

## Environment area of action

LEG pursues the vision of a liveable world in which people use natural resources sustainably in the long term and successfully limit global warming. The buildings sector has considerable responsibility in this respect. In this area of action, we therefore focus on climate protection measures. As a housing company, we focus on reducing the energy used in providing heating and hot water to our apartments through energy-efficient buildings. We also support the use of low-emission and renewable energies. We involve our tenants by informing them about energy saving, resource conservation and about individual energy consumption via targeted measures.

## PROTECTING THE ENVIRONMENT AND CLIMATE

### Focus on energy efficiency and emissions reduction in our residential portfolio

The buildings sector is responsible for a significant portion of Germany's overall energy consumption and is therefore one of the relevant causes of CO<sub>2</sub> emissions. The housing industry in general and LEG in particular are supporting the energy transition and climate protection. As a major housing company, LEG believes it has considerable responsibility for the environmental impact of its actions. It makes strategic use of its leverage for impacting energy efficiency and emissions reduction, and involves its tenants in improvement measures, for example by participating in projects. In the new 2020 materiality assessment, the topic of energy and emission reduction was classified as having high materiality in the environment area of action. This classification applies to LEG's entire property portfolio, including its administrative buildings. LEG supports the achievement of the climate goals set by policy-makers and meets the statutory requirements of the German Building Energy Act. The company carries out energy modernisation measures that focus on building insulation, window replacement, heating system optimisation, the use of renewable energies, and transparent and targeted information for local tenants.

**GRI 103-1**

However, as landlord in the affordable segment, LEG has to balance the interplay of energy modernisation measures with economic viability for tenants.

In addition to portfolio modernisation, LEG also uses innovative digital concepts for the efficient control of its heating systems and for energy-efficient living. In its construction projects, LEG uses modern, sustainable forms of energy and environmentally-friendly building systems. The system for recording and evaluating environmental metrics is continuously reviewed and developed further so as to derive the correct action strategies.

**GRI 103-1**

### Investment programme for energy modernisation

To offer its tenants energy-efficient apartments and to assist them in reducing consumption and emissions, LEG adopted a set of measures with concrete goals as part of its investment planning and has set its sights on improving the efficiency of its heating systems via its own energy company. **GRI 103-2**

The company is pursuing the strategic goal of reducing the energy consumption and CO<sub>2</sub> emissions of its portfolio of properties by the end of 2021. The key instrument in this respect is implementing energy improvements to the entire portfolio. To do this we want to improve the energy efficiency of 3% of the properties in the current year. Until the end of 2024, we want to reduce the current level of the CO<sub>2</sub> emissions of 36.7 kilograms per square metre by 10%. **GRI 103-2 c**



Erkrath, Kattendahlerstrasse

Most of the investments in modernising the portfolio relate to energy efficiency. For overall investment measures, the ongoing project planning and preparation is handled by the relevant technical units, supported by a suggestion list on the part of the regional branches and the centralised Portfolio Management division. The projects are calculated and are evaluated qualitatively in terms of categories such as traffic safety, regulatory requirements and obligations pursuant to private law. **GRI 103-2**

The measures are selected on the basis of internal company requirements regarding profitability, value enhancement, financing regulations, budgeting, sustainability and LEG's strategic goals. The entire project portfolio is approved by the Management Board. **GRI 103-2**

#### Responsibility for target attainment assigned

The Management Board and Supervisory Board are involved in setting the investment programme first and foremost with regard to budgeting. A team comprising employees from multiple divisions is responsible for the implementation of this investment programme.

Realisation of the investment programme and the modernisation measures is firmly embedded in LEG's target attainment system and is linked to target agreements. This applies to executives and employees at different levels. For the first time, achieving short-term and long-term environmental targets are being used as an element for the target systems of the Management Board and second-tier executives > **Strategy chapter, page 13 f.**

#### Realigned climate strategy

Reducing buildings' direct and indirect energy consumption and the greenhouse gases that they emit has become essential to success in the property industry.

The German federal government's climate package enshrined sector-specific environmental targets and CO<sub>2</sub> pricing in law for the first time. For the building sector, this means reducing

greenhouse gas emissions in Germany to 67 million tonnes in 2030 (2020: 118 million tonnes). LEG supports the federal government's target of making building stock in Germany virtually carbon-neutral by 2045.

The objective must also include realising climate protection with fair and affordable rents. It is for this reason that LEG is aiming to realise climate protection for its tenants in a socially compatible manner.

We began preparing a climate strategy in the reporting year. To provide sound underlying data, we discontinued CO<sub>2</sub> emission measurement on the basis of the previous practice of extrapolating from energy certificates and have moved largely to recording actual consumption of the previous year on the basis of which an extrapolation for the reporting year is made.

In the reporting year, we set up a team of experts at our subsidiary EnergieServicePlus (ESP) so that we can better assess and manage the environmental risks and opportunities for LEG. This team is responsible for monitoring CO<sub>2</sub>, working out way to reduce our CO<sub>2</sub> emissions and conducting research related to CO<sub>2</sub> reduction > **see page 36 f.**

In 2021, we will assess whether there are any potential physical or transitory environmental risks and, if so, integrate these into LEG's risk management system.

#### Making good progress toward target attainment

The continuation of our modernisation programme also helped reduce specific CO<sub>2</sub> emissions produced by our portfolio in 2020. In the current year, at least 3% of residential units are to be upgraded for maximum energy efficiency. By the end of 2024, we want to reduce CO<sub>2</sub> emissions by 10%. Previous charges are due both to the CO<sub>2</sub> emissions and the number of energy efficiency classes when purchasing portfolios worse in energy terms as well

as the extensive new issue of energy certificates and more than offset the positive effects from the energy modernisation of buildings in the existing portfolio. Projects were physically completed in 2020 that will result in energy improvements for almost 6,200 residential units – about 4.3% of our portfolio as at 31 December 2020. In 2019, this figure was 4% and 4,800 residential units. **GRI 103-2**

LEG is planning to carry out even more comprehensive modernisation work for entire neighbourhoods in the future. We had particularly positive experiences with this in the past financial year. With upgraded energy efficiency in Monheim, Dortmund and Herne – a total of about 2,200 residential units, we made average energy savings of 40% to 46% by installing large-scale insulation, exchanging windows and refurbishing roofs.

### Energetic improvement of c. 6,200 residential units in the reporting year

– this represents c. 4.3% of the portfolio.

We are also paving the way for virtual carbon-neutrality in new builds: 100% of our planned new buildings will be rated energy efficiency class A in future. All current projects are to receive funding under "KfW 55", which requires primary energy requirements to be 45% lower than those of a reference building under the German Energy Saving Ordinance (Energieeinsparverordnung). All our new builds are thus fitted with an environmentally friendly source of heating, good insulation, energy saving windows and the option to install green roofing.



**Dusseldorf, Airport City:** STRABAG Real Estate develops new sustainable headquarter 2022.

Newly built units that we intend to purchase from project developers starting in 2023 (250 each year) should all be "KfW 55 homes" and over 90% of them are to be in energy efficiency class A.

In addition, we are targeting German Sustainable Building Council (DGNB) certification for our new LEG headquarters in Dusseldorf which we will move into in the spring of 2022. This is issued by the DGNB [www.dgnb.de/en/](http://www.dgnb.de/en/). Certification is to cover not only the headquarters, but also an adjoining building that LEG intends to rent.

### Protecting the environment and climate – taking the next step

In order to take due account of the topics of climate protection, sustainability and CO<sub>2</sub> avoidance, in the reporting year, we established a new "Climate and sustainability" unit in ESP, our wholly owned subsidiary. As the next strategic move, the unit will analyse existing neighbourhoods in respect to energy status and consumption so as to be able to provide targeted support for investment decisions.

### Transparency as starting point for shaping a successful future

In the 2020 reporting year, in line with the GHG Protocol a complete carbon footprint was prepared for 2019. On this basis, using the CO<sub>2</sub> conversion factors provided by the German Federal Office for Economic Affairs and Export Control, we prepared our carbon footprint for 2019.

Due to the fact that final consumption data always arrive at the company with a delay of up to one year, there is also a delay in the context of providing information on the overall climate footprint. For this reason, in the 2020 reporting year, we prepared the overall footprint based on extrapolating the 2019 figures. This calculation covers the data determined in the context of the overall climate footprint for 2019, supplemented or adjusted by data from locations added or disposed of in the reporting year.

LEG will now retain this methodology on an ongoing basis, i. e. creation of a full footprint for the previous year in the respective reporting year and for the reporting year publish a corresponding extrapolation audited by the statutory auditor.

In line with the "TABULA Typology", all LEG buildings were classified into a range of construction year classes based on features relevant to energy. For all buildings (100% of the portfolio) either actuals data were recorded or corresponding consumption calculated (energy recording or construction year cluster).

Here the age structure of LEG housing is in line with the German average. 87% of all LEG buildings were constructed before 1979, 99% before 2002.

The 2019 climate footprint is constituted of 81% actual data and approx. 19% calculated data.

By distribution according to the source of data, 50% of heating consumption data already comes from within the LEG Group. A further 31% is provided by third parties, i. e. from energy utilities.

The biggest portion of extrapolated consumption, 18 % of all data was determined using data from energy certificates. Only for close to 1 % was a calculation made using the actuals data on the basis of the above described construction year cluster.

In terms of heat generation, at 64.6 % natural gas had by far the biggest share, followed by 28.4 % for district heating. The share of heating systems fuelled by heating oil, which has a relatively poor carbon footprint in comparison to natural gas and district heating, had already been reduced to 3.8 % over the last few years. LEG's own local heating systems, which are partially still fuelled using coal, make up only close to 1 % of heat energy consumption. For the most recent calculation, we do not know the type of energy for 2.5 % of our residential units. This occurs particularly when calculations have to be made using energy certificates and there is no information on the primary energy type of the building.

Overall, in the reporting period heating energy consumption across LEG totalled 1,333 GWh, resulting in a KPI of 157.5 kWh/m<sup>2</sup> of living space adjusted for vacancy levels.

### Calculation of the carbon footprint

To calculate the LEG carbon footprint, on a standardised basis we used the conversion factors published by the German Federal Office for Economic Affairs and Export Control. The heating energy footprint (Scope 1 and 2) calculated for the reporting year is 311,031 tonnes CO<sub>2e</sub>. On the basis of rented living space (adjusted for vacancies), this results in a KPI of 36.7 kg CO<sub>2e</sub>/m<sup>2</sup>.

### How the CO<sub>2</sub> footprint is calculated

As there are no legal requirements on how to calculate the carbon footprint, we describe our approach below. Our footprint is adjusted for vacant living space and includes only rented space. If the entire space were used, then the 2019 KPI would improve by -3.5%. On the other hand, 81% of the 2019 energy information comes

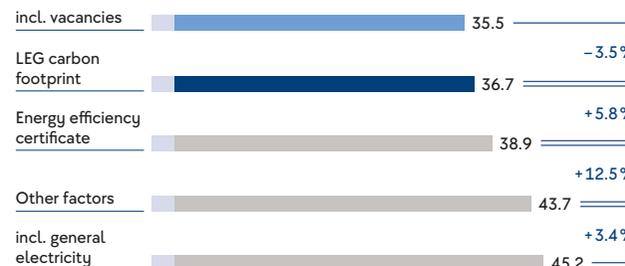
from actuals data. If the same footprint were used with the consumption figures calculated using only the energy certifications, this would result in 1.3% increase in the consumption figures.

This would also be reflected in determining the footprint. If different conversion factors from other institutes were used, then the calculated footprint would rise from 36.7 to 43.7 kg CO<sub>2e</sub>/m<sup>2</sup>.

Graphic 1 (kwh/m<sup>2</sup> living space)



Graphic 2 (kg CO<sub>2e</sub>/m<sup>2</sup>)



### When strategy becomes DNA

So as to collate the numerous sources, both internal and external, the carbon footprint was initially calculated in Microsoft Excel. We are currently transferring the climate and carbon footprint into a Microsoft-Power BI database application. Here the objective is firstly to facilitate the future link to the different data sources, including the link to weather data (degree day figures) for climate adjustment in a multi-year comparison. In the future, this database is to be connected to the Group database so that all LEG actuals data can be transferred automatically. Secondly, energy consumption data at local level were combined at building character level (EPIQR) so as to be able to derive different simulation paths. Various simulations can indicate what investment resources can achieve which target paths. On this basis, future modernisation schedules could be adjusted to the climate objectives on an annual basis. Completion of the Power BI tool for the carbon footprint is planned for spring 2021 > see also EPRA reporting, pages 65 f.

### Participations in research and development accompany our path

Currently LEG is participating in various research projects, provides support in studies, accompanies and comments on various publications issued by various institutes on climate protection. With a pilot project in Mönchengladbach, LEG is participating in the dena "Energiesprung Germany" project. This is an innovative renovation concept based on pre-fabricated modules, that promotes a high degree of comfort, short renovation times and – if mass production is possible – affordable renovation costs. The aim is rent-neutral renovation to a net-zero standard, meaning that the building generates as much energy for heating, hot water and electricity over the course of the year as it requires.

In another large project, together with the Open District Hub and the Fraunhofer Institute, we are drafting an action guideline, not only for LEG, but for the housing industry as a whole. Here in different LEG model neighbourhoods various neighbourhood concepts contributing to the decarbonisation of living space are to be trialled and realised. An appropriate group from industry and research is to support and accompany the projects, with LEG heading the consortium.

### Contractor waste management

As a matter of principle, LEG makes sure that its activities are environmentally acceptable and comply with the waste disposal standards regulated by numerous national and international laws and regulations. During maintenance and modernisation activities, LEG is also confronted with contamination assessments and hazardous waste that require special attention. As a rule, contamination reports are therefore always obtained in the context of more extensive building measures in order to ensure that pollutants are identified in good time and disposed of properly. This way, potentially contaminated components and materials are analysed at specialist laboratories and assessed by experts. In addition, appropriate disposal concepts are coordinated with the contractors and the authorities involved. **GRI 103-2**

Our contractors undertake to take complete charge of waste management and keep complete records of the waste disposal. This is also done in view of the fact that occupational safety and environmental protection usually go hand in hand and that proper handling of pollutants is part of the (further) training of our contractors' employees who are working on site. The execution of the work is monitored by specialist and management staff of the contractors on the construction site and reviewed by health and safety coordinators commissioned by LEG. Due to this procedure, the exact volume of hazardous waste is not recorded within LEG. LEG has such little economic, legal, organisational or any other influence over the waste-generating activities of its contractors

that it does not qualify as the waste generator within the meaning of waste legislation. **GRI 103-2 > Key performance indicators: Environment area of action, Waste by type and disposal method**

### Waste management in the portfolio

The waste generated by private households is disposed of by municipal enterprises or private waste disposal companies. LEG has little influence over the volume of waste generated by its tenants. To ensure correct waste disposal, however, a service provider acts as the waste manager for approximately 30% of LEG's residential portfolio. Among other things, its tasks include checking whether the recycling bins are filled correctly and removing mis-sorted waste where this is possible and permitted. The quantities of waste generated by the properties managed by this service provider are determined on the basis of the volume of the refuse containers provided. However, the actual fill levels of the refuse containers cannot be determined, nor can the volume of waste disposed of in containers, e.g. public waste paper banks. **> Key performance indicators: Environment area of action, Waste by type and disposal method**

### Dealing with water

Water is vital for life and key to human well-being. LEG relies on high-quality fresh water supply to provide water, sanitary, hygiene and technician services, all of which must be available across the entire portfolio for tenants, employees and visitors. The LEG portfolio is located exclusively in Germany, a country which legislates stringent drinking water standards and where there is a nationwide water treatment system. In addition, Germany has extensive freshwater reservoirs, particularly in the core LEG regions.

LEG is well aware of the decisive importance of water to achieve the United Nations sustainable development goals. Particularly in the private sector, coping with the challenges related to water plays a key role, something humankind must face now and in the future. For this reason, one of the company's objectives is protection

of and sustainable use of fresh water resources not only in our buildings, but also on our open spaces and in new construction  [www.leg-wohnen.de/en/corporation/sustainability/codes-and-guidelines/policies/water-guideline](http://www.leg-wohnen.de/en/corporation/sustainability/codes-and-guidelines/policies/water-guideline).

### Green energy, including electricity and gas tariffs

EnergieServicePlus again expands its services in 2020. To do this, LEG expanded its sales partner network with high-profile energy suppliers in order to ensure that its tenants are offered exclusive electricity and gas tariffs as extensively as possible. This includes 100% green electricity, new customer bonuses and price guarantees.

### Siegerland biomass co-generation plant

In 2005/2006, Ökotech GmbH and the then LEG Standort- und Projektentwicklung Köln GmbH (LEG S Cologne) constructed a carbon emission-neutral biomass co-generation plant  [www.kraftwerk-siegerland.de](http://www.kraftwerk-siegerland.de). With an equity interest of 94.9%, today LEG S Cologne is the main shareholder of Biomasse Heizkraftwerk Siegerland GmbH and Co. KG. The plant was commissioned in June 2006 and generates electricity and usable heat simultaneously. The fuel used is wood. As well as ready-prepared wood chips, the power plant can accept coarsely pre-broken wood and prepare it for use itself. In this way, Siegerland biomass co-generation plant helps municipal companies from the region to recycle and reuse wood. The electricity generated is fed into the existing grid of the regional operator in accordance with the German Renewable Energy Sources Act (EEG) and marketed directly. Electricity production is geared to a requirement equivalent to approx. 45,000 residential units. All the buildings at Siegerland Airport and part of the neighbouring business park are also supplied with district heating.

The energy produced every year in the form of electricity and heat from the renewable energy source of wood corresponds to a CO<sub>2</sub> equivalent of around 57,500 metric tons. This means that the power plant offsets around one third of the carbon emissions of LEG's entire residential portfolio.