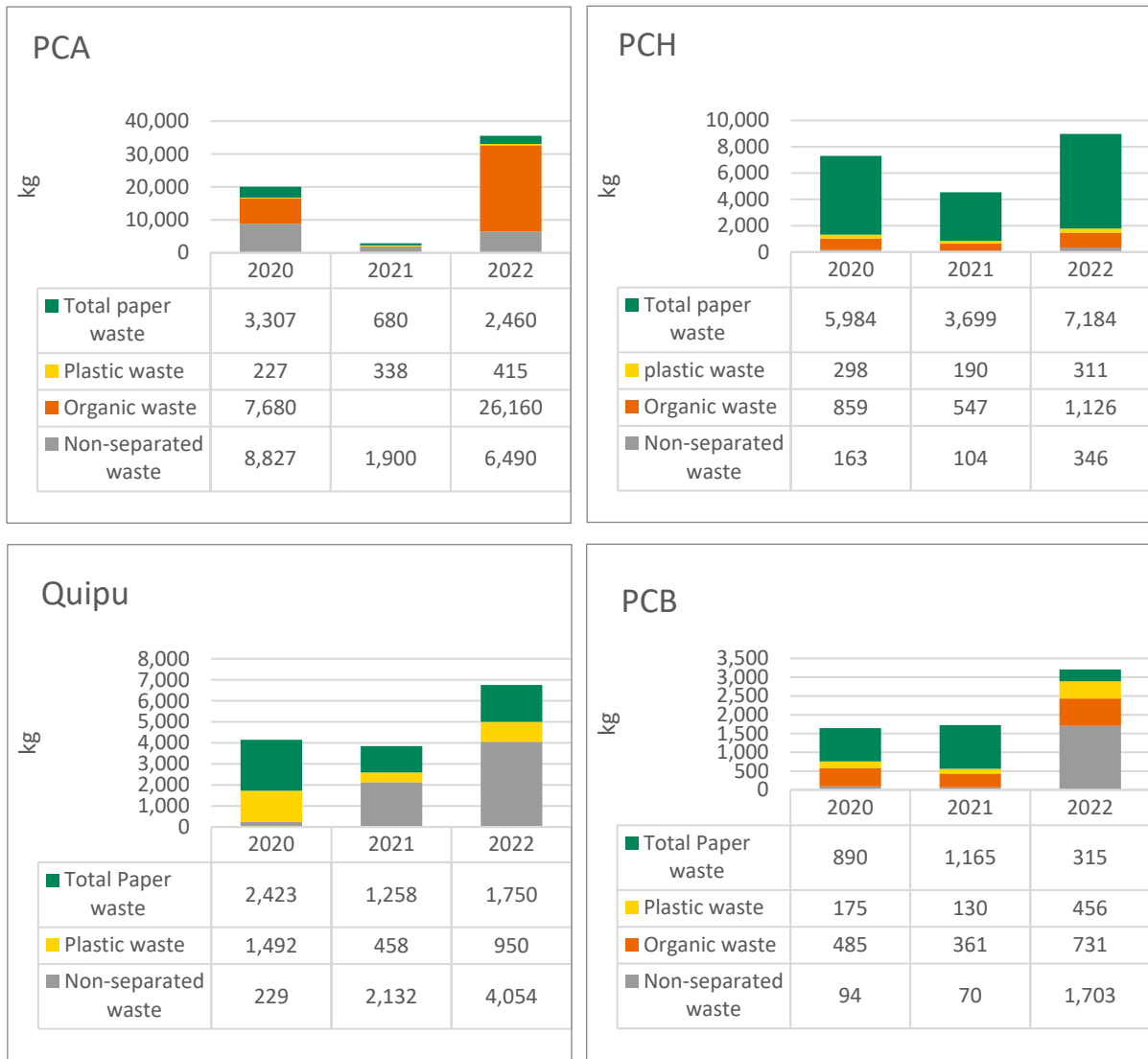
### 3.2.7 Waste generation

Waste comprises household waste<sup>12</sup>, e-waste and hazardous waste. For reporting purposes, usable electronic equipment is also recorded here, although it cannot really be considered as waste as it is often still serviceable. The amount of household waste generated can be seen in Figure 15. Total household waste has generally increased at all institutions due to resumed presence at our offices and overnight stays at the Academy.

At Quipu, the amount of non-separated waste has increased significantly compared to 2021. This is due to the fact that the method for measuring waste has been changed. Previously, waste volumes were estimated as an annual average based on a specific week in the year; now monthly data is projected based on measurements from the first week of each month. The method for measuring waste should also be improved at PCH so as to receive a more reliable result. We aim to weigh our household waste for one week at least twice a year. Paper waste at the Academy mostly includes flipcharts, notebooks, moderation cards and other printing needed for the training sessions. The share of organic waste was the highest due to the fully operational kitchen.

<sup>12</sup> Household waste is the waste produced in the facilities by employees and visitors and includes paper, organic, packaging and residual waste. For PCA, oil from the grease trap is also reported under household waste.





**Figure 10: Household waste**

Quipu mostly sells usable but no longer compliant laptops and mobile phones to employees. E-waste that cannot be sold is collected and recycled by a company called ElectroCycling.

**Table 10: E-waste, usable electronic equipment and hazardous waste**

Indicator	Unit	PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
E-waste	kg	133	697	730	-	-	-	743	802	524	-	-	-
Usable Electronic Equipment	kg	157	4	-	-	-	-	68	56	63	-	-	-
Hazardous waste	kg	-	-	-	-	-	-	40.7	8.37	33.3	-	-	-

### 3.2.8 Land use

Since July 2022 Quipu has been renting an additional workspace consisting of 581 m<sup>2</sup> at Koenigsberger Str.1. Land use at the other institutions stayed the same, as can be seen in the table below.

**Table 11: Land use**

Indicator	Unit	PCH			PCBG <sup>13</sup>			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Total area <sup>14</sup>	m <sup>2</sup>	982	982	982	518	520	520	735	735	817	12,250	12,250	12,250
Total area/ employee	m <sup>2</sup> / FTE	8.8	8.1	8	9	8.7	8.9	5.9	5.6	6	826	698	499.6
Heated area <sup>15</sup>	m <sup>2</sup>	2,390	2,390	2,390	1,421	1,421	1,421	2,258	2,258	2,549	5,184	5,184	5,184
Heated area/ employee	m <sup>2</sup> / FTE	21.5	19.7	19.7	24.6	23.7	24.3	18.2	17.1	18.7	349.5	295.4	211.4
Sealed area <sup>16</sup>	m <sup>2</sup>	954	954	954	503	503	503	517	517	575	9,652	9,652	9,652
Semi-natural (unsealed) area	m <sup>2</sup>	28	28	28	15	17	17	217	217	242	2,598	2,598	2,598

### 3.3 Indirect aspects per institution

The daily operations of the ProCredit banks (including PCBG) indirectly affect the environment in various ways. The most significant factor is the banks' loan portfolios, which are characterised by their special focus on green investments and the mandatory consideration of environmental and social risks when loan proposals are evaluated. ProCredit Holding has especially strong influence with respect to the indirect aspects due to its central role in shaping the strategy, processes and standards of the entire group with regard to environmental protection and sustainability. The environmental performance of the other ProCredit institutions is therefore considered an indirect environmental aspect of ProCredit Holding.

A detailed overview of the different levels of control and environmental relevance of the indirect aspects of the four ProCredit institutions in Germany can be found in last year's full environmental statement. There were no changes in 2022.

<sup>13</sup> Regarding the small change from 2020-2021, nothing has changed in terms of land use per se; they simply found an error in the original calculation and adjusted it.

<sup>14</sup> The total area corresponds to the proportional floor space at the location, including the floor area of the building, the traffic areas (paths and car park on the site), open spaces and semi-natural (unsealed) areas.

<sup>15</sup> The data for the heated area refers to office space, not including storage areas and parking spaces.

<sup>16</sup> For leased areas, the proportion of sealed/unsealed areas was set based on the share in the total leased area at the location.

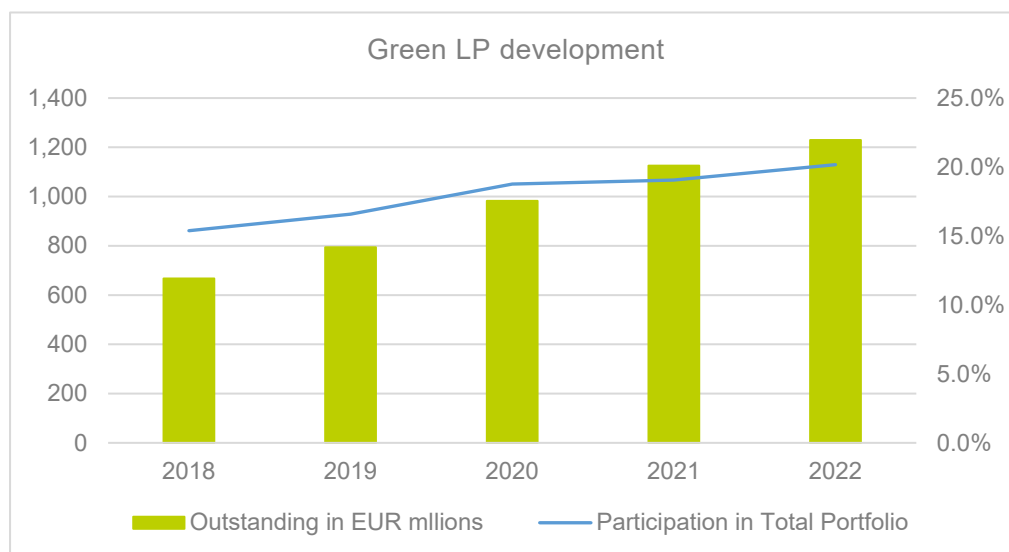
### 3.3.1 Green loan portfolio

In 2018, the ProCredit group set itself the goal to increase the share of green loans in the total loan portfolio to 20%. This was achieved in December 2022, with green loans accounting for 20.2% of all loans.

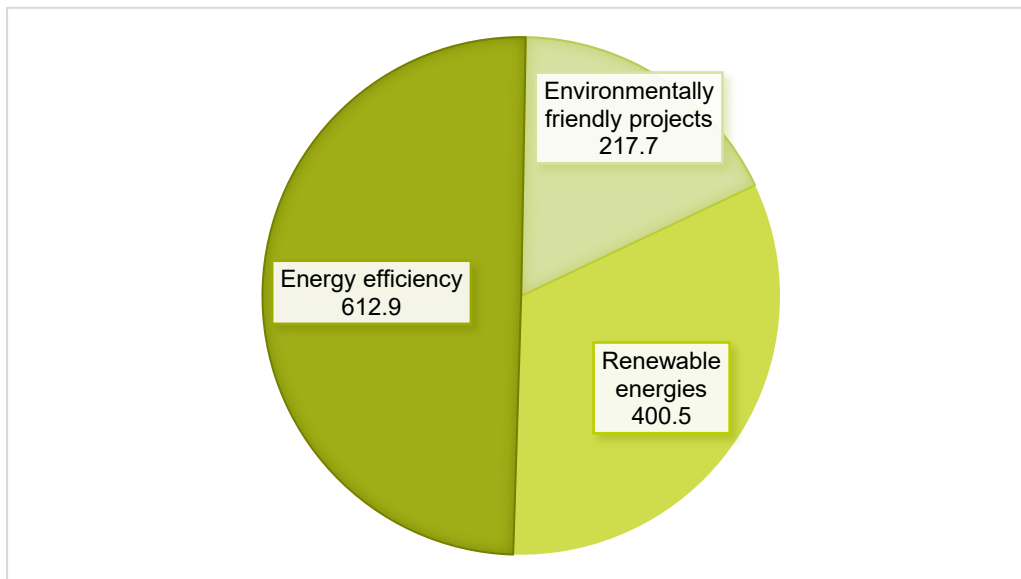
Figure 11 shows the development of the green loan portfolio between 2018 and 2022. The gross green loan portfolio stood at EUR 1,231.1 million by the end of 2022. Of these green loans, about 50% were invested in energy efficiency projects, 32% in renewable energy and about 18% in environmentally friendly measures (see Figure 12).

Over the past few years, we have managed to disburse more than EUR 2 billion in green loans to small and medium-sized companies as well as households. Our portfolio is widely distributed among various segments, including investments in energy-efficient buildings, electro mobility, rooftop and utility-based solar systems, waste management solutions and pollution prevention technologies, with an average loan amount of EUR 140,646.

Nevertheless, we will continue to actively invest more in renewable, energy efficient and other environmentally friendly projects in all our countries of operation as well as review our green loan criteria and align them with certain regional standards (e.g. EU Taxonomy).



**Figure 11: The ProCredit group's outstanding green loan portfolio for private and business clients**



**Figure 12: The ProCredit group's 2022 green loan portfolio in millions of EUR by investment type**

### 3.3.1.1 Regional network of electric vehicle charging stations

As a socially and environmentally responsible group, ProCredit has encouraged the transition to cleaner energy consumption in its countries of operation since the beginning. This has meant making investments in our own RE/EE infrastructure as well as supporting the green investments of our clients, including actively promoting and incentivising e-mobility. In line with these efforts, one of our group's main sustainability goals is to achieve carbon neutrality.

To accomplish this goal, we are continuing to work on converting the car fleet of the 12 ProCredit banks to all-electric models. In 2022, we were able to increase our fleet by 20 additional e-vehicles, which now account for 38% of our total fleet.

The ProCredit banks continued to install charging stations in their countries of operation and expanded the network with 110 new electric charging stations. There are currently 306 stations, 272 of which are also available for the public to use. We plan to continue expanding our network over the next few years.

In line with our aim to continuously raise awareness about e-mobility, we launched a campaign called "No more excuses not to drive an electric car" last year. As a part of the initiative, our banks introduced attractive Eco Drive loans for the purchase of electric cars. We put special emphasis on countries where electric mobility is developing more slowly, such as North Macedonia and Romania, to support the necessary infrastructure and promote greener transportation.

### **3.3.1.2 Accounting for the CO<sub>2</sub> emissions of our loan portfolio**

As part of our continued climate action efforts in support of the Paris Agreement target of limiting global warming to 1.5°C above pre-industrial levels, in 2021 the ProCredit group committed to disclosing information on emissions related to our financial activities (Scope 3 emissions) by implementing the Partnership for Carbon Accounting Financials (PCAF) standard.

In cooperation with our consulting partners Internationale Project Consult (IPC) and Climate Risk Services (CRS) and using technical assistance funds received from the Development Bank of Austria (OeEB), we applied the PCAF methodology and approach in our first report, disclosed in the Impact Report Annex 2021. In 2022 we increased the accuracy of some of the calculations with data provided by our clients. In particular, data on our green loans improved the score.

The main contributors to our loan portfolio emissions are connected to economically important sectors, such as agriculture, livestock and the manufacturing of raw materials. These results confirm the soundness of the approach promoted by the various international standards and regulations that prioritise energy-intensive sectors in the transition to low-carbon technologies.

We aim to continue establishing new strategies to support our clients in the sectors identified in the transition to low-carbon technologies and at the same time strengthen our data quality and acquisition process in order to improve the accuracy of our carbon accounting. The results from 2021 and 2020 are summarised in Annex 6.2.

### **3.3.1.3 Green seminars**

As in previous years, two green seminars were held at the Academy in 2022, the first in March and the second one in September. The latest regulations and developments regarding climate change, as well as our special topic of animal welfare, were discussed at both seminars.

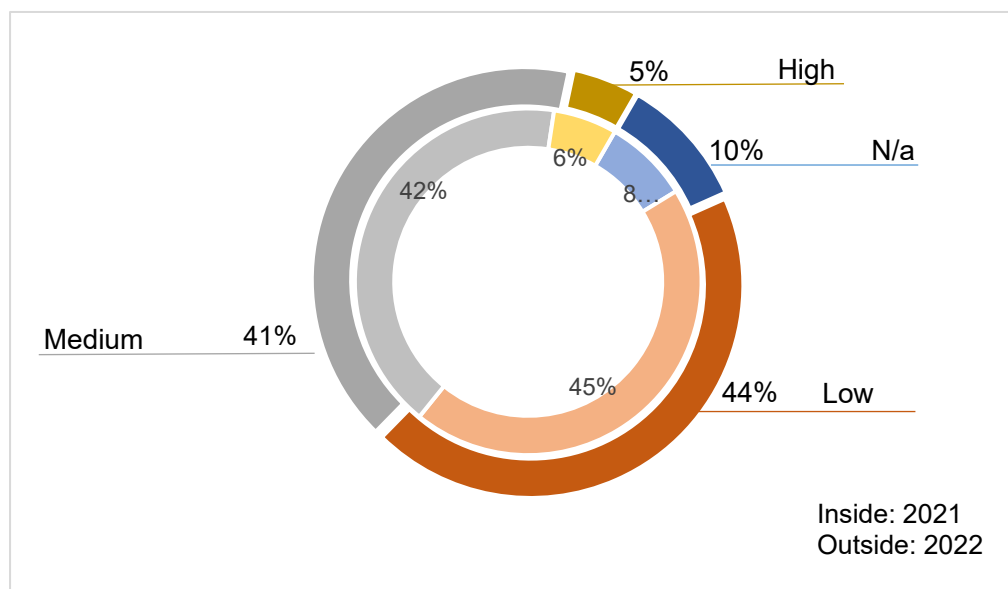
Thanks to the group-wide integration of Microsoft 365, both seminars had a high level of participation from all banks, including the permanent participants from the Environmental Management Unit and at least one board member from each bank. The online format also helped to engage colleagues from the various departments related to each topic discussed.

## **3.3.2 Environmental and social (E&S) risk assessment**

In addition to the general business and financial analysis, ProCredit also carries out an assessment of its clients' activities with regard to their impact on society and the environment. We have continuously improved our environmental and social risk assessment methodology since the beginning of our banking activities: to this end, we focus not only on selected environmentally friendly clients or investments, but assess all our clients against ESG aspects. One of our main achievements last year was screening the portfolio for physical risks in the short, medium and long term based on the geolocation data of our business clients and their collateral items. At the same time, the client emissions we identified were used to analyse our

transition risk at portfolio level. The result of this analysis will establish the baseline for our climate change strategy, which will help us manage climate-related risks and decarbonise our portfolio. As environmental and social risk may turn into financial risk for the client and reputational risk for our banks, we consider effective E&S risk management to be indispensable for a sustainable credit institution.

Client activities that are not on our Exclusion List (for more details, please see our [Code of Conduct](#)) are assessed for potential risks (low, medium or high) in terms of the environment, society, health and safety, based on the sector and the amount of the loan (risk exposure). Activities with a medium or high environmental and social risk are individually reviewed and evaluated in accordance with the respective international standards. Every business client, regardless of the assigned risk category, is also examined and evaluated with regard to social issues, occupational safety and working conditions. Depending on the potential environmental, social and credit risk, an external and independent environmental and social impact assessment is also required. Figure 13 displays the total loan portfolio distribution according to the environmental risk class for 2021 and 2022.



**Figure 13: Outstanding loan portfolio by environmental risk category**

In 2022, as in previous years, we organised a comprehensive training event for Environmental Risk Officers and Environmental Management Units to build capacity in E&S risk assessment. The online training focused on deepening the participants' understanding of the ProCredit group's approach to assessing E&S risk while also providing detailed information about the potential E&S risks deriving from the medium- and high-risk industries which we finance. The participants took part in self-guided learning sessions; practical sessions, where they were given a potential case to analyse; and interactive sessions, where they had the opportunity to exchange information with the trainers and other participants.

### 3.3.3 The ProCredit Plastic Strategy

In response to the exponential growth of plastic waste in the environment, in 2020 ProCredit developed a group methodology for lending to clients engaged in plastic production, which entailed examining each client's products (for more details, please see the Impact Report 2021). Since then, we have been actively engaging with our clients who manufacture plastic to explain our strategy and encourage them to improve the sustainability of their businesses.

Here are some of our achievements:

- We communicated our strategy to 54% of the clients producing plastic products from 2020 until the end of 2022 (blacklist: 100%, greylist: 87%, whitelist: 26%).
- 23% our clients involved in the greylist category of plastic production have agreed to implement measures to improve their sustainability. A further 16% of our clients were already in line with our definition of sustainability.
- We stopped financing 25% of our clients, as they would not or could not agree to align their business practices with our strategy.
- The share of our loan portfolio made up of loans to blacklist and greylist plastic producers has decreased by 80% and 20%, respectively.

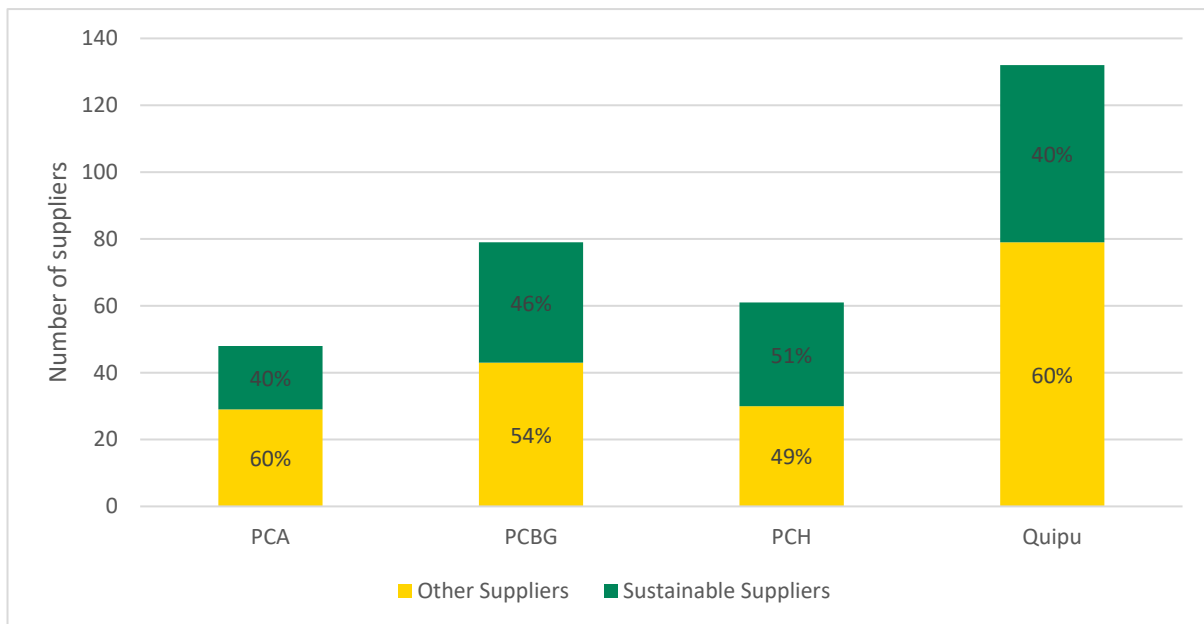
Our next targets are:

- Engage in conversation with all our loan clients involved in the manufacture of blacklist and greylist single-use plastic products by the end of 2023.
- Define measurable actions as binding covenants to loan agreements with clients who make items in the greylist category to improve the sustainability of their products by the end of 2023.
- Communicate our Plastic Strategy to all of our loan clients who manufacture whitelist products by the end of 2024.

Moreover, we became an active member of the Finance Leadership Group on Plastic, which is dedicated to forging a legally binding instrument by 2024 to eliminate plastic waste and pollution on a global scale. The aim of the group is to provide input to the Intergovernmental Negotiation Committee (INC) on the desired outcomes for financial institutions. This will also serve to build readiness in the financial sector to take action against plastic pollution through awareness-raising, capacity-building, and target-setting support measures.

### 3.3.4 Procurement and supplier management

Ensuring the sustainability of the products purchased for our offices was already a crucial part of the environmental management system at ProCredit institutions. We expect our direct suppliers to adhere to the core values of the ProCredit group. They are required to sign a declaration of compliance when concluding a new contract or renewing an existing contract with us. Moreover, in accordance with the Group Guideline on Sustainable Suppliers, all ProCredit institutions screen their suppliers against sustainability criteria in order to analyse the sustainability of the current supply chain.



**Figure 14: Supplier analysis**

All ProCredit institutions located in Germany have also completed the screening of their current suppliers, with the following results at the end of 2022:

The products or services supplied by the vendors and the number of suppliers vary greatly among the institutions. For example, the majority of suppliers for PCA are involved in the food industry, whereas most of the suppliers for PCH, PCBG and Quipu provide intangible services such as legal or consulting services; the majority of these suppliers could not be identified as sustainable. Quipu also provides hardware and software to other ProCredit institutions; they therefore have more suppliers in the field of “information and communication” than the other institutions. It should be noted that some of PCA’s suppliers had to close their business due to lack of income during the pandemic. When PCA reopened, it was necessary to use new suppliers, but any that are not sustainable will be replaced if we find a better alternative.

In 2021, the sustainability criteria tool was updated to facilitate screening and to include new criteria. The same tool was used in 2022.

### 3.3.5 Staff awareness

The courses on environmental and social topics have always been a key component of the group’s long-term training programmes: the Onboarding Programme, the Banker Academy and the Management Academy. They constitute an important platform for intensifying awareness of our values and preparing participants for their role as multipliers of common principles such as the EMS. Regular intensive training courses, seminars and events are also organised at the ProCredit institutions in order to raise environmental awareness among employees and clients alike.

In addition, all ProCredit institutions hold regular training sessions that are dedicated to raising staff awareness about general environmental and social issues. The sessions also serve to



introduce the integrated EMS, and it is always emphasised that employees are the most important stakeholders for the continuation and improvement of the system.

The focus of the training changes every year; this year's special environmental topic was animal welfare, specifically with regard to farming practices. The annual all-staff training served to increase general awareness of the topic and introduce ProCredit's approach to the subject.

Additionally, all ProCredit institutions undertake ongoing internal awareness-raising campaigns and use various communication channels for this purpose. At PCH, we created a wiki platform on which each institution can upload recommendations and tips on sustainable shops, restaurants, and activities in and around Frankfurt. In November, we organised a visit to an organic farm so that all interested employees could learn about biodynamic agriculture. The tour covered the special topics for both 2021 and 2022, sustainable agriculture and animal welfare.

Quipu made posts to inform colleagues about World Bee Day 2022 and *Frankfurt spart Wasser* (a water-saving initiative), and also joined the *Stadtradeln* (cycling in the city) challenge. PCBG launched a screensaver campaign to raise awareness about various topics, including one called "How to save electricity and heating", which provided practical examples from the Federal Government's energy-saving campaign.

## 4 Conclusions

Although the consumption levels and emissions of our German institutions have generally increased compared to the previous year, a general decrease can be observed in comparison with pre-pandemic levels. This achievement demonstrates the efforts that each institution has made over the years to reduce our ecological footprint and thus contribute to climate change mitigation.

We will continue to focus on finding creative solutions in the coming years to achieve further reductions in all areas where we have significant impact and to keep our emissions low. Regarding indispensable emissions, such as those from heating and mandatory business travel, which are not yet based on renewable energy, we will be compensating those emissions with reliable projects in the German institutions in line with the group's mid-term target to become carbon-neutral.

## 5 Contact person

For questions concerning the Environmental Statement 2022, please contact:

Gizem Lange

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[gizem.lange@procredit-group.com](mailto:gizem.lange@procredit-group.com)

The current version of the Environmental Statement and other materials about the ProCredit group's commitment to sustainability can be downloaded from [www.procredit-holding.com](http://www.procredit-holding.com)

## 6 Declaration by the environmental verifiers

Michael **H**ub  
**U**mweltgutachter  
**B**erater Umwelt, Qualität, Sicherheit

### ENVIRONMENTAL VERIFIERS' DECLARATION ON VERIFICATION AND VALIDATION ACTIVITIES

Michael Hub and Dr. Georg Sulzer with EMAS environmental verifiers registration numbers DE-V-0086 and DE-V-0041, accredited or licensed for the scope (NACE-Code)

- 64 Financial service activities
- 62.02 Computer consultancy activities
- 62.01.9 Other Computer programming activities
- 85.42.4 Tertiary education
- 85.5 Other education

declare to have verified whether the whole organisation as indicated in the updated environmental statement of the organisation

### ProCredit institutions located in Germany

Sites:

ProCredit Holding AG & Co. KGaA, Rohmerplatz 33-37, D-60486 Frankfurt am Main

ProCredit Bank, Rohmerplatz 33-37, D-60486 Frankfurt am Main

Quipu GmbH, Königsberger Straße 1, D-60487 Frankfurt am Main

ProCredit Academy, Hammelbacher Straße 2, D-64658 Fürth-Weschnitz

with registration number DE-125-00059

meets all requirements of

### Regulation (EC) No 1221/2009 last amended by Regulation (EU) 2018/2026 (EMAS)

on the voluntary participation by organisations in a Community

### eco-management and audit scheme

By signing this declaration, we declare that

- the verification and validation have been carried out in full compliance with the requirements of EMAS,
- the outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment,
- the data and information of the updated environmental statement of the organisation reflect a reliable, credible and correct image of all the organisation activities, within the scope mentioned in the environmental statement.

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under EMAS. This document shall not be used as a stand-alone piece of public communication.

Frankfurt am Main, 2024-07-18



Michael Hub, environmental verifier  
DAU-Accreditation-No: DE-V-0086




Georg Sulzer, environmental verifier  
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Accredited by DAU – Deutsche  
Akkreditierungs- und Zulassungsgesellschaft  
für Umweltgutachter mbH, Bonn  
Accreditation-No: DE-V-0086

## 7 Annex

### 7.1 Environmental objectives and programmes (2022-2023)

**Table 12: Environmental objectives and programmes**

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
<b>Energy consumption 2022</b>					
Maintenance of air conditioning in offices on an annual basis	<b>Quipu</b>	Maintenance	Maintenance reports	Achieved	100%
Reduce heating consumption 5% compared to 2021 levels	<b>PCH</b>	<ul style="list-style-type: none"> <li>Evaluate the technical possibilities to reduce heating during nights and weekends</li> <li>Explore technical solutions for automatic control of heaters</li> <li>Send informational emails to employees about 21C° and advise them to turn radiator knob to 1 or 2 when they leave the office</li> <li>Discuss the possibilities with Quipu to show a message during shutdown of computers</li> <li>Continue to turn the central heating down in summer months</li> </ul>	Monthly readings	Achieved	15% reduction

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Refurbish premises (1 <sup>st</sup> and 2 <sup>nd</sup> floors) to become more sustainable overall	<b>PCBG</b>	"Pflichtenheft" for renovation work (example: thermostats for heating units, state-of-the-art electrics, etc.)	Example: energy class of new equipment	Partially Achieved	1 <sup>st</sup> floor finished
<p>Reduce energy consumption by 30% compared to 2019: 40 kWh/m<sup>2</sup></p> <p>Baseline of 2019 considered for 2022 planning to offset the impact of COVID-19</p> <p>Reduce energy consumption per overnight stay to reach level similar to 2018: 8 kWh/overnight stay (assuming pool consumption of 85,000 kWh)</p>	<b>PCA</b>	Raise guest awareness via communication measures (e.g. all new groups receive an intro to EMS) and conduct random control of rooms	kWh/m <sup>2</sup>	Not achieved	6% reduction
<b>Energy consumption 2023</b>					
Maintain the electricity consumption at 2022 level in absolute terms	<b>PCA</b>	<ul style="list-style-type: none"> <li>• Provide EMAS training for students and staff</li> <li>• Provide energy-saving tips for students on day of arrival</li> <li>• Install "switch off" screensavers with the help of IT on teachers' and all admin laptops/computers</li> </ul>	kWh		

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
		<ul style="list-style-type: none"> <li>Conduct random control of guests' rooms every 2 months, 20 rooms out of 100: cleaning staff will check the rooms for plugged-in devices, turned-on heaters, lights</li> <li>Upgrade tables in the restaurant area to those that do not need a tablecloth (currently washed every 2<sup>nd</sup> day)</li> </ul>			
Reduce heating energy consumption by 2% of 2022 levels in absolute terms	PCA	<ul style="list-style-type: none"> <li>Provide EMAS training for students and staff</li> <li>Provide energy-saving tips for students on day of arrival</li> <li>Conduct random control of guests' rooms every 2 months, 20 rooms out of 100: cleaning staff will check the rooms for plugged-in devices, turned-on heaters, lights</li> </ul>	kWh		
Install heating thermostats on every heater	PCBG	Install thermostats on every heater in the bank	Number of installed thermostats		
Reduce heating consumption by 5% compared to 2022 levels	PCH	<ul style="list-style-type: none"> <li>Reduce heating during the night and weekends</li> <li>Implement solutions to enable automatic control of heaters</li> <li>Continue to turn the central heating down in summer months</li> </ul>	kWh		
<b>Greenhouse gas emissions 2022</b>					
Compensate GHG flight emissions 100% from the total flights occurring in 2022	Quipu	Calculate kgCO <sub>2</sub> eq compensation of GHG flight emissions using atmosfair	Receipt of certificate from atmosfair with detailed description of compensation	Achieved	
Achieve CO <sub>2</sub> -neutrality in building emissions (heating and electricity)	PCH	Discuss the possibilities to switch to renewable heating with the building owner	Contract with a renewable heating provider	In progress	

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Compensate carbon emissions	<b>PCA</b>	Acquire carbon certificates for the emitted values, as certain emissions cannot be avoided (oil from heating back-up, flights) Note: this will be agreed centrally by PCH; PCA will adopt the strategy	t CO <sub>2</sub> eq compensated	Postponed	Perhaps in the future in line with the strategy adopted by the Holding. Not planned immediately.
<b>Greenhouse gas emissions 2023</b>					
Compensate carbon emissions	<b>Quipu</b>	Compensate GHG flight emissions for all Quipu offices from the total flights occurring in 2023 up to EUR 6,000	t CO <sub>2</sub> eq compensated		
Achieve CO <sub>2</sub> neutrality in building emissions (heat and electricity)	<b>PCH</b>	Switch to renewable heating, influence the landlord	Contract with a renewable heating provider		
Develop methodology to reduce or/and compensate flight emissions	<b>PCH</b>	Conduct research to identify a meaningful way to reduce flight emissions	Methodology		
<b>Fuel consumption 2022</b>					
Maintain the fuel consumption of 600 litres (diesel) by leasing a second e-car to replace the VW Caddy	<b>Quipu</b>	Replace diesel cars through leasing and using e-cars	Fuel consumption data	Postponed	
Promote e-car leasing	<b>PCH</b>	Promote the use of the e-car leasing with staff	Leasing contract	Achieved	
Define an e-car consumption methodology	<b>PCH</b>	Create a procedure to register e-car electric consumption	Documentation	Achieved	
<b>Fuel consumption 2023</b>					
Replace VW Caddy by leasing a second e-car	<b>Quipu</b>	Replace diesel cars through leasing and using e-cars	Fuel consumption data		
Become an employer perceived as cycle friendly	<b>PCBG</b>	Obtain respective certificate and use it in job ads, etc.: <a href="https://tool.cfe-certification.eu/de">https://tool.cfe-certification.eu/de</a>	Achieving certification in 2023		

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
<b>Food 2022</b>					
Improve the environmental footprint of the food consumed	<b>PCA</b>	Offer two vegetarian dishes per meal Reduce meat variety (e.g. one type of meat per meal, no beef, only fish)	NA	Partially achieved	The Academy offers both veg and non-veg options. Vegetarian meal was not very well received by the student groups. However, the meat and fish are locally sourced.
<b>Paper consumption 2022</b>					
Consumption level of printing paper not to exceed 150 kg (as in 2021)	<b>Quipu</b>	Employ paper optimisation measures: routing business processes on digital documents	Paper consumption data	Achieved	
Reduce printing paper by 1% per employee compared to previous year	<b>PCBG</b>	Ensure awareness-raising, process efficiency, etc.	Number of print-outs per staff compared to 2021	Not Achieved	
Reduce paper consumption to 2019 levels (4 pages/overnight)	<b>PCA</b>	Raise guest awareness via communication measures (all new groups receive an intro to the EMS)	4 pages/overnight	Achieved	1.35 pp/overnight stay
Increase the purchase of recycled paper up to 50% of upcoming purchases (this target will be revisited in 2023 as BAU resumes)	<b>PCA</b>	Increase use of recycled paper that works with the printer	50% share of paper purchases	Achieved	82% reduction
<b>Paper consumption 2023</b>					
Ensure that yearly consumption level of printing paper does not exceed 170 kg	<b>Quipu</b>	Employ paper optimisation measures: routing business processes on digital documents	Paper consumption data		



Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Reduce printing paper by 3% per employee compared to previous year	<b>PCBG</b>	Conduct evaluation project with departments which print most; conduct awareness-raising measures for all staff	Number of print-outs per staff compared to 2022		
<b>Water consumption 2022</b>					
Reduce water consumption of pool (meter 63956407) to levels similar to 2019-2020 (2,000 m <sup>3</sup> )	<b>PCA</b>	Monitor water filtering process (in order to look for a more efficient process)	Number of m <sup>3</sup>	Not achieved	Slight increase of consumption in 2022 (2191 m <sup>3</sup> )
Monitor freshwater consumption (without pool consumption and gardening (meter 63956407)); should be 5% lower than average in 2018 and 2019 (180 l/overnight)	<b>PCA</b>	Raise guest awareness via communication measures (all new groups to receive an intro to the EMS) and conduct random control of rooms	l/overnight stay	Achieved	158 l/overnight stay
Monitor irrigation	<b>PCA</b>	Monitor irrigation	Number of m <sup>3</sup>	Achieved	Meters installed to monitor and record garden water
Maintain freshwater quality (to prevent formation of Legionella bacteria)	<b>PCA</b>	Maintain idle running of showers and faucets in rooms	n/a Study (when requested by the Gesundheitsamt Heppeneheim)	Achieved	No incident reported in 2022 and regular checks conducted for monitoring water quality
		Continue to carry out probes of water quality Conduct a risk analysis for water (Gefährungsanalyse Wasser)			
<b>Water consumption 2023</b>					
Reduce total freshwater consumption by 2% of 2022 in absolute terms	<b>PCA</b>	<ul style="list-style-type: none"> <li>Provide EMAS training for students and staff</li> <li>Provide water-saving tips for students on day of arrival</li> <li>Upgrade tables in the restaurant area to those that do not need a tablecloth (currently washed every 2<sup>nd</sup> day)</li> </ul>	m <sup>3</sup>		

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Reduce water consumption in the restrooms by 5%	PCH	<ul style="list-style-type: none"> <li>Reduce the duration of water dispensed from the taps</li> <li>Raise awareness among employees</li> </ul>			
<b>Waste management 2022</b>					
Maintain e-waste level of approximately 740 kg	Quipu	Extend life of equipment by selling usable equipment, donating, replacements and proper disposal	Observation and control checks	Achieved	100%
Weigh waste produced in a week	PCH	Weigh and classify the waste produced in a week to update the weight statistic	Weight data	Achieved	
Review methodologies for automatic weighing of waste (IoT)	PCH	Review possible devices/software to record weight of waste automatically	Documentation	Achieved	Review is complete, but a suitable solution was not found
Define methodology for print cartridge disposal	PCH	Develop a manual for print cartridge disposal	Manual	Postponed	
<b>Waste management 2023</b>					
Keep e-waste level below 1,000 kg	Quipu	Extend life of equipment by selling usable equipment, donating, replacements and proper disposal	Observation and control checks		
Reduce total waste generated in absolute terms by 5% of 2022 level	PCA	<ul style="list-style-type: none"> <li>Purchase packaging-free food items wherever possible to reduce plastic waste</li> <li>Print only when necessary; students and teachers will be encouraged to reuse training materials (e.g. the back unused side of printed materials for a second round of training)</li> <li>Use online attendance sheets wherever possible</li> </ul>	kg		

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Improve waste segregation	PCA	<ul style="list-style-type: none"> <li>Provide EMAS training for students and staff</li> <li>Follow stringent waste segregation process</li> <li>Perform random controls of guests' rooms (every 2 months, 20 rooms out of 100) for waste segregation with the help of a template</li> </ul>			
Reduce packaging waste by 10%	PCH	Introduce and disseminate reusable packaging	Compare weight of waste in Q3 vs Q1		
Define methodology for print cartridge disposal	PCH	Add the process of disposing printer cartridges to the waste management manual	Updated manual		
<b>Environmental awareness 2022</b>					
Raise awareness of PCH staff about EMS and general environmental issues	PCH	Conduct general training with PCH staff with special focus on sustainable agriculture and global developments in line with the group-wide approach	Share of PCH staff who participate in the workshop	Achieved	
		Implement quarterly internal communication on green finance activities in line with the group-wide approach	Marketing materials published quarterly	Achieved	
Create a wiki space to share tips about sustainability	PCH	Create a wiki space to share tips on sustainability live with staff, where they can also add information	Wiki space	Achieved	
Join an environmental action in Frankfurt (cleaning, planting trees, etc.) or/and visit a sustainable farm	PCH	Organise at least one awareness activity, such as participating in an environmental action in Frankfurt or/and visiting a sustainable farm	Report on the activity	Achieved	We visited a sustainable farm and joined the climate strike
Send monthly or bi-monthly short environmental tips to the employees through email	PCH	Share tips via email on reducing the environmental impact of individuals	Number of emails sent	Postponed	

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Increase environmental awareness among PCBG staff	<b>PCBG</b>	Hold smaller campaigns, staff events, communicate recent developments in the EMS, consumption data, current/public green topics and conduct training	Submit proof of smaller campaigns, pictures of staff participating in events, training materials and lists of participants, etc.	Achieved	Screen saver campaign, visit to a sustainable farm, participation in climate strike, awareness raising about energy consumption
<b>Environmental awareness 2023</b>					
Increase environmental awareness among PCBG staff	<b>PCBG</b>	Hold smaller campaigns, staff events, communicate recent developments in the EMS, consumption data, current/public green topics and conduct training Example: clean-up day in FFM	Submit proof of smaller campaigns, pictures of staff participating in events, training materials and lists of participants, etc.		
Raise awareness of PCH staff about EMS and general environmental issues	<b>PCH</b>	Conduct general training with PCH staff, including the special topic of sustainable agriculture and global developments in line with the group-wide approach	Share of PCH staff who participate in the workshop		
		Implement quarterly internal communication on green finance activities in line with the group-wide approach	Quarterly publishing of marketing materials		
<b>Sustainable suppliers 2022</b>					
Reach 100% sustainable suppliers	<b>PCH</b>	Switch to sustainable suppliers according to group-wide guidelines	Share of sustainable suppliers	Cancelled	Another sector-based target will be defined
Increase percentage of sustainable suppliers to 75% of total by 2023	<b>PCBG</b>	Conduct reliable supplier screening (questionnaires and email notifications) and replace non-sustainable suppliers with sustainable alternative suppliers or terminate non-sustainable contracts	Sustainable suppliers tool for screening and tracking percentage of sustainable suppliers	Not due until End of 2023	
Ensure that more than 50% of the selected suppliers are sustainable	<b>PCA</b>	Choose new suppliers according to GL 4 with a strong emphasis on regional and sustainable certified enterprises	Share of sustainable suppliers	na	Although most suppliers are regional and local, they do not fit the criteria used for analysing the suppliers for sustainability in the template

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Continue to select environmentally friendly suppliers whenever possible	<b>Quipu</b>	Replace suppliers that do not comply with core principles and select new suppliers that comply with our environmental criteria	Number of sustainable suppliers		
<b>Sustainable suppliers 2023</b>					
Continue to select environmentally friendly suppliers whenever possible	<b>Quipu</b>	Replace suppliers that do not comply with core principles and select new suppliers that comply with our environmental criteria	Number of sustainable suppliers		
Ensure that at least 50% of selected suppliers are sustainable	<b>PCA</b>	Choose new suppliers according to GL 4 with a strong emphasis on regional and sustainable certified enterprises Define a more effective approach for PCA in collaboration with PCH	Share of sustainable suppliers		
Increase percentage of sustainable suppliers to 75% of total	<b>PCBG</b>	Conduct reliable supplier screening; possibly reduce number of suppliers; collect confirmations from certain suppliers, etc.	Sustainable suppliers tool for screening and tracking percentage of sustainable suppliers = min. 75%		
Conduct evaluation of suppliers in accordance with the new criteria	<b>PCH</b>	Evaluate and report on the sustainability of the suppliers in accordance with the new approach	The report		
<b>Various other milestones or targets in 2022</b>					
Maintain freshwater quality (to prevent formation of Legionella bacteria)	<b>PCA</b>	Maintain practice of regularly running showers and faucets in rooms Continue to conduct probes of water quality	n/a	Achieved	No incident reported in 2022 and regular checks conducted for monitoring water quality
		Conduct a risk analysis for water (Gefährungsanalyse Wasser)	Study (when requested by the Gesundheitsamt Heppeneheim)	Achieved	No incident reported in 2022 and regular checks conducted for monitoring water quality
Maintain air conditioning	<b>Quipu</b>	Contract maintenance of air conditioning in offices on an annual basis	Maintenance reports	Achieved	
<b>Various other milestones or targets in 2023</b>					

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
Maintain freshwater quality (to prevent formation of Legionella bacteria)	PCA	Conduct monthly checks of the swimming pool and yearly checks of the water tank by an external company	n/a		
Maintain air conditioning	Quipu	Contract maintenance of air conditioning in offices on an annual basis	Maintenance reports		
<b>Group-wide high-level EMS targets 2022</b>					
Support ProCredit institutions in maintaining and further developing EMS	<b>PCH (ProCredit Group)</b>	Provide support for all pillars whenever needed	Guidelines, Standards developed, supported cases, internal training materials	Achieved	
Achieve a 5% reduction in the total number of flights compared to 2019 (only applies for the periods in which COVID-19 measures were reduced and which can be compared to 2019)		According to the analysis done by IPC, the following measures could help reduce the number of flights taken: Combine face-to-face meetings with online meetings to prevent too many people flying Switch to online training for certain types of technical training Combine several meetings to prevent short frequent trips	Number of total flights	Achieved	45% fewer flights in 2022 compared to 2019
Incorporate climate risk aspects into credit risk management		Analyse transition and physical risks and relevant regulatory requirements to develop a proposal for risk management strategy	Yes/no	In progress	
Build capacity in the area of green finance		Conduct training on renewable energy assessment process	Number of training sessions conducted	Achieved	Four specialised trainings were conducted
Conduct CO <sub>2</sub> impact reporting for portfolio		Complete impact reporting on all EE, RE and GR investments for disbursements made in 2021 for all countries of operation and continue ongoing process	100% reporting of the impact from green investments	Achieved	
Update the Green Finance eligibility criteria taking into consideration the methodology		Update Group Green Finance Guidelines to improve the quality of assessments (through alignment with EU Taxonomy and international standards) to evaluate the positive impact	Updated Group Guidelines	In progress	

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
suggested by international finance providers (EU Taxonomy, EIB, etc.)					
Animal welfare		Conduct a gap analysis Introduce/cover the topic in E&S risk assessments	Yes/no	In progress	
Conduct employee commuting survey		Conduct a survey among group-level employees to enable calculation of commuting emissions	Survey results	Achieved	The survey will be repeated with improved quality and the results will be published
<b>Group-wide high level EMS targets 2023</b>					
Support ProCredit institutions in maintaining and further developing EMS	<b>PCH (ProCredit group)</b>	Provide support for all pillars whenever needed	Guidelines, Standards developed, supported cases, internal training materials		
Increase the number of electric and hybrid cars in the car fleet compared to 2022		Whenever a vehicle is replaced, the new order should be either electric or plug-in Hybrid cars that are already in the fleet should be replaced when it becomes necessary	% of electric or plug-in hybrid cars in the fleet		
Maintain the number of flights at 2022 level		Combine face-to-face meetings with online meetings to prevent too many people flying Switch to online training for certain types of technical training Combine several meetings to prevent short trips	Number of flights compared to 2022		
Harmonise green financing methodology within the group with international finance providers (EU Taxonomy, EIB)		Update Group Green Finance Guidelines to improve the quality of assessments (through alignment with EU Taxonomy and international standards) to evaluate the positive impact		In progress	The project started with an analysis of production machinery, the EU Taxonomy and IFI eligibility criteria and will continue in 2023, with the alignment of the DNSH principle
Become CO <sub>2</sub> -neutral in own operations (Scope 1 and 2 emissions)		Hold discussion with the banks to obtain interim targets for further reduction of direct emissions (including shifting to RE suppliers for building energy and installation of rooftop PV)	CO <sub>2</sub> eq	In progress	The ProEnergy Project is still ongoing and is planned to be in operation in 2023

Annual environmental objectives (if not otherwise indicated)	Institution	Measure	Evaluation criteria	Status	Degree of achievement
		Realise own 3 MW PV project: ProEnergy (95% PCH ownership and 5% PCB Kosovo) Compensate remaining CO <sub>2</sub> externally			Compensation options are being analysed
Adjust reporting on suppliers in accordance with the updated guidelines		Update definition of supplier Conduct sector-based evaluation of sustainability Differentiate between low-, medium-, high-risk sectors	Updated guideline and reporting methodology		
Define science-based target-setting for Scope 3 emissions		Define target and strategies to decarbonise our portfolio	Defined targets		
Conduct employee commuting survey		Conduct a survey among group-level employees to enable calculation of commuting emissions	Survey results		



## 7.2 GHG emissions of lending portfolio by sector activity

**Table 13: GHG emissions of lending portfolio by sector activity**

Sector activity	Total 2021				Total 2022			
	Total outstanding (EUR m)	Attributed emissions (t CO <sub>2</sub> eq.)	Emission intensity (kt CO <sub>2</sub> eq./ EUR bn)	Data quality score (1=high, 5=low)	Total outstanding (EUR m)	Attributed emissions (t CO <sub>2</sub> eq.)	Emission intensity (kt CO <sub>2</sub> eq./ EUR bn)	Data quality score (1=high, 5=low)
Agriculture (A)	874.6	295.5	337.8	4.5	850.1	358,424.2	421.6	4.2
Minerals (B)	20.6	3,762	183.0	4.6	15.4	4,674.0	303.4	4.1
Industry (C)	1,245.3	221,291	177.7	4.5	1,237.4	259,634.0	209.8	4.2
Utilities (D)	20.4	29,503	1,449.0	4.9	29.3	22,185.3	756.5	4.6
Water distribution (E)	20.4	12,060	591.8	4.3	24.1	11,929.2	495.4	4.1
Construction (F)	352.7	10,658	30.2	4.5	362.1	15,751.4	43.5	4.2
Retail (G)	1,400.9	40,514	28.9	4.6	1,417.5	53,821.9	38.0	4.2
Transport (H)	232.9	9,906	42.5	4.4	236.7	26,447.9	111.7	4.2
Leisure (I)	154.5	1,609	10.4	4.6	156.5	2,390.7	15.3	4.2
Information and communication (J)	62.0	2,378	38.3	4.6	60.2	2,428.2	40.4	4.3
Financial services (K)	16.5	474	28.7	5.0	15.7	271.4	17.3	4.1
Real estate (L)	126.3	1,380	10.9	4.8	142.8	1,998.2	14.0	4.3
Scientific and technical activities (M)	69.5	2,973	42.8	4.6	67.1	2,862.5	42.7	4.3
Administrative services (N)	62.8	2,613	41.6	4.6	67.0	3,234.2	48.3	4.2
Regional administration (O)	0.3	16	63.2	5.0	1.2	39.5	33.8	4.0
Education (P)	35.6	578	16.3	4.6	39.9	460.2	11.5	4.2
Healthcare (Q)	48.4	2,186	45.2	4.7	53.1	1,838.6	34.6	4.4
Recreation (R)	13.0	721	55.4	4.9	9.7	458.3	47.0	4.3
Other services (S)	15.5	468	30.3	4.5	13.9	677.1	48.7	4.2
<b>Total</b>	<b>4,772.0</b>	<b>638,545</b>	<b>133.8</b>	<b>4.5</b>	<b>4,799.7</b>	<b>769,527</b>	<b>160.3</b>	<b>4.2</b>

### 7.3 Environmental parameters 2020-2022

**Table 14: General indicators**

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Employees	No.	358	373	376	122	132	137	65	69	67	141	146	144	30	26	28
Employees	FTE	308	331	343	111	121	122	58	60	58	124	132	136	15	18	27
Total area <sup>14</sup>	m <sup>2</sup>	14,484	14,486	14,569	982	982	982	518	520	520	734	734	817	12,250	12,250	12,250
Heated area <sup>15</sup>	m <sup>2</sup>	11,253	11,253	11,544	2,390	2,390	2,390	1,421	1,421	1,421	2,258	2,258	2,549	5,184	5,184	5,184
Sealed area <sup>16</sup>	m <sup>2</sup>	11,626	11,626	11,684	954	954	954	503	503	503	517	517	575	9,652	9,652	9,652
Semi-natural area (unsealed)	m <sup>2</sup>	2,858	2,860	2,885	28	28	28	15	17	17	217	217	242	2,598	2,598	2,598
Overnight stays	No.	6,242	4,538	22,855	-	-	-	-	-	-	-	-	-	6,242	4,538	22,855

**Table 15: Travel**

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>Road travel</b>																
Cars (petrol)	No.	1.0	1.0	0.9	-	-	-	-	-	-	-	-	-	1.0	1.0	0.9
Cars (diesel)	No.	5.0	4.8	4.0	-	-	-	-	-	-	2.0	2.0	2.0	3.0	2.8	2.0
Cars (electric)	No.	3.0	3.6	4.9	1.0	1.2	2.0	-	-	-	1.0	1.0	1.0	1.0	1.4	1.9
Travelled Distance	km	67,462	75,291	64,335	3,173	4,159	9,060	-	-	-	11,471	13,712	16,135	52,818	57,420	39,140
<b>Air travel</b>																
Number of flights	No.	258	196	789	123	105	349	21	33	99	111	56	310	3	2	31
Travelled distance	km	387,691	232,381	985,785	170,247	138,294	430,151	30,958	32,552	100,174	183,596	60,005	399,852	2,890	1,530	55,608

**Table 16: Energy indicators**

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>Energy generation</b>																
Electricity generation (renewable) <sup>17</sup>	kWh	129,657	108,065	116,780	-	-	-	-	-	-	-	-	-	129,657	108,065	116,780
Heating energy generation (renewable) <sup>18</sup>	kWh	361,270	510,055	420,457	-	-	-	-	-	-	-	-	-	361,270	510,055	420,457
<b>Energy consumption</b>																
<b>Total energy consumption</b>	<b>kWh</b>	1,341,359	1,492,047	1,376,168	254,954	279,958	257,045	93,381	106,081	83,874	258,048	236,358	247,474	734,977	869,650	787,775
Electricity <sup>19</sup>	kWh	463,965	462,713	536,941	128,159	113,376	115,153	46,999	47,799	49,347	113,229	93,596	123,636	175,577	207,942	248,805
Heating energy	kWh	828,290	977,515	802,913	126,237	165,863	140,333	46,382	58,282	34,527	138,938	134,836	113,307	516,733	618,534	514,746
Heating energy (weather-adjusted) <sup>20</sup>	kWh	1,046,174	1,072,419	1,022,681	167,895	189,084	186,643	61,688	66,441	45,921	186,177	155,061	151,831	630,414	661,832	638,285
Liquid gas for cooking	kWh	5,905	7,162	8,407	-	-	-	-	-	-	-	-	-	5,905	1,256.57	8,407
Fuel	kWh	43,199	44,656	27,906	556.74	718.78	1,558.48	-	-	-	5,880.45	7,926.10	10,530.73	36,762.24	36,011.23	15,816.53

<sup>17</sup> Electricity is generated using PV systems.

<sup>18</sup> Heating energy is generated at PCA from wood pellets.

<sup>19</sup> Excluding electricity for PCH's electric car. That amount is included under "Fuel".

<sup>20</sup> The climate factors for the weather adjustment can be found in Annex 7.6.

**Table 17: Resource consumption**

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>Paper consumption</b>																
<b>Total</b>	<b>kg</b>	1,265	1,176	991	578.6	741.2	396.6	166.2	285.2	157.9	206.7	149.2	191.6	313.2	-	244.7
Recycled	kg	1,160.4	1,173.9	941.5	578.6	741.2	396.6	166.2	285.2	157.9	161.3	147.6	186.7	254.4	-	200.3
FSC-certified	kg	104	1.7	49	-	-	-	-	-	-	45.5	1.7	4.9	58.8	0.0	44.4
<b>Water</b>																
Water consumption	m <sup>3</sup>	5,703	6,014	7,814	479	535	864	494	363	409	539	402	569	4,191	4,714	5,972

**Table 18: Waste and usable electronic equipment**

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>Household waste<sup>21</sup></b>																
<b>Total</b>	<b>kg</b>	35,836	15,191	37,431	7,594	5,241	9,697	1,645	1,726	3,206	4,955	4,706	7,341	21,641	3,518	17,105
Organic waste	kg	9,025	907	8,397	859	547	1,126	485	361	731	-	-	-	7,680	-	6,540
Packaging waste	kg	2,193	1,117	2,132	298	190	311	175	130	456	1,492	458	950	227	338	415
Non-separated waste	kg	9,313	4,206	12,593	163	104	346	94	70	1,703	229	2,132	4,054	8,827	1,900	6,490
Total paper waste	kg	12,605	6,801	13,109	5,984	3,699	7,184	890	1,165	1,715	2,423	1,258	1,750	3,307	680	2,460

<sup>21</sup> Since 2017, Quipu has had separate disposal containers for paper and packaging waste.

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
Waste from grease trap <sup>22</sup>	kg	1,600	600	1,200	-	-	-	-	-	-	-	-	-	1,600	600	1,200
<b>Electronic waste and usable electronic equipment</b>																
E-waste recycled	kg	876	1,499	1,254	133	697	730	-	-	-	743	802	524	-	-	-
Usable electronic equipment	kg	225	60	63	157	4	-	-	-	-	68	56	63	-	-	-
<b>Hazardous waste (batteries, light bulbs, toner)</b>																
Total hazardous waste	kg	40.66	8.37	33.29	-	-	-	-	-	-	40.66	8.37	33.29	-	-	-

Table 19: Emissions

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>Energy emissions<sup>23</sup></b>																
Total CO <sub>2</sub> eq emissions	t	186	166	319	64	70	133	16	20	31	74	44	120	33	33	35
Total CO <sub>2</sub> eq emissions with compensation	t	111	153	225	64	70	133	-14	20	31	28	30	25	33	33	35
Total NO <sub>x</sub> emissions	kg	191	236	193	21	28	23	8	10	6	24	23	20	140	175	144
Total SO <sub>2</sub> emissions	kg	65	93	78	2	2	2	1	1	-	2	2	1	62	89	74
Total PM10 emissions	kg	28	39	31	1	1	1	-	-	-	1	1	1	26	37	29
<b>Heating<sup>24</sup></b>																
CO <sub>2</sub> eq	t	82.1	94.9	78.1	25.5	33.5	28.3	9.4	11.8	7.0	28.1	27.2	22.9	19.2	22.4	19.9

<sup>22</sup> Data for waste from the grease trap are calculated based on the volume of the storage containers and the number of pick-ups that are made.

<sup>23</sup> The conversion factors for emissions are listed in Annex 4. There are no direct emissions from electricity consumption, as electricity is generated by PCA's own photovoltaic systems and has been purchased by the other institutions from certified green electricity suppliers since 2017. Total emissions include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFC, PFC, NF<sub>3</sub> and SF<sub>6</sub>. The values of 2019 and 2020 vary from previous reports due to the update of emission factors (IEA, Emission factor 2021).

<sup>24</sup>The reported CO<sub>2</sub>eq emissions refer to the oil heating, pellet heating and BioLPG held as a contingency reserve.

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
NO <sub>x</sub>	kg	187.4	230.6	189.8	21	27.5	23.3	7.7	9.7	5.7	23.1	22.4	18.8	135.6	171	142
SO <sub>2</sub>	kg	64.6	91.6	77	1.5	2.0	1.7	0.6	0.7	0.4	1.7	1.6	1.4	60.9	87.3	73.5
Particulate matter	kg	27.5	37.7	31.1	0.9	1.2	1.0	0.3	0.4	0.2	1.0	0.9	0.8	25.3	35.2	29.1
<b>Cooking</b>																
CO <sub>2</sub> eq	t	1.34	1.34	1.76	-	-	-	-	-	-	-	-	-	1.34	1,34	1,76
SO <sub>x</sub>	kg	0.91	1.59	1.32	-	-	-	-	-	-	-	-	-	0.91	1.59	1.32
NO <sub>2</sub>	kg	0.48	1.50	0.71	-	-	-	-	-	-	-	-	-	0.48	1.50	0.71
Particulate matter	kg	0.09	1.58	0.24	-	-	-	-	-	-	-	-	-	0.09	1.58	0.24
<b>Business travel</b>																
CO <sub>2</sub> eq fuel	t	10.6	10.8	5.9	-	-	-	-	-	-	1.5	2.0	2.7	9.2	8.7	3.2
NO <sub>x</sub>	kg	3.5	3.6	1.9	-	-	-	-	-	-	0.5	0.8	1.0	3.0	2.8	0.9
SO <sub>2</sub>	kg	0.4	0.4	0.2	-	-	-	-	-	-	0.1	0.1	0.1	0.3	0.3	0.1
Particulate matter	kg	0.1	0.1	0.0	-	-	-	-	-	-	0.01	0.02	0.02	0.1	0.1	0.01
CO <sub>2</sub> eq air travel (direct)	t	36.5	23.9	92.7	14.9	14.3	41.6	2.7	3.6	9.9	16.8	5.8	37.0	2.1	0.2	4.1
CO <sub>2</sub> eq air travel (indirect)	t	56.6	35.6	140.6	23.5	22.5	63.1	4.3	4.4	14.3	27.8	8.5	57.0	0.9	0.2	6.2

## 7.4 Core annual indicators for 2020-2022

Table 20: Relative indicators

Indicator	Unit	Total			PCH			PCBG			Quipu			PCA		
		2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
<b>Energy</b>																
Total energy/employee	kWh/FTE	4,358	4,509	4,038	2,294	2,310	2,113	1,615	1,770	1,436	2,081	1,788	1,816	49,560	49,553	32,128
Electricity/employee	kWh/FTE	1,507	1,398	1,575	1,153	935	947	813	798	845	913	708	907	11,839	11,849	10,147

Heating energy/employee (weather-adjusted)	kWh/FTE	3,399	3,241	3,001	1,511	1,560	1,534	1,067	1,109	786	1,502	1,173	1,114	42,509	37,711	26,031
Heating energy/heated area (weather-adjusted)	kWh/m <sup>2</sup>	93	95	91	70	79	78	43	47	32	82	69	60	122	128	123
Fuel/employee	kWh/FTE	140	135	82	5	6	13	-	-	-	47	60	77	2,479	2,052	645
<b>Resource consumption</b>																
Paper consumption/employee	kg/FTE	4.1	3.6	2.9	5.2	6.1	3.3	2.9	4.8	2.7	1.7	1.1	1.4	21.1	0	10
Paper consumption/overnight stay	kg/OS	0.05	-	0.01	-	-	-	-	-	-	-	-	-	0.05	-	0.01
Water/employee	m <sup>3</sup> /FTE	18.5	18.2	22.9	4.3	4.4	7.1	8.5	6.1	7	4.3	3	4.2	282.6	268.6	243.6
Water/overnight stay	m <sup>3</sup> /OS	0.67	1.04	0.26	-	-	-	-	-	-	-	-	-	0.67	1.04	0.26
<b>Household waste</b>																
Total waste/employee	kg/FTE	112.9	41.2	163.3	65.7	37.4	73.7	28.5	28.8	54.9	33.4	29.1	49.6	1,459.3	200.5	1,497.7
Total waste/overnight stay	kg/night	3.5	0.8	1.6	-	-	-	-	-	-	-	-	-	3.5	0.8	1.6
<b>Emissions</b>																
Total CO <sub>2</sub> emissions/employee	tCO <sub>2</sub> eq/FTE	0.6	0.5	0.9	0.6	0.6	1.1	0.3	0.3	0.5	0.6	0.3	0.9	2.2	1.8	1.4
Total CO <sub>2</sub> emissions (with compensation)/employees	tCO <sub>2</sub> eq/FTE	0.4	0.5	0.7	0.6	0.6	1.1	-0.2	0.3	0.5	0.2	0.2	0.2	2.2	1.8	1.4
Total CO <sub>2</sub> emissions/overnight stay	kg CO <sub>2</sub> eq/night	5.2	7.2	1.5	-	-	-	-	-	-	-	-	-	5.2	7.2	1.5
<b>Area</b>																
Total area/employee	m <sup>2</sup> /FTE	47.1	43.8	42.7	8.8	8.1	8	9	8.7	8.9	5.9	5.6	6.0	826	698	499.6
Heated area <sup>24</sup> /employee	m <sup>2</sup> /FTE	36.6	34	33.9	21.5	19.7	19.65	24.6	23.7	24.3	18.2	17.1	18.7	349.5	295.4	211.4
Sealed area/employee	m <sup>2</sup> /FTE	37.8	35.1	34.3	8.6	7.9	7.8430	8.7	8.4	8.6	4.2	3.9	4.2	650.8	550	393.6
Unsealed area/employee	m <sup>2</sup> /FTE	9.3	8.6	8.5	0.3	0.2	0.2	0.2	0.3	0.3	1.8	1.6	1.8	175.2	148	106

## 7.5 Emission factors

**Table 21: Emission factors**

Type	Unit	Year	CO <sub>2</sub> eq	NO <sub>x</sub>	SO <sub>2</sub>	PM <sub>10</sub>
<b>Electricity</b>						
Average German energy mix <sup>25,26</sup>	g/kWh	2015	527	0.488	0.272	0.033
	g/kWh	2016	523	0.440	0.290	0.015
	g/kWh	2017	485	0.408	0.224	0.010
	g/kWh	2018	468	Not published		
	g/kWh	2019	401	Not published		
EWS Schönau (PCBG, PCH)	g/kWh	2016 and later	0	Green electricity is produced entirely from hydro, wind or solar power, thus producing no further emissions		
Entega (PCA)	g/kWh	2016 and later	0			
<b>Heating and fuel<sup>27</sup></b>						
Natural gas	g/kWh	2017	202	0.186	0.012	0.007
Heating oil (diesel)	g/kWh	2017	267	0.213	0.284	0.024
Wood pellets	g/kWh	2017	155	0.337	0.149	0.075
Firewood	g/kWh	2017	404	0.195	0.128	0.186
Diesel	g/kWh	2017	267	1.303	0.118	0.027
Gasoline	g/kWh	2017	250	0.257	0.135	0.018

<sup>25</sup> Source for CO<sub>2</sub> emissions of the German electricity mix: [https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-04-01\\_climate-change\\_13-2020\\_strommix\\_2020\\_fin.pdf](https://www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-04-01_climate-change_13-2020_strommix_2020_fin.pdf)

Total greenhouse gas emissions (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbonate, SF<sub>6</sub>) are denoted in carbon dioxide equivalents.

<sup>26</sup> Source of NO<sub>x</sub>, SO<sub>2</sub>, PM<sub>10</sub> emissions <https://www.umweltbundesamt.de/themen/luft/emissionen-von-luftschadstoffen/spezifische-emissionsfaktoren-fuer-den-deutschen>

<sup>27</sup>Source for CO<sub>2</sub> emissions (Scope1) apart from BioLPG: GHG protocol. Based on IPCC 2006 Guidelines for National Greenhouse Gas Inventories  
Source for CO<sub>2</sub> emissions from BioLPG: World LPG Association (WLPGA) (2019) on the "Role of LPG and BioLPG in Europe"; see: <https://www.wlpga.org/wp-content/uploads/2020/03/The-Role-of-LPG-Bio-LPG-in-Europe-The-2019-Report.pdf>

Source for other emissions: GEMIS (Globales Emissions-Modell Integrierter Systeme) Version 4.95 - 04/2017



LPG	g/kWh	2017	227	0.154	0.081	0.016
BioLPG (Emissions other than CO <sub>2</sub> are taken for LPG)	g/kWh	2017	60.3	0.186	0.012	0.007

## 7.6 Lower heating value

**Table 22: Lower heating value**

Fuel	Lower heating value	Unit
Diesel and heating oil	10.033	kWh/L
Gasoline	9.106	kWh/L
Wood pellets	4.861	kWh/kg
Natural gas	9.333	kWh/m <sup>3</sup>
LPG/BioLPG	7.095	kWh/L
Firewood	4.333	kWh/kg

Source: Emission factors from Cross-Sector Tools (March 2017, GHG protocol); based on IPCC (2006)

## 7.7 Climate factors for weather adjustment of heating energy data

**Table 23: Climate factors**

City	Postcode	Climate factor			
		2019	2020	2021	2022
Frankfurt, Bockenheim	60486	1.25	1.33	1.14	1.33
Frankfurt, Bockenheim	60487	1.27	1.34	1.15	1.34
Fürth	64658	1.16	1.22	1.07	1.24

Source: Deutscher Wetterdienst: <http://www.dwd.de/DE/leistungen/klimafaktoren/klimafaktoren.html>

## 7.8 Indicators and benchmarks for comparison

**Table 24: Indicators and benchmarks for comparison**

Indicator for offices		Unit	Source
Electricity (estimate for offices in Germany 2013)	2,177.0	kWh/(pp a)	Bundesministerium für Wirtschaft und Industrie (2015): Energieverbrauch des Sektors Gewerbe, Handel, Dienstleistungen (GHD) in Deutschland für die Jahre 2011 bis 2013: <a href="https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/sondererhebung-zur-nutzung-erneuerbarer-energien-im-gdh-sek-tor-2011-2013.html">https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/sondererhebung-zur-nutzung-erneuerbarer-energien-im-gdh-sek-tor-2011-2013.html</a>
Heating energy (average for offices in Germany 2013)	5,463.0	kWh/(pp a)	
Heating (PassivHaus)	Specific space heating demand $\leq 15$ kWh/(m <sup>2</sup> /year)		Passive House Institute criteria for non-residential buildings (PassivHaus Institut, 2013, p.1)
Cooling (PassivHaus)	Specific useful cooling demand $\leq 15$ kWh/(m <sup>2</sup> /year)		Passive House Institute criteria for non-residential buildings (PassivHaus Institut, 2013, p.1)
Primary energy	Total specific primary energy demand $\leq 120$ kWh/(m <sup>2</sup> /year)		Passive House Institute criteria for non-residential buildings (PassivHaus Institut, 2013, p.1)
Total water use	6.4	m <sup>3</sup> /FTE/year	Best Environmental Management Practice for the Public Administration Sector <a href="#">Reference Document on (europa.eu)</a>
Total waste generation in office buildings in 2019	1) <200 2) Zero waste generated in the office buildings is sent to landfill	kg/FTE/year	Best Environmental Management Practice for the Public Administration Sector <a href="#">Reference Document on (europa.eu)</a>
Paper consumption	1) Lower than 15 2) Office paper used is 100% recycled or certified according to an ISO Type I ecolabel (2) (e.g. EU Ecolabel)	Sheets of paper/FTE/working day)	Best Environmental Management Practice for the Public Administration Sector <a href="#">Reference Document on (europa.eu)</a>

Heating energy (average for office buildings)	133	kWh/(m <sup>2</sup> a)	Energieeffizienz bei Büroimmobilien. dena-Analyse über den Gebäudebestand und seine energetische Situation: <a href="https://effizienzgebaeude.dena.de/fileadmin/dena/Dokumente/Pdf/9143_dena-Analyse_Energieeffizienz_bei_Bueroimmobilien.pdf">https://effizienzgebaeude.dena.de/fileadmin/dena/Dokumente/Pdf/9143_dena-Analyse_Energieeffizienz_bei_Bueroimmobilien.pdf</a>
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EMAS Benchmark for Hotels 2016		Unit	Source
Building energy (heating and electricity)	180	kWh/(m <sup>2</sup> a)	Reference document issued by the European Commission on Best Environmental Practices, including indicators for environmental performance and benchmarks of excellence for the tourism sector (2016): <a href="https://eur-lex.europa.eu/eli/dec/2016/6111/oj">https://eur-lex.europa.eu/eli/dec/2016/6111/oj</a> LEX%3A32016D0611%20
Electricity	80	kWh/(m <sup>2</sup> a)	
Water	140	L/night	
Residual waste	0.16	kg/night	
EMAS Benchmark for Offices 2019		Unit	Source
Building energy (heat and electricity)	100	kWh/(m <sup>2</sup> a)	Reference document issued by the European Commission on Best Environmental Practices, including indicators for environmental performance and benchmarks of excellence for the public administration sector (2019): <a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019D0061">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019D0061</a>
Water	6.4	m <sup>3</sup> /(FTE a)	
Residual waste	200	kg/(FTE a)	
Paper consumption	18.5	kg/(FTE a)	

Indicators for hotels		Unit	Source
Building energy (average, European hotels in 2006)	306	kWh/m <sup>2</sup>	ECOTRANS e.V., University Stuttgart (2006): Umweltleistungen europäischer Tourismusbetriebe: <a href="https://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.showFile&amp;rep=file&amp;file=LIFE00_ENV_NL_000810_LAYMAN.pdf">https://ec.europa.eu/environment/life/project/Projects/index.cfm?fuseaction=home.showFile&amp;rep=file&amp;file=LIFE00_ENV_NL_000810_LAYMAN.pdf</a>
Building energy (average, European hotels in 2006)	77	kWh/night	
Water (average, European hotels in 2006)	394	L/night	
Residual waste	1	kg/night	
Electricity (average, German hotels 2012)	12	kWh/night	Hotel und Energie, Eine Sonderveröffentlichung der Fachzeitschrift Hotelbau, August 2015 ISSN: 1865-5130 <a href="https://www.hotelbau.de/download/downloadarchiv/hotel+energie2015.pdf">https://www.hotelbau.de/download/downloadarchiv/hotel+energie2015.pdf</a>
Heating (average, German hotels 2012)	136	kWh/m <sup>2</sup>	
Heating (reference value, German hotels in 2012)	28	kWh/night	

Electricity (average, German hotels 2013)	7,829	kWh/pp	Bundesministerium für Wirtschaft und Industrie (2015): Energieverbrauch des Sektors Gewerbe, Handel, Dienstleistungen (GHD) in Deutschland für die Jahre 2011 bis 2013: <a href="https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/sondererhebung-zur-nutzung-erneuerbarer-energien-im-gdh-sektor-2011-2013.html">https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/sondererhebung-zur-nutzung-erneuerbarer-energien-im-gdh-sektor-2011-2013.html</a>
Heating (average, German hotels 2013)	18,269	kWh/pp	Bundesministerium für Wirtschaft und Industrie (2015): Energieverbrauch des Sektors Gewerbe, Handel, Dienstleistungen (GHD) in Deutschland für die Jahre 2011 bis 2013: <a href="https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/sondererhebung-zur-nutzung-erneuerbarer-energien-im-gdh-sektor-2011-2013.html">https://www.bmwi.de/Redaktion/DE/Publikationen/Studien/sondererhebung-zur-nutzung-erneuerbarer-energien-im-gdh-sektor-2011-2013.html</a>

