

ENERGY & EMISSIONS

1. UNDERSTANDING THE TOPIC

There is scientific consensus that our climate is changing considerably. The Intergovernmental Panel on Climate Change (IPCC) has made clear that we must limit global warming to 1.5°C, but based on current levels of commitment, we are on course to reach 3°C of warming. In Germany, over 64 towns and cities have declared a climate emergency and increasing numbers of people are concerned by the lack of an urgent response to the crisis.

Germany's Climate Action Plan 2050 sets out ambitious carbon reduction targets for all sectors, and this includes long-term strategies for upgrading the building stock and the gradual phasing out of fossil-fuel heating systems, and a zero-energy standard for new buildings from 2021, aiming towards a carbon-neutral built environment by 2050.

We take our responsibility to safeguard the natural environment and reduce the adverse impacts of our business activities, including our carbon footprint, very seriously. As a company which invests in the existing building stock and modernizes it to achieve higher levels of efficiency, there is an opportunity for us to position ourselves as a positive contributor to the low carbon economy, working towards low or zero carbon status for our assets. This helps us to attract and retain investors, as well as tenants, and secures easier buy-in for structural projects from local authorities.

2. MANAGING THE TOPIC

Environmental management

At a strategic level, we structure our portfolio-building activities around improving the existing building stock, which entails an inherently more sustainable approach. Renewing and refurbishing assets, rather than destroying and rebuilding, entails a lower carbon footprint and makes an important contribution to tackling wider societal and environmental challenges in the urban context.

GCP has implemented a binding company-wide Environmental Policy which sets out our environmental management framework covering monitoring and review; benchmarking; auditing and target setting-processes for energy consumption, use of fossil fuels and CO₂ emissions.

Energy strategy

The GCP Environmental Policy sets out our environmental commitments covering energy use and emissions, and supports our ambitions target to achieve a 40% reduction in CO₂ emissions by 2030 against our baseline year of 2019. The Policy is applied across the acquisition, property and asset management stages of the property investment lifecycle (with the exception of demolition activities): we identify opportunities for greenhouse gas emissions reduction and energy efficiency improvements as part of the acquisition process and on a regular basis thereafter.

The Policy is supported by The Energy Performance Strategy and Policy of Aroundtown Group, our largest shareholder, that requires asset managers and project teams - under the direction

of the Energy Department - to consider low carbon and energy efficiency improvements before commencing any qualifying works or capital investment. The Energy Department acts as a center of excellence and provides support to project teams in determining the most appropriate investment given each asset's characteristics. Its cross-functional team oversees all elements of our energy strategy including digitalization and procurement, project feasibility studies, building systems optimization and finally performance monitoring and reporting.

Key components of the Aroundtown Group Energy Strategy, applied by GCP:

1. Comprehensive environmental due diligence at the property acquisition stage, enabling us to develop asset improvement and refurbishment plans geared towards higher building environmental quality and operational performance.
2. Implementation of robust environmental management policies and procedures, including data collection, digitalization and reporting, preventive maintenance and ongoing operational improvement.
3. Sustainable energy program encompassing investment in solar and wind power systems; combined heat and power (CHP) and combined cooling heat and power (CCHP) solutions, electric vehicle (EV) charging stations; smart meters and an energy management system.
4. Progressively switching common areas' electricity from Renewable Energy Certificates (RECs) to Purchase Power Agreements (PPA) certified renewable electricity generated from wind, hydroelectric and solar photovoltaic (PV) sources by 2027.

As part of the due diligence that takes place during the acquisition phase, we identify opportunities for structural interventions to improve a building's energy performance characteristics and lower its CO₂ emissions profile. Our due diligence process includes the assessment of upgrades to insulation, heating systems and energy-consuming equipment. Collaboration between our energy department and construction teams allows us to identify assets with greater potential for CO₂ reduction and plan the asset repositioning process accordingly, factoring in the necessary costs are part of the expenditure budget. In 2021, we delivered a total of 82 energy-related projects as part of building modernization works, including 42 for roof, window and façade insulation and five solar PV systems.

Through the operations phase, efforts are made to ensure robust energy performance monitoring and deliver ongoing improvements. We have consolidated robust baseline data for energy and CO₂ emissions which helps us to steer our reduction plans and assess the effectiveness of interventions at asset and portfolio levels. We carry out regular performance benchmarking, site inspections and technical energy audits based on external certification standards such as EN16247 to identify both capex and operational management improvements on an ongoing basis. In parallel to our energy audit program, we continue to roll out the replacement inefficient, fossil-fuel based heating systems with more efficient and, where possible, renewable-based alternatives.

Enhanced metering systems are also being rolled out across the portfolio with digital and remote readable meters progressively replacing older analogue models. The technology means GCP is well placed to comply with amendments to the German heating cost regulations that come into force in 2022, which include a requirement for tenants to receive a monthly notification of their heating use in a bid to reduce energy consumption and associated Greenhouse Gas (GHG) emissions.

These steps form part of GCP's broader digitalization strategy which includes the integration of environmental data into our SAP-based enterprise resource planning framework which is being progressively rolled out across the company. Automated digital invoice reading and expanding data coverage via smart meters to all GCP assets will enable the Energy Department to monitor real-time energy consumption and more rapidly identify irregularities and inefficiencies at individual building management level; and implement corrective measures to reduce unnecessary resource consumption as we work towards our carbon reduction target of 40% by 2030 (against our 2019 baseline).

Other steps towards this goal include a number of projects that will be launched in 2022, including:

- Hydronic balancing which optimizes heat distribution in central heating systems. Modelling indicates potential savings of between 5 and 15% in primary energy demand, and up to 15% reduction in CO₂ emissions through the uniform distribution of hot water flows in radiators.
- Use of state-of-the-art diagnostics to identify energy-related interventions, which involves a three-step hierarchy aligned with the reduce and generate activities of the World Green Building Council's Net Zero Carbon Buildings Commitment for operational carbon: focusing on ways in which assets can reduce and optimize energy demand in the first instance, then identifying opportunities for on-site renewable energy generation, and lastly to supply the remaining energy demand through off-site renewable-based energy.
- Heating and lighting system optimization at larger residential properties including heating room digitalization, adaptive temperature controls, pump replacement, heating flow meters and LED upgrades in common areas.

Energy Investment Program

Aroundtown launched its Energy Investment Program in 2019 in order to achieve a 40% reduction of CO₂ emissions by 2030 against a 2019 baseline.

Investments cover a wide variety of activities, involving both energy efficiency improvements through replacing windows, facades, and roofs while upgrading heating systems, along with renewable energy projects such as solar PV, CHP, heat pumps, and electric vehicle charging stations.

In addition, we have recently co-invested in a company, which specializes in renewable energy and advanced energy systems' projects. The co-investment company analyses the feasibility of installing efficient and/or renewable-based on-site energy systems in our properties, which in the first phase, involves projects that supply residential units with PV energy. Our intention is to increase the proportion of assets with onsite PV and/or CHP, thereby enabling us to supply decentralized electricity and heat to tenants. In 2021, five on-site energy systems were installed across the GCP portfolio, and a further 98 projects are underway.

Green building certifications

From a strategic perspective, GCP strives to increase the share of green buildings within our portfolio. However, we do not undertake any greenfield development and the vast majority of the GCP portfolio comprises acquisitions of existing building stock, very little of which has traditionally qualified for existing green building certifications.

Recognizing the value that investors place on 'green' assets, and the benefits that can be gained by benchmarking our portfolio against external standards, we have begun to assess the

feasibility of seeking certification against the Certified Sustainable Housing label. The standard is the first to measure the positive social and environmental impact of residential investors, and is awarded based on a range of criteria covering affordability, tenant wellbeing, energy use and community development.

Engaging tenants

Tenant involvement and awareness are key to reducing the operational impact of GCP's assets, as tenant utilities' consumption account for the most significant environmental impacts across the scope of our activities, including most of our energy and carbon footprint.

We do not control our tenants' energy consumption, and electricity contracts at the individual unit level are agreed by our tenants on an individual basis. Nonetheless, we strive to provide tenants with consistent and relevant information about their energy consumption. We nonetheless strive to provide tenants with consistent and relevant information about their energy consumption, and the progressive installation of sub-metering systems enables each tenant to be charged according to real consumption rather than average consumption over a group of units. Tenants therefore have a greater incentive to reduce energy use, as this translates directly into a cost benefit for them.

GCP has developed a variety of materials in different languages promoting energy saving behavior among tenants, emphasizing the links between resource efficiency, cost saving and environmental benefit. For example, our refreshed tenant app and loyalty program (launched in April 2021) features incentives, promotions and services that encourage tenants to adopt more sustainable lifestyles. For example, tenants earn loyalty points that can be exchanged for vouchers if they chose to purchase certified renewable energy, as explained below.

Renewable energy

Over the past three years we have pursued a policy of systematically switching energy contracts to renewable-based electricity and carbon neutral gas supplies each time an agreement is subject to renewal. As of 31 December 2021, 100% of the managed assets portfolio was supplied by REC contracts (2020: 100%).

Beginning in 2022, we plan to progressively switch common areas electricity supply from RECs to carbon neutral PPPA for renewable electricity generated from wind, hydroelectric and solar PV sources by 2027. This means that where it is not viable to generate energy on site, or not sufficient energy to meet building demand, sustainable energy will be sourced for building areas under landlord control to minimize asset and portfolio carbon emissions. Switching purchased electricity to PPAs has become a primary focus from 2022 onward.

Understanding climate risks

We have analyzed our assets' direct exposure to climate-related risk and found that the majority of the locations where we are present, pose relatively low risks in relation to climatic changes, including flooding and extreme weather events. Nonetheless, rising sea levels, higher temperatures, altered levels of precipitation and more frequent storms and droughts could have indirect impacts on our business if and when they become severe enough to precipitate mass migrations; food and water shortages; economic losses and rapid movements of investment capital, all of which would have repercussions for our investors, tenants and other stakeholders. Our focus on stable, mature markets within Europe, and our diversity both in terms of city-level market exposure and capital funding, put us in a strong position to withstand such scenarios.

Heightened awareness of climate-change is also leading to demands for greater transparency from the investment community on the steps that companies are taking to build climate-resilience and mitigation strategies into their business models. Our targets with respect to energy consumption and improving the energy efficiency of our portfolio translate into cost reductions; support investor attraction and retention and contribute to sustaining the value of our assets in the long-term.

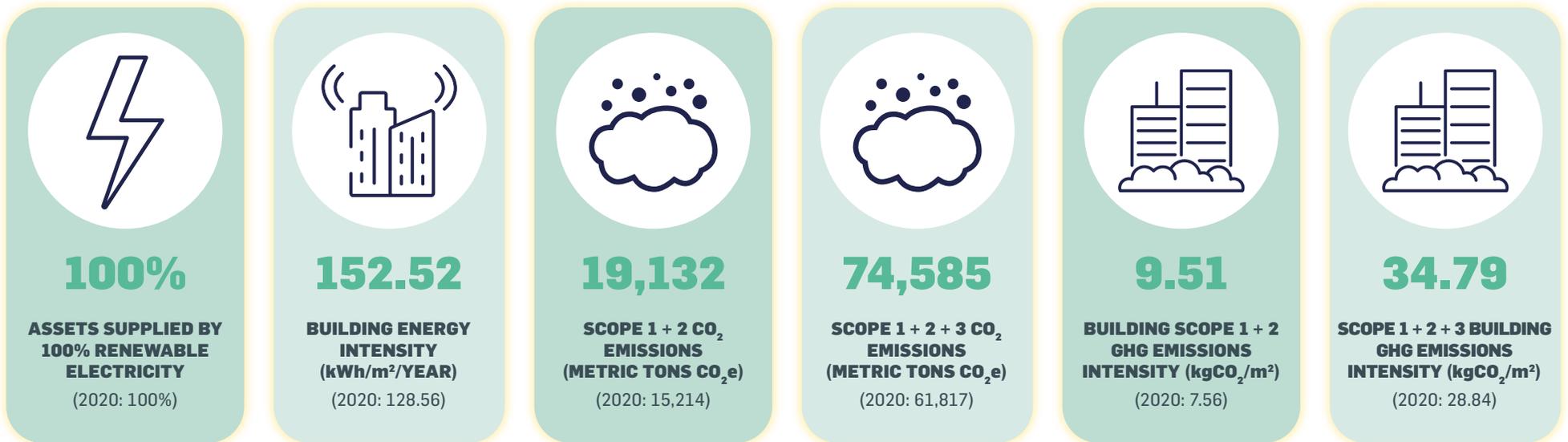
3. PERFORMANCE

Long-term Goals and 2021 Performance

Climate change is an important topic for GCP, and it is within the interests of all our stakeholders that we play an active role in the transition to a low carbon economy. To this end, we are pursuing an ambitious long-term goal to reduce our CO₂ emissions by 40% by 2030.

Achieving this will require significant reductions in energy consumption; procuring electricity from 100% renewable sources and carbon-neutral gas and investing in renewable and low-carbon energy infrastructure where economically viable to do so (see 'Energy Strategy' above).

We use six key performance indicators that we track on a yearly basis to monitor our performance.^{1,2}



1. The highest level of coverage for like-for-like environmental data covers 3,189 assets, representing approximately 67% of our managed assets portfolio, i.e. assets over which GCP has operational control.
2. The data for 2020 has been restated due to availability of real invoice data.

As well as our KPIs, in 2021 we set targets to increase the installation of energy efficient and low carbon technologies as part of our energy investment program. Below, we have described our progress against these targets:

2021 Target	Status	Progress
Achieve a 40% reduction in CO ₂ emissions by 2030 against a 2019 baseline.	Ongoing	We project a 2 % decrease of CO ₂ emissions taking into account weather and vacancy normalization since 2019. We anticipate a 3% decrease in 2022 based on planned and budgeted renewable energy and efficiency projects.
Achieve electricity supply from renewables and climate-neutral gas supply for 100% of our assets where we have operational influence.	Achieved	We have increased electricity supplies from renewables to 100% and climate neutrality has been achieved by offsetting 100% of natural gas for all properties where we have operating control.
Continue the optimization of heating plants by replacing them with highly efficient heating system solutions, using new technologies such as CHP and CCHP systems	Ongoing	Heating plants have been upgraded at 10 assets with the installation of CHP plants. Further 20 projects are under way.
Expansion of the charging station infrastructure for electric mobility	Ongoing	80 electric vehicle charging stations have been installed at our assets.
Install solar power production systems on rooftops and parking areas	Ongoing	Also at our headquarters, we have completed the installation of a rooftop solar PV system with a generating capacity of 100 kWp. Further 35 rooftop PV systems have been installed at our assets.

3. CISBE: Guide F Energy efficiency in buildings (2012)

Significant activities

Portfolio energy and GHG emissions performance

Energy performance and GHG emissions are monitored and assessed based on total consumption (absolute and like-for-like) and intensity metrics. Aggregated data covering the GCP portfolio is reviewed and reported in line with regulatory standards and the EPRA Sustainability Best Practice Recommendations (EPRA sBPR). The data is used to assess our baseline performance and evaluate progress against our carbon reduction target.

In addition, we changed our approach towards distributing energy consumption between landlord-controlled areas and tenant-controlled areas. In the 2019 baseline, we have used a common area/total area ratio to apportion shared-service heating consumption between landlord and tenant spaces, based on the floor area distribution found with the property types classification appendix (3a) of the GRESB Real Estate Assessment reference guide. For electricity, the consumption for tenant-controlled areas was extrapolated based on industry standard energy benchmarks³.

In 2021, GCP-obtained electricity across our portfolio totaled 12,442,873 kWh (2020: 11,029,898). Landlord-obtained heat and fuels totaled 147,066,111 kWh (2020: 121,472,162 kWh) and 159,720,974 kWh (2020: 137,119,213 kWh) respectively. This translated into an average building energy intensity of 152.52 kWh/m²/year (2020: 128.56).

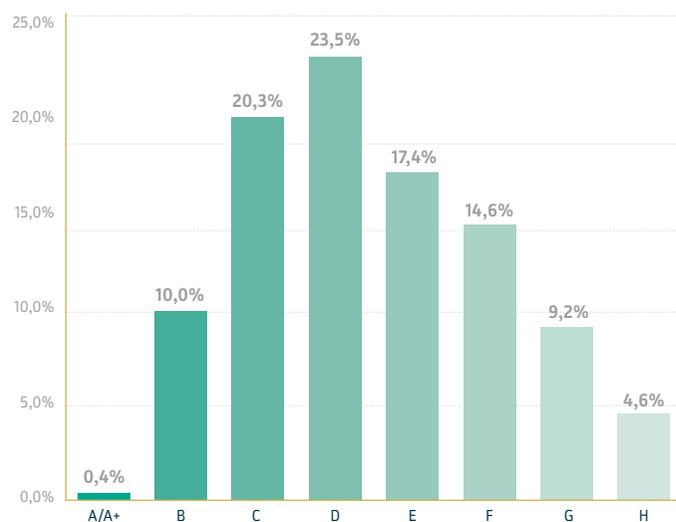
Scope 1 GHG emissions rose by 32 % to 8,903 tons CO₂e (2020: 6,766), and Scope 2 (location-based) GHG emissions rose by 21% to 10,229 tons CO₂e (2020: 8,448). Scope 3 GHG emissions rose by 19% to 55,452 tons CO₂e (2020: 46,603). These increases translated into a Scope 1 and 2 building GHG emissions intensity of 9.51 kg CO₂e/m²/year; a 26% increase compared with 2020 (7.56 kg CO₂e/m²/year).

Energy Performance Certificates

Energy Performance Certificates (EPCs) are required for most buildings when they are sold or leased and provide an objective measure of the energy performance of a property for prospective buyers or tenants. Under the German system, EPCs must be prepared by a certified third party and are valid for a period of 10 years. EPCs are either calculated based on estimated energy demand due to a building's construction (*Bedarfsausweis*), or actual energy use (*Verbrauchsausweis*) which is adjusted for climate factors and vacancy rates at the time of certification.

Across our portfolio, 74% of EPCs have been issued within the past three years. Just over 30 % of GCP's portfolio by floor area have an EPC rating of C or higher, and the average consumption based on the available EPCs is 139.1 kWh/m²/year. The weighted average energy consumption by floor area is 130.14 kWh/m²/year, or 19.8 kWh/m² less than the national average.⁴

EPC ratings by floor area



4. National average provided by the German Energy Agency (DENA)

5. The EPRA report sBPR report will be published in mid-June 2022.

DATA TABLES

Environmental data is reported in line with the EPRA sBPR. Please see our EPRA reporting tables (available on our website)⁵ for a full description of our scope and methodology.

Across our portfolio, 74% of EPCs have been issued within the past three years. Just over 30 % of GCP's portfolio by floor area have an EPC rating of C or higher, and the average consumption based on the available EPCs is 139.1 kWh/m²/year. The weighted average energy consumption by floor area is 130.14 kWh/m²/year, or 19.8 kWh/m² less than the national average

Energy use

Key figures	Scope	Unit	Like-for-Like Portfolio		
			2020	2021	% change
Electricity	For landlord shared services	kWh	11,029,898	12,442,873	13%
	Total landlord-obtained electricity		11,029,898	12,442,873	13%
	% from renewable sources		100%	100%	
District heating & cooling	For landlord shared services	kWh	29,980,363	36,298,709	21%
	Total landlord-obtained heat		121,472,162	147,066,111	21%
	% from renewable sources		0%	0%	
Fuels	For landlord shared services	kWh/m ²	33,629,932	39,244,977	17 %
	Total landlord-obtained fuels		137,119,213	159,720,974	16%
	% from renewable sources		0%	0%	
Energy intensity	Building heating energy intensity	kWh/m ²	128.56	152.52	19%

GHG emissions

Key figures	Scope	Unit	Total Portfolio		
			2020	2021	% change
GHG emissions	Scope 1	tons CO ₂ e	6,766	8,903	32%
	Scope 2 (location-based)		8,448	10,229	21%
	Scope 3		46,603	55,452	19%
	Total Scope 1 and 2		15,214	19,132	26%
	Total Scope 1, 2, and 3		61,817	74,585	21%
GHG emissions intensity	Scope 1 and 2 intensity from building energy	kg CO ₂ e/m ²	7.56	9.51	26%
	Scope 1, 2, and 3 intensity from building energy		28.84	34.79	21%

Corporate Emissions

In response to changing work patterns and a societal shift towards hybrid working between the office and home, we have taken steps to calculate our Scope 3 corporate emissions relating to employee commuting and teleworking.

We have approached these calculations following the technical guidance of the GHG Protocol for Category 7: Employee commuting. Our employee commuting calculation was done on the basis of the average-data method, with consideration to the proportion of office working over the reporting period. The time spent as a proportion of office working was a product of mandated home working by the German government and known employee requests for home working over the year. This proportion was used to reflect reduced journeys for office commuting. Data for German transport trends was used to create the average-data calculations.

Our teleworking calculations were performed on the basis of average domestic German energy use and home office appliances, extrapolated using the home office hours worked over the reporting period. The additionality of home office working was accounted for by applying an intensity factor, using the floor area of a home working space with the entirety of the home.

Employee commuting for GCP totaled 189 tCO₂e and teleworking totaled 771 tCO₂e.

