

Energy & Climate Change

Understanding the Topic

^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. There is clear pressure from investors, from governments and from society for urgent action to reduce the impact of the built environment on the climate, as part of the transition required to achieve this societal goal. It is also vital that buildings and business adapt to the predicted impacts of global warming.

Driving this pressure for change is the increasingly stringent regulation being introduced across the EU. Germany's Climate Action Plan 2050, for example, sets out long-term strategies for upgrading the building stock and gradually phasing out fossil-fuel heating systems, and a zero-energy standard for new buildings from 2022, aiming towards a carbon-neutral built environment by 2050. At the EU level, key sustainability legislation such as the EU Taxonomy and the Corporate Sustainability Reporting Directive is coming into force, which introduce key objectives of climate change mitigation and adaptation, and apply further scrutiny to the environmental impact of large companies.

Given our business model of investing in existing buildings and improving their efficiency to unlock returns, there is a substantial opportunity for us to position ourselves as a leader in the movement towards a low-carbon economy, and we are undertaking significant efforts to achieve this. This year we have also undertaken a significant assessment of our exposure to climate-related risks, the results of which are reported here.

Managing the Topic: Climate Change Mitigation

Our fundamental commitment to climate change mitigation is our target of a 40% reduction in CO₂ emissions by 2030, against our 2019 baseline. In order to achieve this ambitious goal, we developed our Group-wide Energy Policy and Strategy, to establish how efficiency and renewables projects will be targeted, identified, implemented and monitored.

Guiding our actions on this target is our Group CO₂ Pathway, which monitors our progress towards achieving this 40% reduction target, and forecasts the rate of reductions which must be made to reach it. Data on current energy performance and EPC ratings are combined with metrics on potential improvement measures to develop a model of the entire portfolio. The suite of possible measures is determined from on-site audits, desk-based energy simulations and EPC recommendations. Using this data, possible combinations of energy efficiency measures and renewable energy systems are considered, to assess how various types of stranding risk can be mitigated at each property. These insights are considered alongside broader market and regulatory factors, to develop an action plan for combined investments which aligns with the required carbon reduction.

The measures incorporated in the modelling of our CO₂ pathway include upgrades to current building fabric and systems; more sophisticated renewable energy measures such as air source heat pumps and CHP systems; and advanced technologies the department will investigate further in future, such as micro wind turbines, geothermal heat pumps, and hydrogen-based CHP systems. The potential efficiency improvement, carbon reductions and associated costs of these measures are considered.

Given the highly volatile energy market in 2022, many efficiency projects, especially heating upgrades, were not economically viable during this year. The Group's focus has therefore been on making significant improvements to our pipeline for identifying and implementing projects, which we believe will pay off in the ability to roll out such projects more efficiently in future. These improvements are canonised in the new Energy Policy and Strategy published in 2022, which sets out how opportunities for energy efficiency and emissions reduction improvements will be considered at all stages of the lifecycle.

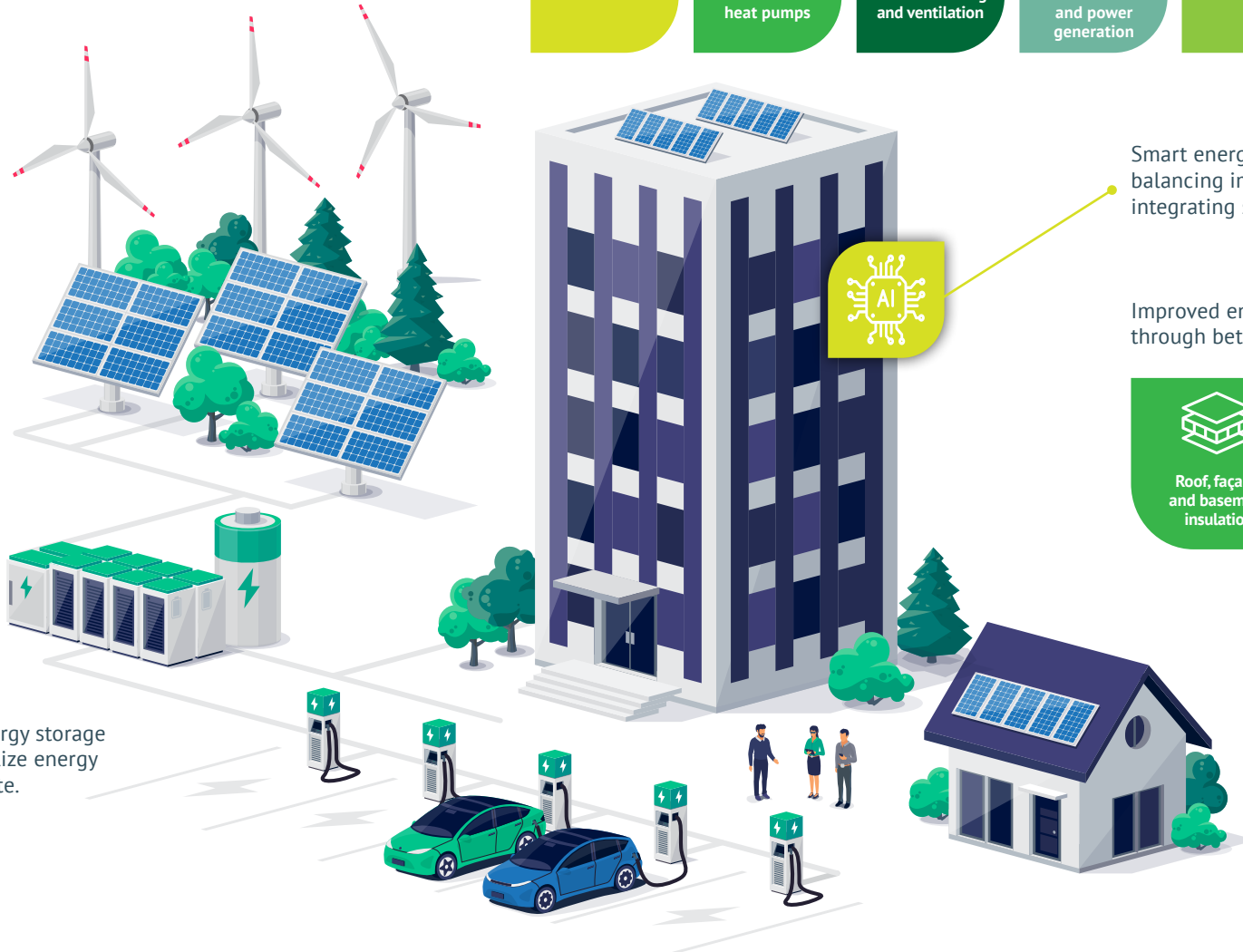
Carbon Reduction Pathway



Sourcing local renewable energy through Power Purchase Agreements

Renewable energy systems and technological upgrading.

- Solar PV
- Air source heat pumps
- Air conditioning and ventilation
- Combined heat and power generation
- EV charging
- LED systems
- Smart meters



Smart energy management systems and hydraulic balancing improve operational efficiency through integrating systems and optimizing energy flows.

Improved energy efficiency through better building envelopes.

- Roof, façade, and basement insulation
- Window replacements

Increase energy storage to better utilize energy created onsite.

Our Energy Strategy focuses on

- Comprehensive due diligence at the acquisition stage, enabling us to develop asset improvement and refurbishment plans to achieve higher environmental performance;
- Implementation of environmental management policies and procedures, including data collection, digitalization and reporting, preventative maintenance and ongoing operational improvement;
- Sustainable energy measures encompassing investment in solar and wind power systems, combined heat and power (CHP) and combined cooling heat and power (CCHP) systems; electric vehicle charging stations; smart meters and a total energy management system;
- Progressively switching all electricity from Renewable Energy Certificates to PPA certified renewable energy by 2027;

Due Diligence at Acquisition

At acquisition, our due diligence processes record the energy intensity and supply systems of the property, so that planning for efficiency improvements can begin as early in the asset lifecycle as possible. This includes examining the current structural fabric, technical systems, and management practices of the building. We are working to expand the energy auditing done alongside the formal due diligence process, so that projects can be implemented immediately upon acquisition.

Monitoring and Management

To maximise the improvement opportunities identified at our existing properties, we aim to complete around 300 energy audits each year. In 2022, we also began to conduct more holistic site audits which assess the condition of the shell, envelope and supply systems of the property. From these audits we aim to identify suitable efficiency and renewables projects. The energy savings, carbon reductions and investment costs of these projects are modelled and extrapolated to the full portfolio, to provide an integrated picture of our progress towards our reduction targets. In future, these assessments will be enriched by sophisticated digital modelling to simulate the effect of efficiency interventions.

Whereas our initial energy management approach was to invest in on-site renewable energy and efficient energy generating systems, such as CHPs or CCHPs (see the next section on our Energy Investment Program), we have adjusted our approach to align with

the three-stage hierarchy in the World Green Building Council's Net Zero Carbon Buildings Commitment for operational carbon. This means when identifying energy interventions, we first focus on ways to reduce and optimize the energy demand of our assets; then identify opportunities to generate the required energy renewably and on-site; and finally source the remaining energy demand through off-site renewable energy.

Good data coverage and reliability is essential to ensure we prioritise these improvement plans correctly, and monitor their effect to further inform our modelling. We have a long-term goal of achieving full data coverage across our portfolio. We increased the coverage of our like-for-like energy data to 89% in 2022, from 63% in 2021. To maximise the utility of this data, we have initiated the development of a new database for environmental data. This will enable semi-automated collection of consumption data through a mobile app for facility managers.

Energy Investment Program

In 2019 we launched our Energy Investment Program. The program's purpose is to ensure that our properties remain competitive during the transition to greater electrification of properties and transport, and to a more decentralized energy market focussed on renewable energy. The extreme challenges to the European energy market in 2022 have further underlined the urgency of this transition, and the foresight of our investment plan.

The program is focused around five components:

- The installation and operation of solar PV generation systems on rooftops and parking areas, up to a potential capacity of 75MW;
- The installation of highly efficient energy generating systems based on CHP or CCHP, up to a potential capacity of 60 MW;
- The implementation of electricity storage to support these solar, CHP and CCHP systems. This will enable optimal management of energy consumption and production, and provide the necessary infrastructure for fast and ultrafast electric vehicle charging stations to serve GCP, our tenants and their clients;
- The installation of up to 25,000 EV charging stations. This will allow for conversion of the Group's fleet to EV, resulting in lower fleet cost and more reliable mobility as well as lower emissions;

- The implementation of smart meters combined with total energy management systems (demand/response) to optimise efficiencies in terms of resource use and cost.

Given the regulatory changes in the past year, we intend to review our Energy Investment Program in 2023, in particular with regard to the usage of gas or fuel-based systems, such as CHPs, which will be phased-out in the long-term.

With a partner company, we implement efficient and renewable-based on-site energy systems at our properties. Our partner also undertakes site visits to identify the number of EV charging points that can be installed at each of our properties, for private or public use. We are also pursuing a deeper investigation into the potential use of heat pumps, and the possibility of incorporating new technology that can increase the efficiency of CHP systems.

Renewable Power Purchasing Agreements

Beyond the scope of our Energy Investment Program, we have set a goal to switch all electricity from Renewable Energy Certificates (RECs) to PPA certified 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 to meet building demand, sustainable energy will be sourced with additionality to minimize asset and portfolio carbon emissions. Since agreeing a new contract with a main supplier for RECs in 2021, 100% of our purchased electricity was covered by RECs in 2022.





Showcase

The efforts of our energy and construction departments to implement leading-edge sustainability technologies at our assets have already produced some remarkable successes. Some showcases of the renovations conducted during 2022 are included here, to provide greater insight as to how our ambitious management strategy is realized at our properties.

Cologne, Germany

We recently completed a thorough refurbishment of one of our assets in Cologne, with around 80 apartment units. When the final coat of paint was applied, this complete renovation of the building envelope involved:

- A new façade, including refurbishment of the balconies;
- New windows in all apartments and stairways;
- New insulation in the roof and cellar ceiling;
- Photovoltaic system.

In addition, we also installed new thermal pumps to support the heating and hot water systems, which are operated by the electricity generated through the newly installed solar PV panels.

GCP has invested €2.3 million into the refurbishment, which started in July 2022 and was completed in February 2023. The energy rating of the asset will improve from EPC label E to A, and the CO₂ emissions of the property will reduce by 65% from 218 t CO₂e to 76 t CO₂e per year.



Managing Climate-related Risks

It is clear that climate change poses major risks across all countries and sectors. These come from both the physical impacts of climate change itself, and the potential impacts of the social transition which will be required to mitigate it. This section of our report is structured according to the recommendations of the Taskforce for Climate-related Financial Disclosures (TCFD), the leading international standard for reporting on management of climate-related risks.

GOVERNANCE

As with corporate governance, GCP's Board of Directors and management team share overall responsibility for climate related risks.

The Risk Committee oversees risk management for the Group, and the potential impacts of climate change are considered as part of this process. Assessment of physical and transitional climate risks is conducted by the Chief Risk Officer in close collaboration with the Sustainability Department, and such assessments are presented to the Committee annually at a minimum, as well as upon urgency throughout the year.

In addition, a cross-departmental taskforce on Building Resilience was formed in Autumn 2022, with contribution from the construction, operation, acquisition, energy and insurance departments. This taskforce will address climate risks across relevant business units and develop action plans and adaptation solutions as necessary.

The Management of GCP is co-responsible for assessing and managing climate-related risks. A distinction is made between climate risks affecting the Group at the corporate level, for which Management is the risk owner, and climate risks which impact our properties, which are owned by the Group's Chief Operations Officer (COO).

STRATEGY

GCP follows the common practice of distinguishing climate-related risks into physical and transition risks. In line with the requirements for a climate risk and vulnerability assessment as laid out in the EU Taxonomy¹, we further subdivide physical risks as being either chronic or acute, with regards to the time-scale of their impacts, and as being temperature-, wind-, water- or solid mass-related.

(1) <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R2139>

Transition Risk

In order to understand the exposure of the Group to transition risks, our Sustainability Department and Risk Committee have undertaken a comprehensive assessment of various transitional risk factors. A summary of the identified risks is provided in the following table, which also sets out the mitigation strategies being used to control these risks to our organisation. In alignment with the recommendations of the TCFD, we also describe the potential opportunities which the Group has identified in each of these factors.

The timeframes short-, medium- and long-term in this table refer to expectations in the next 1-3 years, 4-10 years, and 10+ years respectively. We note that the financial value of each risk has not yet been quantified for GCP.





Risk Committee

Oversees risk management, incl. climate risks



Management

Assessment and management of climate-related risks at corporate level



Sustainability Department & Risk Officer

Assessment of physical and transitional climate risks



Chief Operating Officer

Assessment and management of climate-related risks on a property level



Building Resilience Taskforce

Inter-departmental platform for the discussion and collaboration on climate risks

Develop KPI's for climate risk & action plans and adaptation solutions

Risk Category	Description	Impacts and Timeframe	Mitigation Strategy	Opportunity
Policy	Climate-related regulations and laws are changing rapidly, placing stricter requirements and expectations on the energy and emissions performance. Carbon pricing schemes and energy ratings such as the EU's energy performance certificates (EPCs) are increasingly being implemented, and requirements for minimum ratings that must be met to let units to tenants are coming into force. Over time, existing regulations may become more aggressive or new policy tools may be implemented posing restrictions on letting or preventing the sale of buildings that do not comply with such minimum standards, leaving them „stranded“.	Carbon pricing and enhanced emissions-reporting obligations might result in higher operating and compliance costs. Stricter EPC requirements are already in place in Netherlands and UK, similar requirements are under development in Germany, and the trend will continue in the mid to long-term. These standards may require increased CapEx to bring properties up to the required standard in order to prevent their stranding. Market and investor pressure to disclose GHG emissions, as well as a carbon reduction pathway to net-zero has increased and will stay high in the mid to long-term. (S, M, L)	The Group's Carbon Reduction Pathway forms the strategy for reducing the carbon intensity of the portfolio. The Pathway explicitly considers potential carbon taxes and energy efficiency measures and will identify inefficient assets which are high priority for action to mitigate stranding risk. The energy department has piloted the use of the science-based CRREM methodology to assess the medium-/long-term alignment of our assets to decarbonisation expectations. The Group has also already launched a broader CRREM analysis starting with a set of assets in the German portfolio.	A move to more efficient buildings may result in lower operating costs, reduce stranding risks and decrease exposure to variations in the cost and availability of natural resources. More efficient buildings may also attract higher valuations influenced by improved energy performance and will be more attractive to investors and financial institutions due to compliance with their sustainable reporting requirements.
Legal	Companies may also become subject to lawsuits alleging failure to take sufficient actions to reduce greenhouse gas emissions or to account for or disclose known climate-related risks. Climate-related litigation may also result from erroneous non-financial reporting or misleading sustainability claims, in cases of „green-washing“.	With stricter EU regulation, including the EU Taxonomy and SFDR, the real estate sector has already felt the pressure of environmental legislation. The significant gaps between current regulations and the carbon budgets of the Paris Agreement make further regulatory tightening over the mid- to long-term likely. It is also possible that the scope of these regulations expands to take in more segments of the company's value chain, increasing potential exposure and compliance costs. (M, L)	Our dedicated Sustainability Department works to ensure accurate and high-quality non-financial reporting, while constantly monitoring changes in regulations to identify gaps and facilitate compliance. This involves not only monitoring current legislative initiatives but also assessing the gaps between current policy and science-based climate targets to anticipate future changes.	
Market	Tenant preferences for low or zero-carbon properties are likely to reduce demand for inefficient properties. Likewise, shifting investor preferences for sustainable and resilient assets could see valuations favour green buildings. Market conditions may shift from „green premiums“ for low- or zero-carbon assets to „brown discounts“ in rent or valuation for assets with high energy or carbon intensities.	The age of German building stock, where the Group primarily operates, combined with our business model of acquiring and managing existing buildings, poses significant challenges in offering low or zero-carbon properties through the level of investment that is required. Inability to meet tenant preferences may increase vacancies and reduce revenues while inability to meet investor expectations may reduce access to capital. Shifting market demand may put downward pressure on the value of „brown“ assets which are not in line with market expectations, thereby reducing the availability of capital and increasing the cost of debt. Increasing sustainable finance regulation is forcing our tenants and investors to report on their sustainable actions, which will increase these demands on the Group. (M, L)	The Group is working with tenants to reduce energy and utility consumption as part of tenant awareness campaigns. The carbon reduction pathway prioritizes the most inefficient assets in the portfolio for assessment of possible interventions to determine economic feasibility of investments that will protect or improve their value. This pathway will be subject to ongoing development to ensure alignment to market standards.	Low and zero-carbon buildings will be better positioned to reflect shifting tenant preferences, as well as investor demands, positively impacting rents and access to capital. Green assets may strengthen business resilience by increasing revenue through new products and services that meet market demands and may improve access to capital and debt. Green bond issuance or sustainability-linked loans can be used to improve the financial feasibility of making the needed investments.

Risk Category	Description	Impacts and Timeframe	Mitigation Strategy	Opportunity
Energy	GCP's operating costs are closely connected to commodity-based energy markets, which are more prone to price fluctuations driven by supply crunches or swings in energy demand. This leads to risks associated with high energy and utility consumption and over-reliance on fossil-fuel derived energy supplies.	Energy market risks associated with a dependence on fossil fuels were previously seen as being relevant in the medium-to-long term, but the Russian war in Ukraine and the ensuing rise in energy prices have brought these risks to the present day. This has caused many sectors, including the real estate sector to call for speeding up the transition to a low-carbon economy. Nonetheless, the current energy mix of most grids are still primarily reliant on fossil fuels, as renewable energy generation and energy storage capacities have not reached the required levels for decarbonization. (S, M, L)	The Company's target is to procure 100% of landlord obtained electricity through power purchase agreements (PPAs) and installation of on-site renewable energy systems contribute to reduced reliance on fossil fuels. Investments in energy efficiency through our carbon reduction pathway and Energy Investment Program will also reduce energy costs, mitigating exposure to variations in price.	Increasing procurement of energy from renewable sources and a shift to decentralised energy generation can reduce operational costs, compliance costs and exposure to volatile fossil fuel markets. Green bond issuance or sustainability-linked loans can be used to improve the financial feasibility of making the needed investments.
Technology	GCP recognises that current technologies are insufficient to achieve the grid decarbonization needed to address climate change, and this is expected to increase the pace of technological development.	Insufficient monitoring of technological developments may lead to investment in technologies that become obsolete before the end of their use life. Buildings with obsolete technology systems may experience reduced demand and require higher maintenance costs/capex requirements to meet minimum efficiency standards and modern work, leisure and residential trends. (M, L)	The energy and operational departments monitor available technologies on the market and their observed costs to maintain awareness of relevant and economical technologies that can improve the energy or carbon profiles of buildings. The energy-related procedures underlying the new environmental policy of the group prescribe prioritization of investment towards proven and cost-effective technologies.	Opportunity to engage with and invest in proptech start-ups to ensure modern, forward-thinking and appropriate technological outfits of the Group's properties.
Reputation	Companies seen as taking insufficient climate action or delaying climate action face increasing scrutiny and criticism from tenants, investors, the media, and society at large. Additionally, current and future generations of employees hold greater expectations for companies to act to address climate change.	Any deficiencies in the climate strategy of the Group could expose the company to criticism from societal actors, diminishing the company's reputation. Errors in non-financial reporting may be seen as fraudulent or „greenwashing“. Reputational damage from inaction on climate change may also reduce the ability to recruit and retain talent in the medium- to long-term. (S, M, L)	The sustainability department monitors best practices and societal trends to identify and act on gaps in the company's climate strategy and bringing them to the attention of relevant internal stakeholders while working to ensure high-quality sustainability disclosures. Clear communication on the Group's sustainability, climate risk actions and carbon reduction targets will reassure employees, potential candidates and investors of the Group's continued efforts with regard to climate change mitigation and adaptation.	The sustainability department monitors best practices and societal trends to identify and act on gaps in the company's climate strategy and bringing them to the attention of relevant internal stakeholders while working to ensure high-quality sustainability disclosures. Clear communication on the Group's sustainability, climate risk actions and carbon reduction targets will reassure employees, potential candidates and investors of the Group's continued efforts with regard to climate change mitigation and adaptation.

Physical Risk Assessment

To assess the materiality of various physical risks to our assets, in 2022 we conducted a city-level physical risk assessment through S&P Global's Sustainable1 for each of our major strategic locations. This was done across eight physical risks, with modelling conducted under four warming scenarios (SSP1-2.6, SSP2-4.5, SSP3-7.0 and SSP5-8.5 from the CMIP6 consolidated climate models). From this analysis, exposure scores were produced for each decade from 2020 to 2100 in twenty cities of particular strategic focus to GCP. These scores were weighted against the GDP of the areas assessed, and the cities analysed cover around 73% of the value of our portfolio. This analysis informs the assessment of risk levels in various locations and scenarios provided below.

The following table presents the results of this risk analysis, describing the potential impacts and severity of each risk across the locations analysed and under two warming scenarios.

Risk	Potential Impacts	Potential Business Impacts	Variation under Climate Scenarios	Variation by Location
Extreme Heat	Deadly heat stress is a prominent risk across our countries of operation, particularly in urban areas with heat island effects. Other potential chronic impacts include worsening air quality due to wildfires; and the spread of disease vectors due to increased temperatures.	Under-adapted assets could become dangerous or unliveable in situations of heat stress, with potential effects on occupancy or rent levels. Household energy demand is likely to increase to manage extreme temperatures. Increased CapEx demands will be incurred to adapt to these risks with measures such as green rooftops or use of water permeable material.	Divergence in degree of exposure between scenarios is only observed in the latter half of the century. With actual extreme heat observations outpacing modelled estimates of our current warming path, our analysis indicates this risk is highly likely to become material, regardless of scenario.	Likely to be experienced at similar levels throughout given urban geographies, indicating the need for systemic adaptation plans in high-risk locations. Munich has a high rate of increase of exposure, as well as high absolute risk, alongside other South German cities such as Stuttgart.
Drought	Decreased precipitation and increased temperatures, in particular during extreme heat effects, could make water scarce across large geographic areas. This may have wider infrastructural effects, including to local agriculture.	Under-adapted assets could become dangerous or unliveable in drought conditions, with potential effects on occupancy or rent levels. CapEx requirements may be required to adapt high risk assets.	Divergence of risk level between the scenarios analysed is comparatively lower than for other risks, with the level of exposure of the Group's regions of operation high across all warming paths assessed.	Drought risks are observed to be correlated by region, with the East German cities of Leipzig, Halle, and Dresden among the most exposed. Almost all cities have near-maximum exposure scores by the end of the century, indicating that the solutions adopted need to be systemic across locations.
Wildfire	Wildfire events can cause substantial damage to life and property in short periods of time, displacing communities and rendering wider areas dangerous or unliveable. The resulting smoke also severely worsens air quality, leading to potential chronic impacts.	Acute property damage could prove highly costly to the business and dangerous to our occupants. The potential chronic impacts on air quality may also impact occupancy. Heightened physical risk is also likely to impact insurance premiums and vacancy rates.	Divergence of risk level between the scenarios analysed is comparatively lower than for other risks, with the level of exposure of the Group's regions of operation high across all warming paths assessed.	Local geographical conditions drive wide variations in exposure levels between cities. Despite the connection to heat and precipitation levels, the results differ from the scores for extreme heat and drought, indicating a need to assess local risk drivers at asset-level.
Fluvial Flood	Spontaneous flooding due to extreme precipitation can cause substantial damage, with the impacts depending strongly on location due to ground conditions and structural stability. Such flooding can also have collateral impacts on infrastructure and transportation.	Acute property damage could prove highly costly to the business and dangerous to our occupants. Impacts are extremely dependent on asset-level conditions, making it difficult to assess the value at risk with any accuracy. Heightened physical risk is also likely to impact insurance premiums and vacancy rates.	Some cities see considerable differences in risk scores between the SSP2-4.5 and SSP3-7.0 scenarios, with greater magnitude of increase between decades observed in the higher-warming scenario. The rate of increase of risk rating is most pronounced in the decades before 2050 in these more severe scenarios.	There are considerable differences in exposure scores at city level, indicating the very location-specific drivers of this risk. The cities with greatest exposure include London and Hamburg. London also ranks among the cities with the greatest rate of increase in exposure through 2050, along with the cities of Frankfurt, Mannheim, Mainz, and Wiesbaden, which are located near the confluence of the Rhein and Main rivers. The highly location dependent findings demonstrate the need to conduct asset-level assessments of this risk.
Coastal Flood	Rising sea levels may render coastal areas or river flood basins unliveable. Impacts will be widespread in affected locations, potentially leading to displacement of communities or substantial adaptation costs.	Surface water or river flooding could lead to severe damage to real estate, potentially incurring substantial costs for repair and maintenance, and losses from assets being removed from operation. Heightened physical risk is also likely to impact insurance premiums and vacancy rates.	Differences between scenarios are significant by the end of the century, but are less pronounced through to 2050, suggesting this risk will be material regardless of actual warming.	Naturally, this risk can only be assessed in coastal cities, with the highest scores found in Bremen and Hamburg. As the adaptation solutions required cannot be implemented at the scope of individual assets, in-depth consideration of the adaptation plans of local governments will be required to understand the value at risk of assets.

Three risks are excluded from the table above, as they were deemed less relevant to our portfolio following the analysis conducted. Tropical cyclones are excluded, as our assets have no potential exposure to such risks. Extreme cold is discounted as the scores against this risk fall in all scenarios. This risk is part of the historical norm for the European areas in which we operate, and so is not relevant as a climate risk. Finally, water stress is excluded, as the analysis conducted indicated decreasing risk levels. However, we consider that this does not incorporate the potential interrelations with other risks, and is not sufficiently clear as to the driving causes of the identified stress. We will seek to conduct more conclusive analysis of this risk in future.

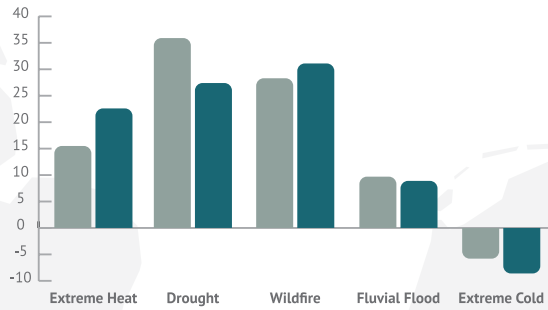
The following map shows the 16 cities from the German portfolio included in the physical risk assessment conducted through S&P Global Sustainable1. The colour scale ranks the cities according to their increasing exposure to extreme heat risk up until 2050 providing an indication of which German cities should be prioritized when implementing adaptation solutions.

The four bar charts demonstrate the growth rates in risk exposure through 2050, comparing between the Medium (SSP2-4.5) and Medium-High (SSP3-7.0) scenarios, for the strategically important cities of Berlin, Cologne, Frankfurt, and Munich. The differences between the scenarios, as well as the local risk variations indicate the need for a carefully informed approach when developing adaptation plans at the city- and asset-level. Consideration of multiple scenarios is critical for ensuring any plans implemented are robust to multiple climate change scenarios.

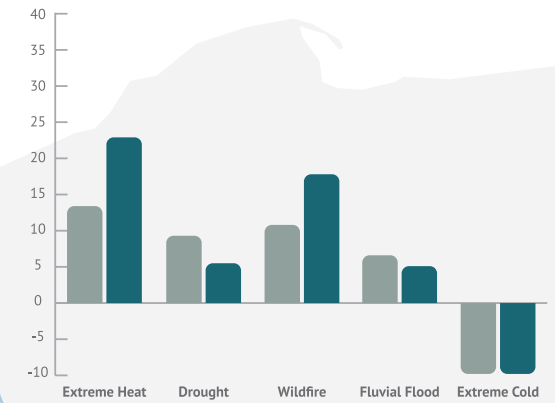


City-level Physical Risks Analysis

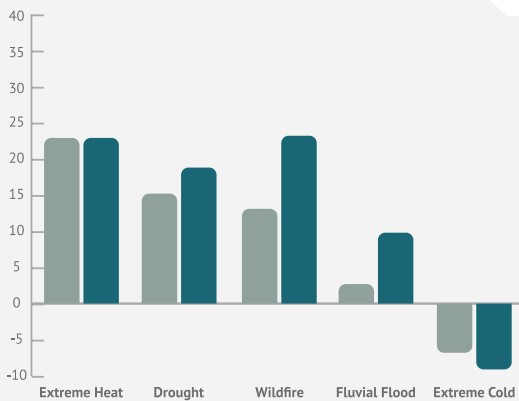
Cologne, Average Decadal Growth Rate (2020-2050)



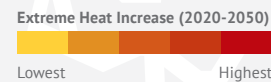
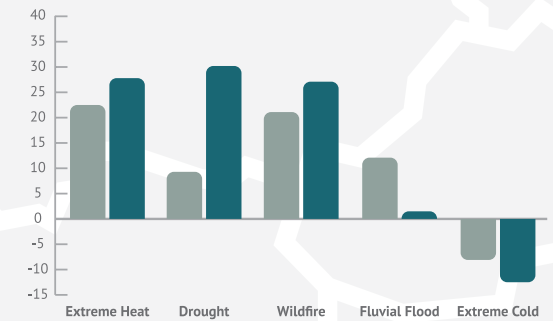
Berlin, Average Decadal Growth Rate (2020-2050)



Frankfurt, Average Decadal Growth Rate (2020-2050)



Munich, Average Decadal Growth Rate (2020-2050)



Medium scenario (SSP2-4.5) Medium-high scenario (SSP3-7.0)

RISK MANAGEMENT

The Group categorizes our risk management systems into two main sections – internal risk mitigation and external risk mitigation. The assessment of physical and transitional risks linked to climate change are primarily external.

The Risk Committee commissions the Chief Risk Officer and the Sustainability Department to conduct physical risk assessments of GCP's portfolio in Germany and the UK. Other departments, including insurance, energy and technical due diligence provide additional support and expertise where necessary. Under our current procedures, we assess climate-related risk at the portfolio level; however, the Group's long-term ambition to conduct an asset-level analysis. Our focus is to prioritise information which provides the most accurate image of regional and local climate risks, as well as opportunities arising from the necessary transition.

In addition to governing risk assessment within the Group, the Risk Committee also monitors the effectiveness of risk management functions throughout the organization, ensuring that our infrastructure, resources and systems are adequate to maintain satisfactory risk management discipline.

A key priority in our current risk management efforts is the implementation of adaptation solutions and action plans. The joint work of the CRO, the Sustainability Department and the Building Resilience taskforce on this objective is presented to the Risk and ESG Committees and reported to the Management. These bodies then jointly authorise the risk management approach we will move forward with.

GCP's overall risk management is based on the COSO Enterprise Risk Management framework in order to determine the Group's material risks, define current and desired mitigating controls for each risk group (Strategic, Operational, Reporting and Compliance) and to provide a framework for Risk Management Program and risk-based Internal Audit Plan.

Climate-related risks are taken into account throughout the described process above. A comprehensive risk matrix catalogue for each risk group has been compiled for the Group, including physical and transitional climate-related risks. Each risk is rated based on combination of impact and likelihood resulting in four rating definitions: Inherent Risk, Target Residual Risk, Target Risk Reduction and Actual Residual Risk.

Where possible the impact is quantified and based on the current financial results of the company; the likelihood is based on the management's subjective judgement of the probability or on historical data, such as number of claims filed in recent years in relation to flooding.

The ability to quantify climate related risks depends on the availability of data and methodologies. The Carbon Risk Real Estate Monitor, CRREM, tool is an emerging best practice for stranding risk assessment in the real estate sector. Therefore, this tool has also been piloted by GCP's parent Aroundtown in 2022. An analysis of the German portfolio is ongoing, and this will also be applied to GCP's portfolio eventually.

Adaptation Solutions

A key priority in our current risk management efforts is the implementation of adaptation solutions and action plans. The joint work of the CRO, the Sustainability Department and the Building Resilience taskforce on this objective is presented to the Risk and ESG Committees and reported to the Management. These bodies then jointly authorize the risk management approach we will move forward with.

Potential adaptation solutions were identified by the Sustainability Department, taking into account the results of the physical risk analysis described above. In order to prioritize these measures, the Building Resilience Taskforce held a working session to assess the materiality and feasibility to the stakeholder departments within Aroundtown. The results of this exercise were collated, to identify those measures which could deliver the greatest value for the required investment.

The outcome of this assessment process was a set of four adaptation programs which will be prioritized at our assets. The identified solutions are:

- *Tree planting program* – Planting and maintenance of trees in public areas, and unsealing spaces to create more green areas around buildings.
- *Flood analysis and planning* – Asset-level analysis of flood and drought to determine particular counter-measures. Development of flood scenarios plans and emergency plans.
- *Tenant guidebook for extreme conditions* – Creation of a behavioural guide for tenants to deal with extreme climatic conditions, including definition of the internal and external notification chain in such emergency circumstances.
- *Refurbishments* – Review of materials chosen at sites which are at risk, and roof maintenance works.

In line with the EU Taxonomy's prescribed climate risks and vulnerability assessment, it is the Group's goal to implement these adaptation solutions over the course of the next five years. These solutions will therefore guide our investment program to increase

the resilience of our assets to physical climate risks. Our Sustainability Department will continue to analyse the vulnerabilities of our assets to identify further opportunities for adaptation in future.

Performance

METRICS AND TARGETS

We publish comprehensive environmental performance data in line with the EPRA Sustainability Best Practice Recommendations (sBPR). In 2022 we received the EPRA sBPR Gold award for this disclosure for the 6th time consecutively, demonstrating the high standard of the data we publish. As recommended by EPRA, we track our total energy consumption and Scope 1, 2 and 3 emissions, and the intensity ratios of these totals normalised by floor area, decomposed by the sectors within our portfolio. In 2022, we initiated the project of benchmarking these data against the pathways published by CRREM, the Carbon Risk Real Estate Monitor. We will expand the number of properties assessed by this project in 2023, in order to proactively monitor and mitigate the stranding risk of our assets.

We produced a CO₂ baseline report for 2019, with ISEA 3000 limited assurance, to provide a solid baseline for our reporting going forward. This report establishes our organisational and emissions boundary, and will ensure that our future emissions reduction goals are assessed against a verified point of comparison.

The Company has launched the process of assessing future exposure to the physical risks of climate change. As progress continues in this area, additional metrics will be identified to monitor progress in adapting to the risks of climate change, serving as the foundation for relevant targets as well.

PROGRESS AGAINST 2019 BASELINE	2022 PROGRESS	2030 TARGET
CARBON INTENSITY (ANNUAL)	-0.2%	-40%
CARBON INTENSITY (CUMULATIVE)	-16%	
ENERGY INTENSITY (ANNUAL)	-4%	-20%
ENERGY INTENSITY (CUMULATIVE)	-13%	

KPI ²	2022	2021
Assets supplied by renewable electricity (%)	100	100
Heating Energy Intensity (kWh/m ² /year)	130.33	144.63
Scope 1+2 Emissions (t CO ₂ e)	29,668	32,386
Scope 1+2+3 Emissions (t CO ₂ e)	130,665	140,151
Scope 1+2 Emissions Intensity (kg CO ₂ e/m ² /year)	9.17	10.15
Scope 1+2+3 Emissions Intensity (kg CO ₂ e/m ² /year)	40.38	43.32

(2) Observed indicator values from the like-for-like portfolio

Narrative on Performance

In 2022, landlord-obtained electricity in our like-for-like portfolio totalled 12,264,324 kWh, down from 13,189,796 kWh in 2021. Like-for-like landlord-obtained district heating & cooling was 230,511,855 kWh, decreasing from 259,674,888 kWh in 2021, and fuels totalled 191,171,371 kWh, compared to 208,280,708 kWh in 2021. This translated to a 9.9% decrease in average heating energy intensity across the portfolio, from 144.63 kWh/m²/year to 130.33 kWh/m²/year. These improvements demonstrate the impact of our investments in energy efficiency across the board, and we will look for this trend to continue in future years.

These decreases in energy consumption corresponded to strong reductions in our emissions across all three scopes. We achieve a 10% decrease in our Scope 1 + 2 emissions intensity (from 10.15 kg CO₂/m²/year in 2021 to 9.17 kWh/m²/year), and a 7% decrease in Scope 1, 2 + 3 emissions intensity (from 43.32 kg CO₂e/m²/year in 2021 to 40.38 kg CO₂e/m²/year in 2022). In addition to our renewable energy efforts outlined above, these reductions delivered by our energy efficiency projects put us in a strong position to meet our CO₂ reduction target. The measures implemented this year will begin to show their effect in future years' reporting.

Priorities for 2023

In 2023 we will continue to focus on progress towards our overarching reduction targets in carbon and energy intensity. This will mean setting the work to prioritize energy efficiency interventions done in 2022 into motion, rolling out these planned upgrades across our portfolio. We will also continue to work with our partner company to deploy renewable energy systems and electric vehicle charging points at our assets.

Alongside this work to mitigate our impact on climate change, we will expand our efforts to assess and adapt to climate-related risks to our business. The adaptation solutions identified by our Building Resilience Taskforce will be initiated, to begin safeguarding our assets, and we will investigate deeper insights into our physical climate risk exposure, including at the asset level.

GCP 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 out 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.

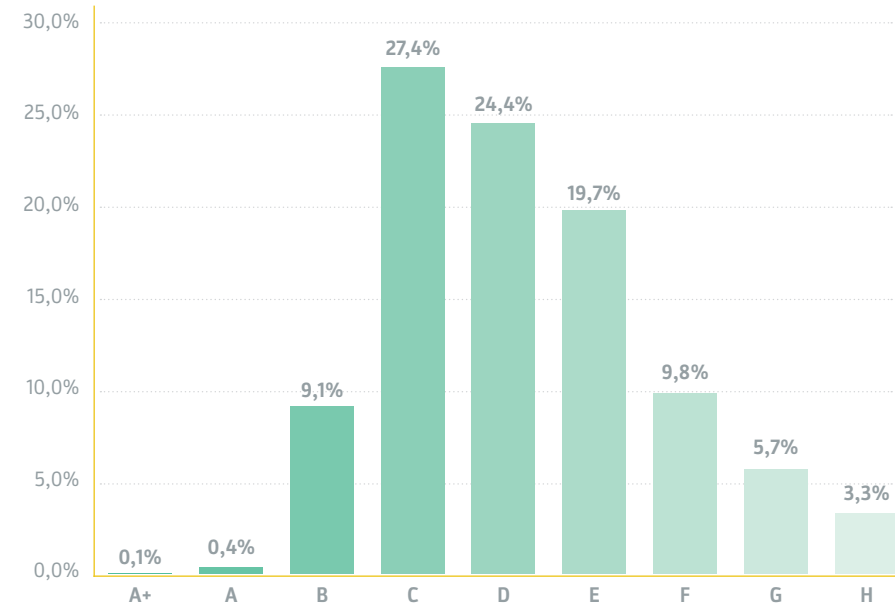
The year-on-year increase visible in this table is driven by the substantial increase in office working days in 2022, as work in 2021 was still primarily remote due to the COVID-19 pandemic. Total teleworking emissions in 2022 were 750 tCO₂e, compared to 771 tCO₂e in 2021.

COMMUTE GROUP	GCP EMISSIONS 2022 (tCO ₂ e)	GCP EMISSIONS 2021 (tCO ₂ e)
ON FOOT	0.00	0.00
BICYCLE	0.00	0.00
PRIVATE MOTORISED TRANSPORT	511.07	149.62
PUBLIC TRANSPORT	133.22	39.00
TOTAL EMPLOYEE COMMUTING	644.29	188.62

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, EPC 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 construction (*Bedarfsausweis*) or actual energy use (*Verbrauchsausweis*) which is adjusted for climate factors and vacancy rates at the time of certification.

Across our portfolio, 56% of the EPCs have been issued within the past three years. About 37% of GCP's portfolio by floor area have an EPC rating C or higher, and the average consumption based on the available EPCs is 127 kWh/m²/year, or 22 kWh/m² less than the national average.



Data Tables

Energy Use

Indicator	Unit	Boundaries	Total portfolio (Like-for-Like)		
			2021	2022	% change
ELECTRICITY	kWh	for landlord shared services	13,189,796	12,264,324	-7.0
		Total landlord-obtained electricity	13,189,796	12,264,324	-7.0
		Total tenant-obtained electricity	139,165,315	139,165,315	0.0
		Total electricity	152,355,111	151,429,639	-0.6
		% from renewable sources (landlord shared services)	100	100	-
FUEL	kWh	for landlord shared services	50,177,118	46,096,296	-8.1
		tenant allocated	158,103,590	145,075,075	-8.2
		Total landlord-obtained fuel	208,280,708.4	191,171,371	-8.2
		Total fuel	208,280,708	191,171,371	-8.2
		% Carbon Neutralized	0	0	-
DISTRICT HEATING & COOLING	kWh	for landlord shared services	61,973,343	55,029,469	-11.2
		tenant allocated	197,701,544	175,482,386	-11.2
		Total landlord-obtained heating & cooling	259,674,888	230,511,855	-11.2
		Total heating & cooling	259,674,888	230,511,855	-11.2
		% from renewable sources	0	0	-
ENERGY INTENSITY	kWh/m ² /year	Heating Energy Intensity	144.63	130.33	-9.9
		Total Energy Intensity (partly estimated)	191.72	177.13	-7.6

GHG Emissions

Indicator	Unit	Boundaries	Total portfolio (Like-for-Like)		
			2021	2022	% change
GHG EMISSIONS	t CO ₂ e	Scope 1	10,383	9,531	-8.2
		Scope 2	22,453	20,137	-10.3
		Scope 3	107,315	100,997	-5.9
		Scope 1 + Scope 2	32,836	29,668	-9.6
		Scope 1 + Scope 2 + Scope 3	140,151	130,665	-6.8
GHG INTENSITY	kgCO ₂ /m ² /year	Scope 1 and 2 Intensity from building energy	10.15	9.17	-9.6
		Scope 1, 2 and 3 Intensity from building energy	43.32	40.38	-6.8