



## Environment

“We aim to minimise the ecological footprint of our entire business. We strive to become a climate-neutral company and are therefore committed to the continuous reduction of our greenhouse gas emissions.”

CR Principles

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Climate protection, waste reduction, and green building are the topics at the centre of our environmental protection activities. Currently, we primarily focus on areas under our direct control, i.e. our stores, regional distribution centres, and transport logistics.

Our climate protection goal is to reduce our greenhouse gas emissions – measured in carbon equivalents per square metre of sales floor – by at least 30% compared to 2012 by 2020. For this purpose, we calculate our [Company Carbon Footprint \(CCF\)](#) on a regular basis. The CCF was last calculated for the year 2016. The largest share of our greenhouse gas emissions was caused by energy consumption, followed by fuel consumption, refrigerant leakages, and heating energy consumption. Wherever possible, we employ energy-efficient modern technologies, such as state-of-the-art refrigeration systems and LED lighting. In several countries, we already use green electricity, which is produced without any carbon emissions, exclusively. We focus on conserving fuel in our logistics operations by optimising trailer capacity utilisation, developing new logistics concepts, and operating a modern fleet of vehicles. We increasingly use more environmentally friendly refrigerants for our chest freezers and chiller cabinets, and we focus on modern, energy-efficient technology for heating purposes.

With regard to waste management, we follow the principle “reduce, reuse, recycle”. We strive to minimise the volume of our operational waste which is incinerated or sent to landfill. In order to avoid food waste, we offer products at reduced prices shortly before their best-before dates expire and donate unsold volumes of food products to charity, farmers, or for the production of biogas.

With regard to the implementation of our climate protection goal, we are making solid progress. In almost all countries the ALDI SOUTH Group operates in, we have been able to significantly reduce our relative greenhouse gas emissions. The switch to green electricity throughout the European countries where ALDI SOUTH Group operates was an essential step. In addition, in several countries we generate electricity with photovoltaic systems on the roofs of our stores, regional distribution centres, and administrative buildings. For example, in 2016, we already covered 15% of our energy demand in Germany with solar power generated by more than 1,250 photovoltaic systems installed on our roofs. The replacement of standard refrigerants by more environmentally friendly alternatives is also progressing according to plan (see [focus: modern refrigeration technology](#)). With regard to transport logistics, we were able to reduce the emissions produced per kilometre travelled by our logistics vehicles in most countries. In Germany, Austria, Switzerland, and Slovenia, we have become climate-neutral through modernisations, the use of electricity from renewable sources, and the compensation of unavoidable emissions by supporting various climate protection projects.

We are currently establishing waste monitoring systems in all countries. Cardboard, paper, and cardboard packaging as well as plastic film/shrink wrap used in our operations, together with batteries from material handling equipment (MHE), are almost entirely recycled. Nearly all of our stores collaborate with local, regional, or national charitable organisations which distribute donated food products to people in need.

To ensure that our buildings are fit for the future, we increasingly apply sustainability standards. More than 45% of our Austrian stores are certified in accordance with the EU GreenBuilding standard, and five stores are even certified as ‘emission-free’. Our new stores in Germany are constructed based on the silver standard of the German Sustainable Building Council (‘Deutsche Gesellschaft für nachhaltiges Bauen’, DGNB).

With regard to environmental protection, we have already reached very high standards in many areas. While we continue to optimise our operational procedures, we will increasingly focus on our supply chains and our cooperation with service providers and suppliers in the future. For example, in order to develop a long-term climate strategy beyond 2020, we are currently evaluating our potential contributions throughout the supply chain, for instance, within the area of procurement logistics or with regard to products and production methods. The 2015 Paris Agreement on climate protection and the goal to limit global warming to well below 2 degrees Celsius (2 °C) above pre-industrial levels form the framework for our

strategic thinking. With regard to waste management, we focus, among other things, on the topic of packaging and strive to better implement the principle “reduce, reuse, recycle” in collaboration with our suppliers and service providers.



The refrigeration technology used in our stores, regional distribution centres, and logistics vehicles essentially influences the achievement of our climate protection goals. On the one hand, the discharge of refrigerants into the environment cannot be entirely avoided. On the other hand, refrigeration systems are responsible for a large share of our energy consumption.

Using modern, environmentally sound, and climate-friendly refrigerants is an essential approach to reducing harmful greenhouse gas emissions. Until very recently, the refrigerants used were almost exclusively halogenated hydrocarbons, i.e. compounds of hydrocarbons and substances such as fluorine and chlorine. Compared to carbon dioxide, the potential of these F-gases to contribute to the greenhouse effect (global warming potential, GWP) is up to 4,000 times higher. Moreover, several refrigerants are suspected to accelerate the depletion of the ozone layer.

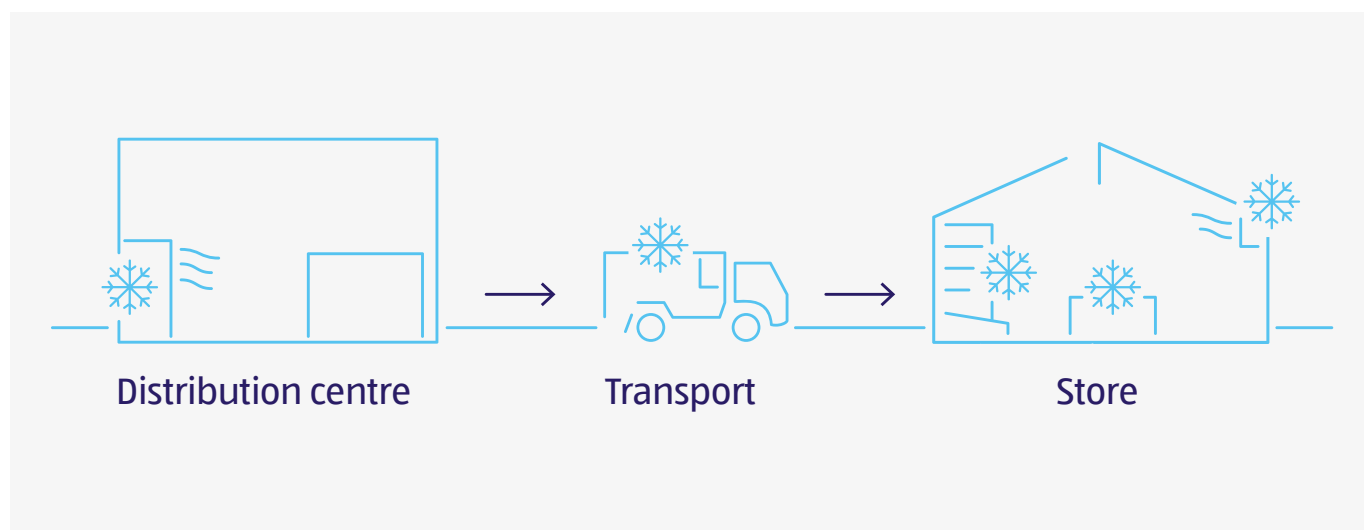
For this reason, refrigerants with a significantly lower GWP, such as carbon dioxide (GWP of 1) or ammonia (GWP of 0), are increasingly used. At present, approximately 25% of our stores are equipped with carbon dioxide-based refrigeration systems for the chiller cabinets and storage areas, and ammonia-based refrigeration systems are used in the majority (2016: 83%) of our regional distribution centres. All new free-standing chest freezers within our stores which are not connected to the central refrigeration system operate on propane, which possesses a low GWP and does not deplete the ozone layer. Moreover, we are successively replacing the refrigerants used within our logistics vehicles with modern alternatives. In all our refrigeration systems, including those in chest freezers and logistics vehicles, we monitor any refrigerant leakages in order to identify and repair defects at an early stage.

Within our modern refrigeration systems, efficient technology, electronic controls, and continuous monitoring of electricity consumption help us to save both costs and energy and thereby avoid unnecessary emissions. The use of LED lighting in chest freezers and chiller cabinets also contributes to saving energy. In addition to being more energy-efficient, LED lighting also emits less heat. Further energy savings are achieved by optimising the temperature settings of our refrigeration equipment. Reliable technology enables us to reduce cooling performance without running the risk of



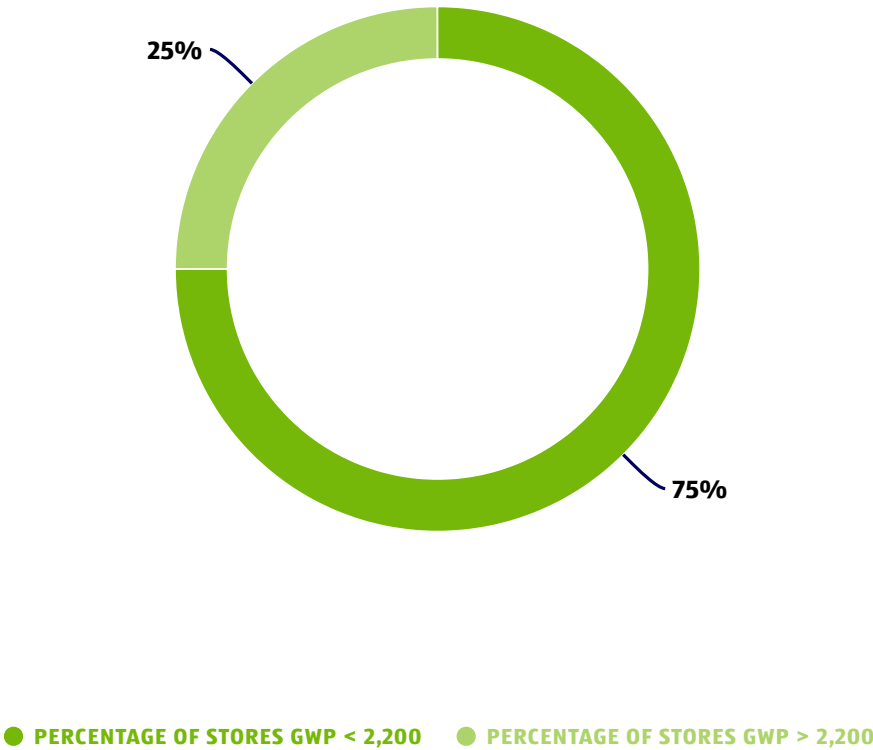
exceeding the required minimum temperatures. Increasing the temperature in a chest freezer used at ALDI SOUTH from -21 to -19 degrees Celsius alone can reduce energy consumption by 200 kWh per year per chest freezer. This corresponds to an overall energy saving of 10%.

Our efforts are coming to fruition. At present, we are using a refrigerant with a GWP of less than 2,200 for medium-temperature refrigeration in 75% of our stores and aim to increase this share to 100% of our stores by 2025. Currently, some of our refrigeration systems are so efficient that we can no longer use their exhaust heat in order to heat our stores and thus need to consider alternatives. Our leading position with regard to the use of modern refrigeration technology has been confirmed multiple times: the non-governmental organisation Environmental Investigation Agency (EIA) awarded us the title of 'Green Cooling Leader' in Europe in 2013, 2014, and 2016, and we received the 2016-2017 'Best of the Best' award from the United States Environmental Protection Agency's GreenChill Partnership.



# Key figures

Percentage of stores with medium-temperature refrigeration systems (coolers/chillers) using a refrigerant with a GWP < 2,200 ✓



The damage potential of refrigerants is reported as Global Warming Potential (GWP). The GWP value indicates a refrigerant’s potential greenhouse effect in comparison to the same amount of carbon dioxide (CO<sub>2</sub>).

## Refrigeration

Number of stores with CO<sub>2</sub>-based integrated refrigeration systems 1,496

## Heating

Percentage of stores equipped with a system for heat recovery from refrigeration compared to the total number of stores	44.82
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## Company Carbon Footprint (2016)

Company Carbon Footprint in kg of CO<sub>2</sub>e per m<sup>2</sup> of sales floor by country/country group (change compared to the base year 2012 as a %)

Germany	120 (- 43%)
HOFER S/E	89 (- 56%)
UK/Ireland	178 (- 50%)
US	562 (+ 5%)
Australia	711 (- 16%)

## Greenhouse gas emissions (2016)

Absolute amount of greenhouse gas emissions in 1,000 t of CO <sub>2</sub> e (change compared to the base year 2012 as a %)	1,421 (- 3%) ✓
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### Direct greenhouse gas emissions (Scope 1) in t CO<sub>2</sub>e

Heating	104,330
Fuel	160,636
Refrigeration	205,051

### Indirect greenhouse gas emissions (Scope 2) in t CO<sub>2</sub>e

Electricity	761,247
District heating	2,358

### Indirect greenhouse gas emissions (Scope 3) in t CO<sub>2</sub>e

Third-party logistics	199,367
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Greenhouse gas emissions in transport logistics in kg CO <sub>2</sub> e/km	0.87
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## Energy and electricity (2016)

Energy consumption in GWh	4,202
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### Percentage of energy consumption per source

Electricity	54.5
Heating	13.76
Fuel	31.73

### Total electricity generated by ALDI SOUTH-owned photovoltaic units in kWh

140,921,931

## Lighting

### Percentage of stores equipped with LED lighting in chiller cabinets compared to the total number of stores

80.06

### Percentage of stores equipped with LED lighting in chest freezers compared to the total number of stores equipped with lighting in chest freezers

63.32

## Management of recyclable materials

### Total tonnage per waste fraction

Cardboard, paper, and cardboard packaging	609,794
Plastic film/shrink wrap	14,405

### Recycling of transport packaging

#### Percentage of transport packaging recycled from cardboard, paper, and cardboard packaging

98.82

#### Percentage of transport packaging recycled from plastic film/shrink wrap

98.68

### Avoiding food waste

#### Percentage of stores cooperating with charitable organisations to donate unsold food of sound quality compared to the total number of stores

82.28

# Future-oriented construction methods

Number of stores built in accordance with a green building standard (LEED, BREEAM, DGNB, Green Star, etc.) or voluntary energy efficiency standard (Minergie, Energy Star, Nullenergie, etc.)

317

## Sustainable Development Goals



## GRI disclosures

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