Reducing our footprint

We want to lead by example and work to minimise the environmental impact of our operations. Bringing our CO_2 emissions to net-zero and reducing energy consumption are key targets across the Group.

As a knowledge company in the financial services sector, we do not cause large environmental impacts through our own operations. Nonetheless, we firmly believe that as a company committed to sustainability we should minimise our environmental footprint, thus leading by example.

For our core re/insurance business, climate change represents a key topic. Reflecting this, we have been focusing on our own CO_2 emissions and energy consumption for many years. Our pioneering initiatives include the Greenhouse Neutral Programme and the CO_{you2} Programme. Both are now into their second cycles, running from 2013 to 2020.

Furthermore, we apply sustainability guidelines to our sourcing activities. Extending our efforts beyond our company, we continue to play an active role in the Swiss Climate Foundation.

Management system and certification

We operate an integrated global management system at our Corporate Real Estate & Services (CRES) division, which interlinks quality and environmental management, and ensures that similar processes are seamlessly managed. Through a systematic, Group-wide reporting process, we monitor our environmental performance and implement appropriate improvement measures.

Environmental objectives and targets are defined centrally at our headquarters, but responsibility for implementing improvement measures also lies with the CRES departments in our regions and individual locations. Some of them define additional environmental targets that reflect specific local conditions and challenges.

Since 2015, our entire CRES division has been certified according to the ISO 14001 environmental management standard (www.iso.org), replacing the location-based approach previously used. This means that all our operations and employees are covered by an ISO 14001-certified environmental management system (EMS).

Complementing the ISO 14001 certification of our Group-wide EMS, we have achieved ISO 50001 certification for the energy management system of our main locations in the EU.

For our recently completed office buildings in New York, Zurich (Swiss Re Next) and Bangalore we have also received the Leadership in Energy and Environmental Design (LEED, usgbc.org/leed) certification, the most widely used green building rating system worldwide to evaluate the overall environmental performance of a building. In addition, we have received certification for our Campus Mythenquai in Zurich as a "2000-Watt site in transformation".

Committing to reach net-zero emissions by 2030

In 2019, we made a major new commitment: to reach net-zero emissions in our own operations by 2030. This is an ambitious goal. It requires us to double down on our efforts to cut emissions and to shift from conventional carbon offsetting to carbon removal. On pages 60 and 62 you can find out more about our net-zero commitment and our early engagement in the nascent carbon removal market.

Website

You can find out more about our engagement in the Swiss Climate Foundation at:
www.swissre.com/sustainability/footprint/partner-initiative-swiss-climate-foundation.html

Website

You can find out more about our certification from the 2000-Watt society at:
www.swissre.com/sustainability/footprint/2000-watt-society.html

Website

You can find out more about our commitment to reach net-zero emissions in our operations at:
www.swissre.com/sustainability/footprint/co2netzero-programme.html

Our Greenhouse Neutral Programme

Climate change has been Swiss Re's most important sustainability issue for some 30 years. It is a key topic for a re/insurer because it leads to more extreme and more frequent weather events. Reflecting this, "Mitigating climate risk and advancing the energy transition" is one of the three ambitions of our enhanced Group Sustainability Strategy (see pages 9–13).

The Greenhouse Neutral Programme has been the principal means to reduce the emissions from our own operations. It combines two commitments: firstly, to reduce our CO_2 emissions per employee (full-time equivalent, FTE); secondly, to offset all the remaining emissions by purchasing high-quality emission reduction credits, thus making our company fully greenhouse neutral.

We originally launched the Greenhouse Neutral Programme in 2003 for a ten-year period. During that time, we gradually reduced our CO_2 emissions by 49.3% per employee (FTE) and compensated all the remaining emissions.

Goals and scope

Seamlessly continuing from the programme's first phase, we launched a second commitment cycle running from 2013 until 2020. However, after almost halving our CO_2 emissions per employee in the previous ten years, the potential for further reductions has now been significantly smaller. Thus, our target until the end of 2020 is to keep our CO_2 emissions per employee stable at the 2013 level. In view of our expansive business strategy, especially in high growth markets, we regard this as an ambitious goal.

10.6%

Total reduction of CO_2 emissions per employee since 2013

CO_2 emissions per employee (full-time equivalent, FTE), Swiss Re Group

		2013 kg/FTE	2018 kg/FTE	**2019 kg/FTE**	Change in % since 2018	Change in % since 2013
Scope 1	Heating	378	244	**210**	–13.8	–44.4
Scope 2	Power[1]	824	584	**472**	–19.1	–42.7
Scope 3	Business travel	3 713	3 892	**3 842**	–1.3	3.5
	Copy paper	40	16	**13**	–15.7	–66.3
	Waste	50	33	**28**	–13.7	–43.1
	Water	12	11	**8**	–23.7	–30.1
	Technical gases	27	6	**52**	764.3	92.1
	Commuting[2]	1 250	1 000	**1 000**	0.0	–20.0
Total		6 294	5 786	**5 627**	–2.7	–10.6

1 Calculation based on a market-based approach taking into account the purchase of renewable energy instruments, with the exception of the UK, where the government requires companies to report an average grid factor (see table at the bottom for our reporting of emissions from electricity).
2 Commuting data are gathered bi-annually by means of a survey. The figures are rounded and fraught with considerable uncertainty.

Underlying environmental data, Swiss Re Group

		2013	2018	**2019**	Change in % since 2018	Change in % since 2013
Heating	kWh/FTE	1 931	1 190	**1 023**	–14.0	–47.0
Power	kWh/FTE	4 533	3 405	**2 917**	–14.3	–35.6
Energy intensity	kWh/FTE	6 464	4 595	**3 940**	–14.3	–39.0
Business travel	km/FTE	13 492	14 310	**14 228**	–0.6	5.5
Copy paper	kg/FTE	34	14	**11**	–19.7	–66.9
Recycling paper	%	71	65	**61**	–5.8	–13.8
FSC label	%	96	96	**97**	1.1	1.1
Waste	kg/FTE	181	134	**119**	–11.0	–34.1
Water	m^3/FTE	16	14	**11**	–20.0	–30.0

Indirect emissions from purchased electricity, Swiss Re Group

In line with the Scope 2 Guidance of the Greenhouse Gas (GHG) Protocol, we report the emissions associated with our electricity consumption according to both a location-based approach representing the CO_2 intensity of the grids where we operate and a market-based method taking into account emission reductions from instruments such as Renewable Energy Certificates (RECs) and Guarantees of Origin (GOs).

	Location-based total	Market-based total	Instrument types	Percentage kWh
	t CO_{2e}	t CO_{2e}		
Switzerland[1]	820	300	GOs	33%
US[2]	6 659	192	RECs	21%
UK[3]	5 424	5 424	GOs, residual mix	19%
Rest of the world[4]	10 223	1 880	RECs, GOs, residual mix	27%
Total	**23 126**	**7 796**		**100%**

1 All Swiss electricity producers are required by law to declare the quality and quantity of the electricity produced. Swiss Re buys 100% green-labelled electricity (naturemade star).
2 In the US, we purchase green-e labelled Renewable Energy Certificates (RECs) for our total power consumption.
3 The UK government claims all green credentials of renewable electricity produced in the country. Even though over 80% of the electricity we consume in the UK comes with Renewable Energy Guarantees of Origin (REGOs), we report the same emission figures for location- and market-based approaches.
4 Our next biggest power consumption is India with 7% and Slovakia with 4% of the Group's total consumption.

Goals of our Greenhouse Neutral Programme until 2020:

- Maintain the emissions reductions we achieved between 2003 and 2013 regarding power consumption, heating and business travel
- Fully offset the remaining emissions
- Continuously reduce energy intensity (power consumption and heating) by 2% per year (kWh/FTE)
- Obtain 100% of power from renewable sources by the end of 2020

In the current cycle, the programme covers the following emission sources:

- Heating (Scope 1)
- Power consumption (Scope 2)
- Business travel, copy paper use, waste generation, water use, technical gases and employee commuting (Scope 3)

In 2019, our total CO_2 emissions per employee (FTE) decreased by 2.7% and were thus 10.6% lower than in 2013. We achieved this overall reduction mainly by further cutting power consumption at our business locations and moving into more energy-efficient buildings, eg in New York and Zurich (Swiss Re Next).

39.0%

Total reduction of energy intensity per employee since 2013

Using renewable power

Purchasing power from renewable rather than conventional sources has been a principal measure of our Greenhouse Neutral Programme. Concluding a gradual build-up that started in 2005, we are now using 100% renewable power at all of the Group's locations where it is available in reliable and trustworthy quality (ie at a total of 30 locations in Europe, North America, Asia and Oceania). This means that approximately 92% of our total power consumption came from renewable sources at the end of 2019.

To assess the quality of the renewable power available in individual locations and select suitable sources, we use a Minimum Standard that clearly states how we define renewable power and what requirements it needs to meet.

We pursue the following impactful green power options, with decreasing preference:

- Direct investments in our own solar plants (eg at Armonk, Swiss Re Next in Zurich)
- Indirect investments via long-term virtual power purchase agreements from newly built plants
- Sourcing of high-quality renewable energy certificates (eg naturemade star in Switzerland and NaturEnergie in Germany)

Reducing energy consumption

In parallel with our switch to using renewable power, we have made continuous efforts to lower the actual amount of energy consumed per employee (FTE) or, in other words, to reduce our energy intensity. Through many small measures to improve energy efficiency and by concentrating back-office tasks in fewer and more energy-efficient buildings, we managed to cut our energy intensity by a total of 46.5% between 2003 and 2013.

For the current phase of our Greenhouse Neutral Programme from 2013 until 2020, our goal is to continuously reduce our energy intensity by 2% per year. At the end of 2019, the total reduction we had reached since 2013 was 39.0%. We partly achieved this by decommissioning existing office buildings and moving into more energy-efficient ones.

RE100 and EP100

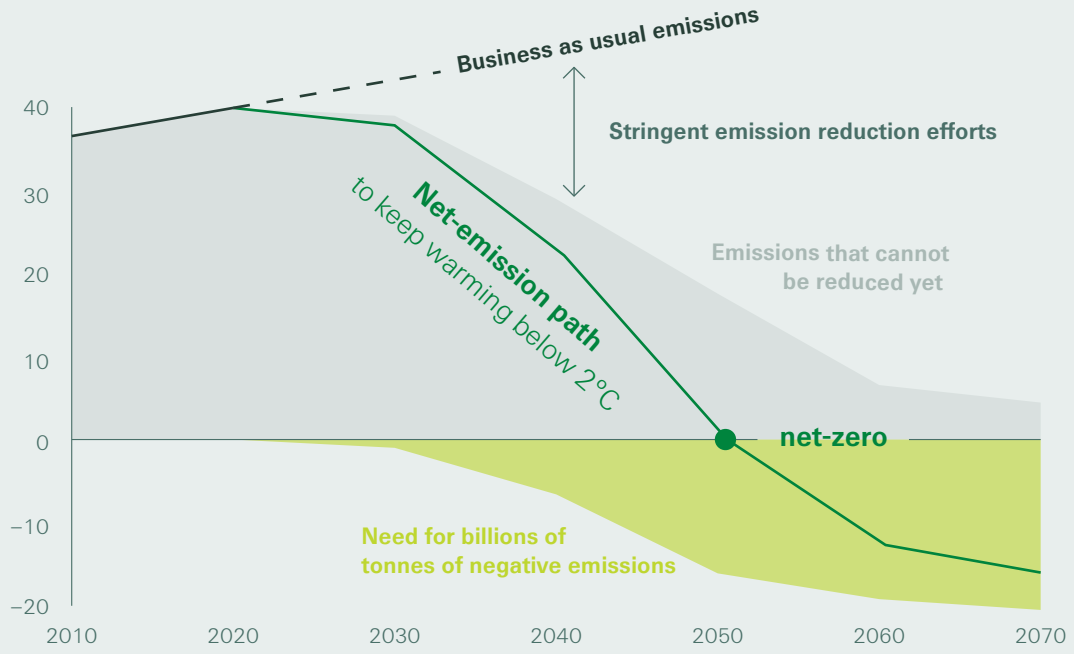
At the end of 2019, approximately 92% of the power we purchased across the Group came from renewable energy sources. We are committed to raising this figure to 100%, which is why we helped establish the Climate Group's RE100 initiative in 2014 as a founding member.

The goal of this initiative is to unite the world's most influential companies in a shared commitment to use 100% renewable power by 2020. To achieve this, the RE100 group approaches policymakers and regulators at national and sub-national level to make renewable energy more available. RE100 grew substantially again in 2019 and now includes more than 220 of the world's largest companies. www.theRE100.org

Going beyond these collective efforts, we have recently started to build solar power plants at our own offices.

In 2016, we also signed up to the EP100 initiative, launched by the Climate Group (www.theclimategroup.org) and the EE Global Alliance (eeglobalalliance.org/). This is a shared commitment by leading global companies to double their energy productivity or, in other words, to get more economic output from each unit of energy. www.theclimategroup.org/project/ep100/

Global CO_2 emissions
Billion tonnes per year



Source: based on a graph published by the IPCC

Committing to reach net-zero emissions in our operations by 2030

Over the years, we have set ourselves ambitious targets to address our own CO_2 footprint. In 2003, we were one of the first large companies worldwide to commit to becoming greenhouse neutral. In 2014, we pledged to cover all our energy consumption from renewable sources by 2020 and, to motivate other companies to do the same, co-founded the RE100 initiative. To see where we stand on this journey at the end of 2019, see page 59.

With these internal measures we have played a pioneering role in the fight against climate change. Today, however, climate scientists clearly state that efforts need to be reinforced: to keep global warming well below 2°C, the world needs to reach net-zero emissions by 2050 (see illustration above). Put simply, net-zero emissions means that for every tonne of CO_2 that cannot be reduced yet, another tonne needs to be removed from the atmosphere and stored permanently through so-called carbon removal technologies. Scientists further predict that it will take billions of tonnes of negative emissions to keep warming below 2°C – the longer emission reduction efforts are deferred, the more.

Swiss Re has decided to play a leading role again in this accelerated effort to mitigate climate risk. Thus, in 2019 we committed to reaching net-zero emissions in our operations by 2030. This underscores our pledge to reach net-zero emissions by 2050 both in our re/insurance business (see page 33) and in our investment portfolio (see page 47).

To achieve net-zero in our operations, we need to do two things: Firstly, we will double down on our efforts to reduce emissions. As approximately 70% of our CO_2 footprint stems from business travel, we will focus on flight emissions, starting with a reduction target of at least –15% in 2020. Afterwards, further reductions will be incentivised by ramping up our existing internal carbon price to a stringent carbon steering levy.

Secondly, we will start to buy impactful carbon removal certificates, which are significantly more expensive than conventional carbon offsets. The latter cannot be used to substantiate a net-zero emissions claim, though (see page 62). The new carbon steering levy will address both objectives at the same time – cutting emissions from flights that are not absolutely needed and raising funds to support carbon removal projects.

Carbon removal is still a nascent industry. Our early engagement will help it grow and deliver at scale by 2050. It will, however, not be feasible to buy high-quality removal certificates for all our emissions immediately. Any surplus funds generated through the carbon steering levy will be channelled back to our business for sustainability-focused initiatives.

We have also continued our efforts to create more flexible and modern office environments that offer our employees optimal working conditions while, at the same time, using space and resources more effectively. The spread of digital communication and devices makes it possible to work seamlessly across different locations and devices, creating the foundation for a more flexible and informal workplace setup that encourages teamwork. At Swiss Re Next in Zurich, for example, this open-workplace concept is a key feature. Although further reducing our environmental footprint is not the primary driver of these efforts, their potential to lower the energy intensity of our locations is nevertheless substantial.

Minimising business travel

As a result of the substantial cuts we have achieved in CO_2 emissions from power consumption and heating since 2003, business travel easily constitutes Swiss Re's largest emission source today. Since the business trips our employees take are ultimately driven by client needs, they are difficult to influence. However, we have taken several measures to reduce the need for business travel and to curb unnecessary business trips.

For a start, we have built up a dense network of video conferencing equipment across the Group. Recently, we replaced these facilities with state-of-the-art technology, which creates a real-time, life-size virtual meeting experience in specially designed rooms. By the end of 2019, we had a total of 155 video conference facilities worldwide. In total, we hosted 97 743 video calls in 2019, amounting to 71 884 hours.

76 340

Tonnes of CO_{2e} compensated in 2019, thereof 100 tonnes through carbon removal certificates

We continuously monitor all travel budgets and collect travel data centrally. Furthermore, we introduced an internal carbon price on air travel in 2014, which uses the "polluter pays" principle. It allocates the costs of the Verified Emission Reductions (VERs) we need to buy to offset our CO_2 emissions to the Group's Global Functions in proportion to their respective share of air travel; previously they had been borne centrally by Group Finance.

Despite these measures, the amount of kilometres travelled per employee and the associated emissions increased for a number of years, mainly driven by our continued expansion in high growth markets. After falling by 6.0% in 2018, the average total distance travelled by each of our employees remained roughly the same in 2019, at 14 228 km/FTE.

As part of our commitment to net-zero emissions, we will replace the existing internal carbon price on air travel through a stringent carbon steering levy (see page 60).

Paper, water and waste

We also calculate and compensate the CO_2 emissions from further sources along our supply chain (Scope 3), ie copy paper, waste generation and water use. The overview of our emissions sources on page 58 shows, however, that these are less relevant in our business than other environmental impacts, which is why we have not set quantitative reduction goals for them.

Furthermore, it is difficult for us to influence water use and waste generation at locations where we rent office space. In the office buildings we own ourselves, however, we ensure that appliances meet high standards of water efficiency.

As paper use is more responsive to managerial action, we have taken a number of measures to reduce the average amount used by our employees in recent years. New IT solutions such as "pull printing" (which eliminates uncollected printouts), web-based collaboration and document management platforms have led to a significant decrease of paper use in all our locations. Average paper use per employee fell strongly again by 19.7% in 2019, resulting in a total reduction of 66.9% since 2013.

Offsetting our remaining CO_2 emissions

The second commitment of our Greenhouse Neutral Programme is to compensate all CO_2 emissions we cannot yet avoid. For the seven emission sources covered by it, we bought and retired Certified Emission Reductions (CERs) as well as a first batch of third-party verified carbon removal certificates for a total of 76 340 tonnes of CO_{2e} in 2019. To meet our commitment to net-zero emissions, we will gradually need to switch from conventional carbon offsetting to carbon removal (see pages 60 and 62).

External verification of our CO_2 reporting

Ever since we first launched our Greenhouse Neutral Programme in 2003, we have disclosed our CO_2 emissions, their principal sources and relative performance over time. The method we use to calculate our emissions is based on the guidelines of the Greenhouse Gas Protocol, the most widely used emissions accounting standard (www.ghgprotocol.org/).

Before our emission figures are published, PricewaterhouseCoopers checks them to verify our calculations. Their complete assurance report for the whole Sustainability Report is included on pages 82–83.

Sustainability in our supply chain

To run our operations, we continuously procure a wide range of goods and services. In line with our overarching Group Sourcing Standard, we select suppliers that offer the best value for money, meet high quality standards and adhere to Swiss Re's Code of Conduct.

Furthermore, as a signatory to the UN Global Compact (www.unglobalcompact.org/), we are committed to honouring all its ten principles. Amongst other things, these prohibit any sort of discrimination or the use of child or forced labour, and require that the freedom of association and the right to collective bargaining be upheld. These principles of the UN Global Compact are incorporated into our Code of Conduct by reference and specifically cover our

35%

Share of our tier 1 and 2 vendors ESG-assessed by the end of 2019

(30% by the end of 2018)

Moving from carbon offsets to carbon removal to compensate our unavoided emissions

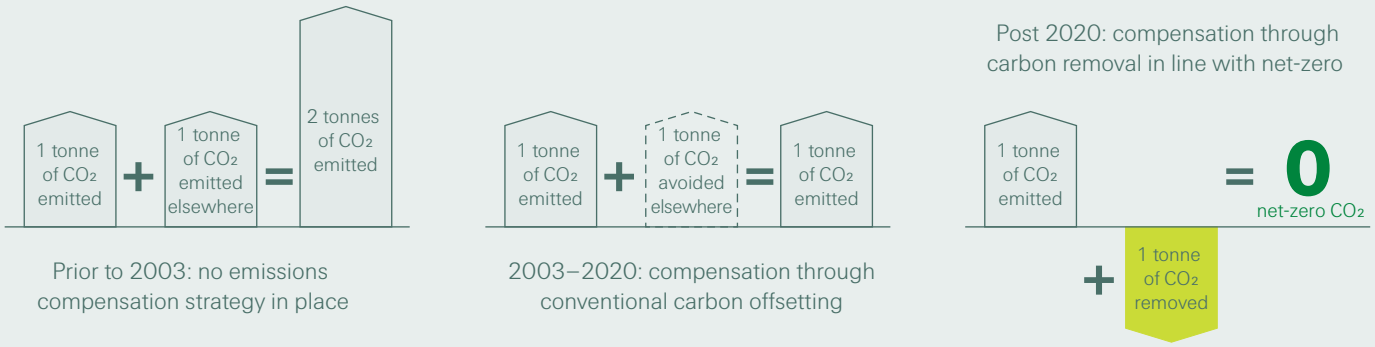
In 2003, Swiss Re committed to become greenhouse neutral with the intention to compensate any unavoided emissions through the purchase of CO_2 reduction certificates, or carbon offsets. Greenhouse neutrality was a thought-leading concept at the time. Carbon offset markets as we know them today did not yet exist, so Swiss Re invested in a fund specifically set up to help develop CO_2 reduction projects and issue the resulting offsets to its investors. We chose the Community Development Carbon Fund (CDCF) run by the World Bank, as it was the first fund designed not only to generate emission reductions, but also community benefits through the projects it finances: access to clean water, improved health conditions, creation of jobs, women empowerment and more.

By 2008, carbon offset markets had matured to the point where we were able to buy enough offsets to compensate all our outstanding emissions back to 2003. Over time, labels and standards had emerged that guaranteed the quality of offsets in terms of accountability, social and environmental safeguards etc. We have exclusively supported Gold Standard-certified projects (www.goldstandard.org), which means they have come with the same level of co-benefits as the CDCF projects. To fund our offsetting campaign according to the "polluter pays" principle, in 2014 we introduced a small levy on our employees' business flights.

In 2019, Swiss Re committed to achieve net-zero emissions in our own operations by 2030 (for details, see page 60). This major new commitment requires us to move away from conventional carbon offsets, where we pay others to avoid their emissions in our place, as this type of compensation is not enough to reach net-zero emissions. Instead, unavoided emissions need to be compensated through carbon removal (see illustration below).

Net-zero emissions is the thought-leading concept of today. Yet the carbon removal industry, let alone a fully fledged market for removal certificates, is still to emerge. Hence, we find ourselves in a similar situation as in 2003. Through our early engagement we will help develop the carbon removal market by creating demand and by motivating clients and peers to join our commitment.

Living up to this ambition, we seized the opportunity to participate in the very first marketplace for sellers and buyers of carbon removal certificates – the Finnish start-up Puro (puro.earth/). In their inaugural auction held in May 2019, Swiss Re secured a first batch of 100 carbon removal certificates generated by a biochar project in Tampere. Biochar locks away the CO_2 that plants have removed from the air to grow their biomass. Mixed with soil, biochar endures for hundreds of years and improves soil quality by retaining moisture and nutrients.



relationships with external service providers under the headings of human rights, labour conditions, environmental impacts and anti-corruption.

The procurement of all goods and services from external vendors is conducted in accordance with our Group Sourcing Standard, which also incorporates these headings from the UN Global Compact. When selecting new products and suppliers, we examine whether they comply with these requirements as part of the overall evaluation process. We take a fresh look at existing strategic suppliers in our periodic contract reviews and visit individual suppliers to inspect them onsite. Internally, we hold regular awareness trainings with our sourcing staff.

For some sourcing categories, we have also developed Minimum Standards that further specify our requirements. Besides power (see page 59) and paper (see page 61), they cover cleaning services and agents, refrigerant agents and building materials.

In 2016, we signed up for EcoVadis (www.ecovadis.com), a collaborative platform for sustainable supply chain management, which covers a wide range of screening criteria across the topics of environmental impacts, human rights, labour practices, ethics and sustainable procurement. This allows us to assess the sustainability performance of our suppliers

Biochar production is a promising method to remove CO_2 from the atmosphere. Mixed with soil, biochar particles endure for centuries and improve plant growth by retaining moisture and nutrients.

more systematically with the help of key performance indicators and to engage them in improvements. It also helps us reduce and manage potential sustainability risks in our supply chain.

For our tier 1 and tier 2 vendors (who account for approximately 80% of our outsourced spending), we have set ourselves the goal of having all of them ESG-assessed by the end of 2020. At the end of 2019, the assessment had been completed for approximately 35% of these vendors. In addition, due to expired scorecards we had to re-assess approximately 50% of our assessed tier 1 and tier 2 vendors during 2019.

From 2020 we will take a multi-layered and integrated approach to sustainable supply chain management, using various solutions to assess and screen suppliers and supply networks against sustainability criteria.

The CO_{you2} Programme

Reducing our own carbon footprint is an important part of our efforts to tackle climate change. In 2007, we launched the CO_{you2} Programme because we wanted to make our commitment more tangible for our employees and help them become more aware of climate change. The programme offers subsidies for a range of investments through which our employees can reduce their private carbon footprints. To our knowledge, it was the first global corporate initiative of its kind at the time.

The investment options we offer for subsidies are clearly specified in the programme. Some of them are supported at all our locations, while others vary to account for regional differences in climate, living conditions etc. Our subsidies cover 50% of the investment amount up to a locally determined maximum allowance. All regular employees are entitled to apply and new employees can submit subsidy requests after three months following their hire start date.

In 2019, we granted a total of 3 436 subsidies spread across three product categories: home appliances, home infrastructure and mobility. Over the past six years, electricity-powered mobility has become more prominent, with 1 000 subsidies for e-bikes, e-motorbikes, e-cars and plug-in hybrid electric cars.

Among the larger Swiss Re locations, uptakes per employee were highest in Slovakia and India. Our office in Slovakia has witnessed particularly strong growth in recent years. Many new employees there have made use of the opportunity to claim subsidies, eg for highly energy-efficient fridges and washing machines as well as bicycles for their daily commute to work. In Europe, in general, mobility remains a popular category, with bicycles the most common type of subsidy.

In our Asian locations, energy-efficient home appliances were particularly popular. In the Americas region, both home appliances and home infrastructure subsidies were sought-after subsidy categories.

3 436

CO_{you2} subsidies granted to our employees in 2019

(2 924 in 2018)