

2020 Swisscom climate report in accordance with ISO 14064

Direct and indirect climate
impact of Swisscom's
activities

(Scope 1, 2 and 3 emissions and
savings)

Climate strategy of Swisscom



swisscom

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1. Introduction

1.1. Environment

The framework conditions for limiting the consequences of climate change have altered significantly in recent years.

At national level, the Energy Act (EnG), which was adopted in a referendum in 2017, and now the CO₂ Act, which was revised in 2020, form the common basis for Switzerland's energy and climate strategies. These two strategies provide for the gradual phasing-out of a hitherto essential energy source (nuclear energy). They also contain the obligation to promote renewable energies, to continuously increase energy efficiency and to massively reduce CO₂ emissions. The energy and climate strategies thus reflect Switzerland's strong commitment to climate protection at both national and international level. In addition to the national energy and climate strategies, Swisscom takes into account, among other things, the IPCC Special Report on Global Warming of 1.5°C and the current Guidance for ICT Companies Setting Science Based Targets issued by the International Telecommunication Union (ITU) and other partners (March 2020), which give its targets a scientific basis. Swisscom has also drawn up new science-based targets (SBTs) for the period up to 2030 and had them recognised by the Science Based Targets Initiative (SBTI). Swisscom has achieved its SBTs set for the period from 2013 to 2020. Its current and renewed SBTs cover the period from 2018 to 2030.

The SBTi is supported as a partnership between the CDP, the UN Global Compact, WWF and the World Resources Institute (WRI). It classifies company reduction targets as "climate science-based" if they are in line with the level of decarbonisation required to keep the global temperature increase below 2 or 1.5 degrees Celsius.

Thanks to offsetting, Swisscom has been operating in a CO₂-neutral manner since the year under review. It also continuously reduces actual CO₂ emissions thanks to targeted savings and efficiency measures.

The financial environment is changing too. Private and institutional investors are increasingly looking for sustainable investments. Thanks to its Green Bond Framework, Swisscom fulfils the requirements to meet investor needs. In April 2020, for example, it successfully issued a green bond based on the green bond principles of the International Capital Market Association (ICMA).

This report describes the energy and climate strategies pursued by Swisscom as well as Swisscom's carbon footprint according to the ISO 14064 standard and the Greenhouse Gas Protocol (GHG Protocol). Energy savings by customers and the promotion of sustainable prod-

ucts and services are described in detail in section 4. The results and the achievement of targets by the end of 2020 are summarised in section 5. Finally, this report serves as an Impact Report in accordance with the ICMA's Green Bond Principles.

1.2. Summary: Climate impact of Swisscom's activities

This report deals with the 2020 financial year; its reporting period therefore runs from 1 January 2020 to 31 December 2020. Figures from previous years are provided for information purposes.

The report sets out the direct and indirect impact of Swisscom's activities on the climate under Scopes 1, 2 and 3 for the years 2018 to 2020. It also summarises the impact of the savings made on the climate.

- **Emissions:** Swisscom directly (Scope 1) and indirectly (Scope 2 and Scope 3) emitted a total of 369,201 tonnes of carbon dioxide equivalent (CO₂ eq.) in 2020 (312,173 tonnes of CO₂ eq. excluding Fastweb and offset with electricity and district heating).
- **Savings:** In the same period, thanks to enabling effects (also referred to as Scope 4 in this report), specifically with the services portfolio, 895,092 tonnes of CO₂ eq. were saved by customers. Swisscom has achieved further savings thanks to its directed actions in operations and offsetting through guarantees of origin. These are summarised in Table 5.2.
- **Ratio:** In the year under review and within the reporting boundaries, the ratio between the savings made by customers (895,092 tonnes of CO₂ eq.) and its own emissions (312,173 tonnes of CO₂ eq.) was 2.87.
- **Difference:** The difference between the savings made by customers (895,092 tonnes of CO₂ eq.) and the emissions (312,173 tonnes of CO₂ eq. excluding Fastweb and offset with electricity and district heating) is 582,919 tonnes of CO₂ eq., and amounts to 1.26% of Switzerland's emissions (according to the current 2020 report by the Federal Office for the Environment (FOEN), which contain figures incl. 2018).

The emissions are broken down into 3.9% Scope 1 emissions, 14.6% Scope 2 emissions (before compensation) and 81.5% Scope 3 emissions.

Swisscom's 2020 greenhouse gas inventory was verified in January 2021 by Société Générale de Surveillance (SGS) in an independent audit according to ISO 14064. The verification focused on Scope 1 and 2 emissions, but additionally covered Scope 3 emissions as well as, in less depth, the "enabling effects" (the savings by customers due to the use of Green ICT services or due to offsetting).

Swisscom also participates in the Carbon Disclosure Project (CDP) as part of the “Investors” and “Supply Chain” projects. In this context, it publishes additional information about its CO₂ emissions.

1.3. Swisscom’s targets and its energy and climate strategies

By the end of 2020, Swisscom originally set itself the goal of

- increasing energy efficiency by 35% from 1 January 2016 onwards.
- achieving a ratio of savings by customers to Swisscom’s own emissions of two to one: in other words, saving together with its customers in Switzerland twice as much as it emits throughout the entire company including the supply chain.

These objectives have been achieved (see Table 5.4).

In the current situation, in which the call for more intensive measures is becoming ever louder, Swisscom has revised its two main objectives of energy efficiency and reduction of greenhouse gas emissions. By the end of 2025, Swisscom has set itself the new goal of

- increasing energy efficiency by an additional 25% from 1 January 2020 onwards.
- achieving emission savings by customers in Switzerland that are significantly higher than the company’s emissions, including its supply chain – until a difference of 500,000 tonnes of CO₂ is achieved, which corresponds to over 1% of the emissions for Switzerland as a whole.

In concrete terms, the CO₂ reduction targets are as follows:

- a) for the period from 2013 to 2020:
- Scope 1 emissions by 10%
 - Scope 2 emissions by 100%
 - Scope 3 emissions by 18%

These targets have been achieved (see Table 5.4).

(b) for the period from 2018 to 2030:

- Scope 1 emissions by 54%
- Scope 2 emissions by 100%
- Scope 3 emissions by 35%

The published reduction target for 2025 should be seen as a stage on the CO₂ reduction path.

Swisscom’s energy and climate strategies to reach the above-mentioned goals rely on comprehensive energy management, efficiency and reduction measures in its own operations and in the supply chain, energy savings by customers thanks to improved end-devices as well as the promotion of sustainable products and services. The reduction of emissions from the supply chain is to be achieved in partnership with suppliers, for example through the Action Exchange Program of the Carbon Disclosure Project (CDP). Swisscom’s strategy also provides for the purchase of certificates (either guarantees of origin for energy or CO₂ certificates for offsetting).

The 2030 Agenda for Sustainable Development adopted by the United Nations is a reference framework for Swisscom. Swisscom’s climate strategy and its aim to reduce CO₂ emissions relate primarily to Sustainable Development Goal 13 of the 2030 Agenda: “Climate Action”.

The table below provides an overview of all of Swisscom’s climate protection agreements. The results are described in section 5.4.

Partnership	Target agreement	Start year January 1 st	Target year Dec. 31 st	Target
Swisscom	Ratio CO ₂ savings achieved by customers to CO ₂ emissions Swisscom	2016	2020	2:1
Swisscom	Energy efficiency (savings measures over total energy consumption, not weighted)	2016	2020	+35%
EnAW	Energy efficiency (savings measures over total energy consumption, not weighted)	2013	2022	+35%
EnAW	CO ₂ intensity of heating fuels (CO ₂ emissions as a proportion of total CO ₂ emissions and CO ₂ savings)	2013	2022	-8%
EnAW	CO ₂ intensity of fuels (CO ₂ emissions as a proportion of total CO ₂ emissions and CO ₂ savings)	2013	2022	-24%
VBE	Energy efficiency (savings measures over total energy consumption, not weighted)	2006	2020	+25%
SBTI	CO ₂ Reduction Scope 1	2013	2020	-10%
SBTI	CO ₂ Reduction Scope 2	2013	2020	-100%
SBTI	CO ₂ Reduction Scope 3	2013	2020	-18%

1.4. Reference systems

1.4.1 Reference systems for the greenhouse gas inventory

Swisscom's greenhouse gas inventory and its verification are based on the following standards:

International Organization for Standardization (ISO)

- **ISO 14064-1:** Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals (ISO 14064-1:2006)
- **ISO 14064-3:** Specification with guidance for the validation and verification of greenhouse gas assertions (ISO 14064-3:2006)

World Resources Institute (WRI)/World Business Council for Sustainable Development (wbcsd)

- **Greenhouse Gas Protocol:** GHG Protocol Corporate Accounting and Reporting Standard

The following standard provides guidance for indirect emissions under Scope 2:

- **Greenhouse Gas Protocol:** GHG Protocol Scope 2 Guidance

The following standard provides guidance for indirect emissions under Scope 3:

- **Greenhouse Gas Protocol:** GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard
- **Greenhouse Gas Protocol:** GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (Supplement to the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard)

Global e-Sustainability Initiative (GeSI)

In 2018, Swisscom adopted the following standard to calculate the savings resulting from the use of Green ICT services:

- **GeSI:** ICT Sector Guidance built on the GHG Protocol Product Life Cycle Accounting and Reporting Standard (2017)

Energy consumption and the greenhouse gas inventory are reported in accordance with GRI Standards 302 (Energy) and 305 (Emissions).

1.4.2 Reference systems for target setting

Swisscom's target setting for reducing greenhouse gases is based on the following standards:

Intergovernmental Panel on Climate Change (IPCC)

- IPCC Special Report on Global Warming of 1.5°C (November 2018)

SBT Initiative

- Guidance for ICT Companies Setting Science Based Targets (March 2020)

1.5. System boundaries

In line with Swisscom's Annual Report and Sustainability Report 2020, the system boundaries for the greenhouse gas inventory are the fully consolidated companies in Switzerland (i.e. consolidated from a shareholding of 50% or higher; see Sustainability Report 2020, "Scope of the report" and Annual Report Note 5.4, Group companies in Switzerland). All Group companies domiciled abroad and investments in associates and joint ventures are not included in the scope, with the exception of Fastweb. The investment in the Cinetrade Group is not included in the scope of the report either.

These operational boundaries include direct greenhouse gas emissions (Scope 1), indirect greenhouse gas emissions generated by the purchase of energy (electricity and district heating, Scope 2) and other indirect emissions from upstream and downstream activities (Scope 3).

The emissions of foreign subsidiaries such as Fastweb are recorded under Scope 3, Category 15 (investments).

The emission reductions result from targeted measures within the company (directed actions) and from the positive effects (enabling effects) of the use of ICT services by customers (Scope 4). The emission reductions within the company follow the operational boundaries in line with the operational control approach. See section 4 for savings and emission reductions.

The reporting organisations up to the end of 2020 were the following:

Swisscom Ltd:

- Swisscom (Switzerland) Ltd and subsidiaries in Switzerland
- The other Group companies in Switzerland (such as Swisscom Broadcast Ltd)
- The foreign subsidiary Fastweb

1.6. Link to Swisscom's Sustainability Report and Annual Report 2020

The Swisscom corporate responsibility strategy on energy efficiency and climate protection as well as energy management, energy consumption, own CO₂ emissions and savings achieved by customers using services from the sustainable ICT portfolio are also presented in the Sustainability Report 2020 under "Ready for the environment". The governance of corporate responsibility, including for climate and energy management, is described in the "Governance" section. The key figures and information in this report are in line with those set out in the Sustainability Report 2020.

Swisscom uses sustainable financing instruments. In April 2020, it issued a green bond based on the green bond principles of the International Capital Market

Association (ICMA). Financial information about the green bond can be found in the “Financial liabilities” section of the Annual Report 2020.

1.7. Definition of scopes

Greenhouse gas emissions by scope.

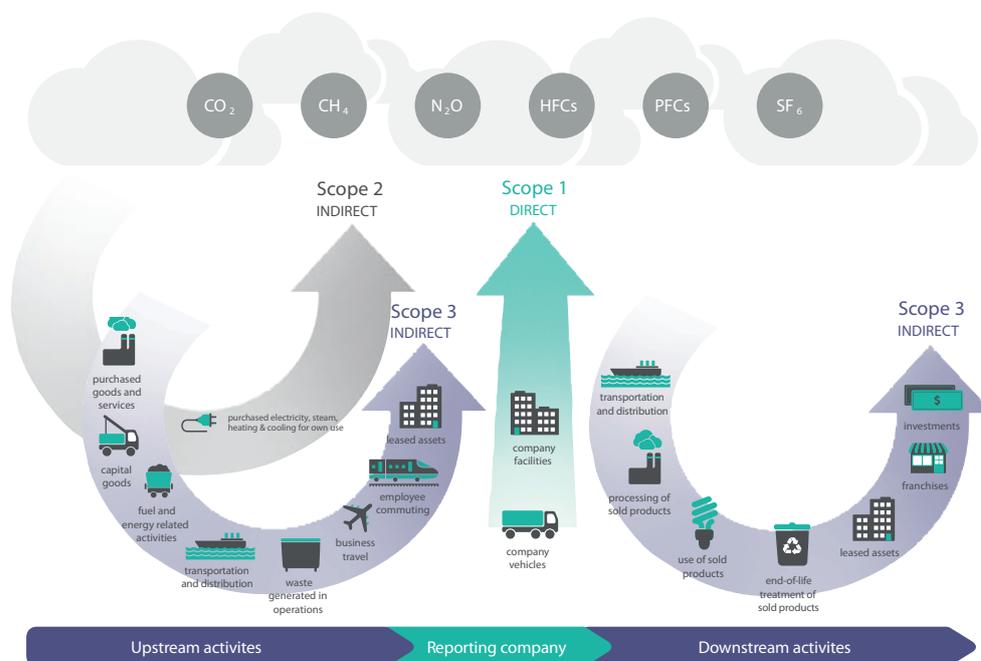


Fig. 1: Greenhouse gas emissions by scope. (Source: GHG Protocol, Corporate Value Chain (Scope 3) Accounting and Reporting Standard)

downstream leased assets (Category 13) and franchises (Category 14).

Scope 1 and 2 emissions are generated by Swisscom’s activities at various locations (multi-sites). The definitions are given in the GHG Protocol for Scope 3 emissions.

Relevant Scope 3 greenhouse gas emissions are those from

- the supply chain (Categories 1, 2 and 4),
- the provision of energy (Category 3),
- waste generated in operations (Category 5),
- business travel (Category 6),
- employee commuting (Category 7),
- leased assets (in this case retail space, Category 8),
- transportation from distribution centres to Swisscom Shops or to customers (Category 9),
- the use of products (electrical energy consumption, Category 11),
- the disposal of terminals (Category 12), as well as
- investments (main Swisscom Group company abroad: Fastweb; Category 15).

The following Scope 3 categories are not relevant for Swisscom: processing of sold products (Category 10),

1.8. Data quality

In terms of quality, the data collection methods can be broken down into the following categories:

- **Data quality 1:** Materials and energy flows are measured directly and the emissions calculated from them. Scope 1 emissions from refrigerants fall into this category.
- **Data quality 2:** Another materials or energy flow is measured or recognised, and the emission levels are derived from this based on assumptions. Included in this category are Scope 1 emissions from heating and vehicle fuel consumption, Scope 2 emissions from electricity and district heating and Scope 3 emissions from purchased goods (Category 1), capital goods (Category 2), provision of energy (Category 3), upstream and downstream transportation and distribution in Switzerland (Categories 4 and 9), waste generated in operations (Category 5), disposal of terminal devices (Category 12) and investments (Category 15).

- **Data quality 3:** Emissions are estimated, with approximate values or empirical information used. This category includes emissions from business travel (Category 6), employee commuting (Category 7), leased assets (Category 8) and consumption by terminals (Category 11), along with enabling effects or savings achieved using services from the sustainable ICT portfolio (Scope 4).

1.9. Sustainable financing (green bond) and eligible categories

Swisscom allocates the green bond funds to a portfolio of green projects in Switzerland that fall into the following categories (eligible categories): energy efficiency, renewable energies and clean mobility (i.e. mainly CO₂-free mobility). Sustainable financing supports Swisscom in its efforts to improve its own energy efficiency, e.g. by increasing the efficiency of existing or new network equipment and cooling systems or by server virtualisation.

2. Energy management and overall consumption

2.1. Energy management

In simple terms, Swisscom Energy Management includes the following process steps:

- Determining energy requirements over a specific period
- Determining the energy mix, particularly the electricity mix
- Determining and approving energy efficiency targets and measures
- Implementing energy efficiency measures
- Efficiency measures for the networks
- Generating electricity
- Using waste heat
- Monitoring, accounting and reporting
- Research and development projects
- Developing and marketing sustainable ICT products and services

2.2. Governance and responsibility for climate and energy management

The Board of Directors of Swisscom is committed to pursuing a strategy geared towards sustainability. It addresses the relevant economic, environmental and social issues in plenary sessions held twice a year. The implementation of the strategy is delegated to the CEO of Swisscom Ltd. The CEO can transfer powers and responsibilities to subordinate units and is supported in operational management by members of the Group Executive Board. The Group Communications & Responsibility (GCR) division is responsible for the implementation of the Corporate Responsibility (CR) strategy. Group

Executive Board members and the Head of Group Communications & Responsibility have been named as internal sponsors for the priorities of the CR strategy. They are responsible for progress and the achievement of targets within their priority areas. The areas of responsibility are aligned to the core tasks of the respective Group Executive Board members and the Head of Group Communications & Responsibility. They are defined as follows:

- **Overall management:** Head of Group Communications & Responsibility
- **Energy efficiency and climate protection:** Head of IT, Network & Infrastructure and Head of Group Business Steering (CFO) of Swisscom Ltd

2.3. Energy consumption at Swisscom

Swisscom's energy consumption (electricity, vehicle and heating fuels) fell in 2020, thanks to the definitive decommissioning of the old analogue telephony (TDM), the efficiency measures implemented and the resulting savings. Its energy efficiency was increased by 38.0% in the year under review compared with 1 January 2016 (Source: Sustainability Report 2020).

The private usage of vehicles from the Swisscom fleet was taken into consideration and subtracted from the fuel consumption.

The share of third-party tenants (proportion of third-party tenants at Swisscom sites) of electrical energy consumption was also subtracted.

Table 1: Energy consumption and energy mix of Swisscom Ltd in Switzerland according to system boundaries (source: Swisscom Annual Report 2020)

Energy consumption and mix [MWh]	2018	2019	2020
Electrical energy consumption	485,141	489,800	479,046
Vehicle fuel consumption petrol	4,655	4,738	3,796
Vehicle fuel consumption diesel	30,795	30,120	24,624
Vehicle fuel consumption natural gas	47	111	83
Heating oil consumption (emergency power systems)	1,044	1,299	1,193
Heating energy consumption heating oil	18,150	18,732	18,127
Heating energy consumption natural gas	7,595	7,872	7,944
Heating energy consumption district heating	10,338	9,928	10,540
Heating energy consumption biomass	319	341	301
Total energy consumption	558,083	562,941	545,655

The environmental energy supplied to Swisscom by heat pumps is not shown in the table. This environmental energy is “free” and does not cause any CO₂ emissions

within the meaning of the Scope. The electrical energy of the heat pumps, on the other hand, is recorded under “Electrical energy consumption”.

Table 1.1: Overview of energy consumption and energy mix of Swisscom Ltd

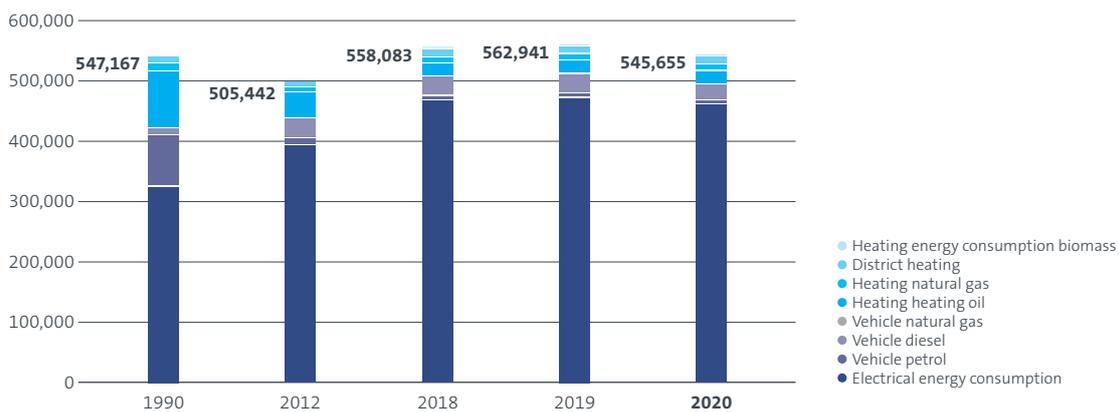
in MWh or TJ	2018	2019	2020
Energy consumption			
Electricity	485,141	489,800	479,046
Fuels	35,497	34,969	28,504
Heating fuels	37,446	38,172	38,104
Total energy consumption [MWh]	558,083	562,941	545,655
Total energy consumption [TJ]	2,009	2,027	1,964

The table shows the shift in energy consumption from fossil sources to electricity. This corresponds to a trend which, according to internal forecasts, will become even

more pronounced in the future due to the ongoing electrification of heating systems and mobility.

Chart 1: Development of Swisscom Ltd’s energy mix in Switzerland

in Megawatt-hours MWh



2.4. Energy consumption by customers

The energy consumed by customer devices can be extrapolated to 288 GWh based on the devices, the energy consumption of each device and the typical usage profiles (2019: 304 GWh). Fewer end devices such

as TV boxes and routers were installed in 2020. Swisscom makes its customers aware of the many options available for reducing energy consumption, as well as offering concrete solutions.

3. Details of emissions

3.1. Development of Scope 1 emissions

In terms of direct emissions, Swisscom reports on emissions from the consumption of fossil fuels and the loss of refrigerants. Other possible sources such as emissions from fire extinguishers are negligible, non-existent (halon) or outside Swisscom's control (SF₆).

Scope 1 emissions from vehicle fuels fell year on year in 2020. This is mainly due to a decline in the number of vehicle kilometres travelled in the course of the year. Emissions from heating fuels are unchanged. Hardly any

change during the pandemic was observed in the heating of the buildings, as the offices were heated regardless of the number of users.

Emissions from oil consumption for stationary emergency power stations and emissions from the loss of refrigerants in cooling systems are reported separately. These systems are critical for network operation and are dealt with in a separate efficiency programme.

Table 2: Details of Scope 1 emissions

Scope 1 CO ₂ eq. emissions [tonnes] from:	2017	2018	2019	2020
Vehicle fuel consumption petrol	1,222	1,260	1,313	1,052
Vehicle fuel consumption diesel	8,292	8,261	8,050	6,581
Vehicle fuel consumption natural gas	15	8	20	15
Heating oil consumption (emergency power systems)	248	279	347	319
Heating energy consumption heating oil	6,876	4,855	5,004	4,842
Heating energy consumption natural gas	1,465	1,506	1,561	1,575
Scope 1 CO ₂ eq. emissions (from energy consumption)	18,119	16,171	16,295	14,384
Scope 1 CO ₂ eq. emissions (from refrigerants)	352	118	153	36
Scope 1 CO₂ eq. emissions	18,471	16,289	16,448	14,420
CO ₂ eq emissions from biomass		–	–	–

In 2020, total Scope 1 emissions decreased (-12.3%). Swisscom is continuing its efficiency programme for its properties by using a mix of low-CO₂ energy sources, on the one hand, and increasingly replacing oil-fired heating systems with heat pumps or wood-fired heating systems, on the other. Biomass is considered CO₂-free; the biogenic CO₂ is therefore not classified under Scope 1. Swisscom is also continuing its programme to increase the efficiency of its mobility by reducing the size of its vehicle fleet and continuing to introduce more fuel-efficient vehicles. The complete electrification of mobility is planned for 2030.

3.2. Development of Scope 2 emissions

Swisscom has been pursuing a “market-based” approach for the non-renewable portion of purchased electricity since 1 January 2010 and for district heating since 2019. In accordance with GHG Protocol Scope 2 Guidance, this report contains the Scope 2 emissions prior to offsetting (location-based approach) and the emissions after offsetting (market-based approach).

Renewability of the purchased energy: Swisscom covers 100% of its electricity needs with a mix of renewable

energy sources, mostly hydroelectricity and a mix of renewable energies. For district heating, it has used renewable heat since 2019. Swisscom has thus increased its share of electricity and heat from renewable energy sources.

Energy purchased declared to be CO₂-free: Swisscom uses guarantees of origin (HKNs) or certificates. This means that its Scope 2 emissions from district heating and electricity are reduced to zero. The use of certified electricity and district heating reduces CO₂ emissions from electricity to the indirect emissions (provision of electricity and district heating) shown in section 3.3. A residual-mix calculation does not exist for guarantees of origin from hydropower and district heating.

Efficiency measures have also helped prevent Scope 2 emissions at Swisscom, reducing total electrical consumption in operations and in the buildings by 51.6 GWh in 2020 (2019: 41.1 GWh). Methods in this regard which are still effective include the virtualisation of servers, the fresh-air cooling methods (Mistral and now Levante for cooling mobile telephony base stations), the renovation of the entire mobile network with energy-efficient infrastructure and the increased efficiency of data centres (lower PUE values). The decommissioning of the old TDM platform (Time Division Multiplexing as old analogue

fixed-network technology) has been completed and is yielding substantial electricity savings.

Finally, Swisscom also generates electricity from photovoltaic installations. At the end of 2020, the total installed capacity was 3,321 kWp, with the installations producing 2,900 MWh of electricity (2019: 2,162 MWh).

Table 3: Emission factors considered for electricity and district heating (source: myclimate calculated according to ecoinvent)

In g CO ₂ eq. / kWh	Validity	Emission factor (total)	EF Scope 2 (direct)	EF Scope 3 (indirect)
Electricity				
Supplier electricity mix Switzerland ("location-based")	from 2017	149.40	111.70	37.70
Certified electricity ("market based")	from 2017	13.00	0	13.00
District heating				
District heating according to scopes	2018	146.10	101.78	44.32
District heating ("market-based")	2019	44.32	0	44.32
District heating ("market-based")	2020	42.26	0	42.26

Swisscom updated the emission factor for district heating each year and also divided it by scope (Scope 2 and 3). The division by scope is based on a calculation performed by myclimate specifically for Swisscom, using a

weighted average courtesy of the district heating calculator from the company treeze Ltd. Swisscom has been using guarantees of origin (HKNs) for district heating since 2019.

Table 4: Details of Scope 2 emissions

Scope 2 emissions are converted using the factors from Table 3.

Scope 2 CO ₂ eq. emissions [tonnes] from:	2017	2018	2019	2020
Electricity consumption supplier electricity mix Switzerland ("location-based")	56,054	58,168	54,691	53,490
Heating energy consumption district heating ("location-based")	948	1,052	1,011	511
Scope 2 CO₂ eq. emissions ("location-based")	57,002	59,220	55,702	54,001
Electricity consumption certified electricity ("market based")	0	0	0	0
Heating energy consumption district heating ("market-based")	948	1052	0	0
Scope 2 CO₂ eq. emissions ("market-based")	948	1052	0	-

3.3. Development of Scope 3 emissions

Scope 3 emissions are a key topic for Swisscom: In 2020, more than 80% of Swisscom's emissions were attributable to indirect emissions (Scope 3), whereby most of them were incurred in the supply chain. In this context, Swisscom has drawn up a model for calculating supply

chain emissions along with the life cycle specialists from treeze Ltd. Other emissions are derived from materials and energy flows or are estimated using approximate values or empirical information (Categories 7 and 11).

Table 5: Details of Scope 3 emissions

Scope 3 CO ₂ eq. emissions [tonnes] from:	2017	2018	2019	2020
Cat. 1 Purchased goods and services	263,400	311,600	237,340	208,101
Cat. 2 Capital goods	8,900	3,900	3,800	3,991
Cat. 3 Provision of electricity	6,078	6,307	6,367	6,228
Cat. 3 Provision of district heating		458	440	446
Cat. 3 Provision of vehicle fuels (petrol + diesel) ¹	2,031	1,977	1,943	1,503
Cat. 3 Provision of heating oil	1,191	831	866	773
Cat. 3 Provision of natural gas	461	409	402	408
Cat. 3 Provision of biomass	–	8	9	10
Cat. 4 Upstream transportation and distribution	19,000	17,800	14,359	17,038
Cat. 5 Waste generated in operations	3,342	2,434	2,581	1,927
Cat. 6 Rail travel in Switzerland	96	102	104	49
Cat. 6 International rail travel	19	22	23	4
Cat. 6 European flights	1,030	1,016	1,012	270
Cat. 6 Intercontinental flights	1,471	1,400	1,417	456
Cat. 6 Car journeys to meetings	841	905	807	453
Cat. 7 Employee commuting (public transport)	1,370	1,318	1,183	357
Cat. 7 Employee commuting (car)	16,150	15,543	13,851	3,889
Cat. 8 Upstream leased assets	5,300	8,000	7,867	7,554
Cat. 9 Downstream transportation & distribution	5,600	1,200	1,114	1,055
Cat. 11 Use of sold products	42,788	44,700	45,432	42,961
Cat. 12 End of life treatment of sold products	2,315	220	385	281
Cat. 15 Investments	4,884	4,943	3,223	3,026
Total Scope 3 CO₂ eq. emissions	386,265	425,093	344,524	300,779

¹ Vehicle fuel consumption without private use of Swisscom's fleet

Categories 10, 13 and 14 are not relevant for Swisscom.

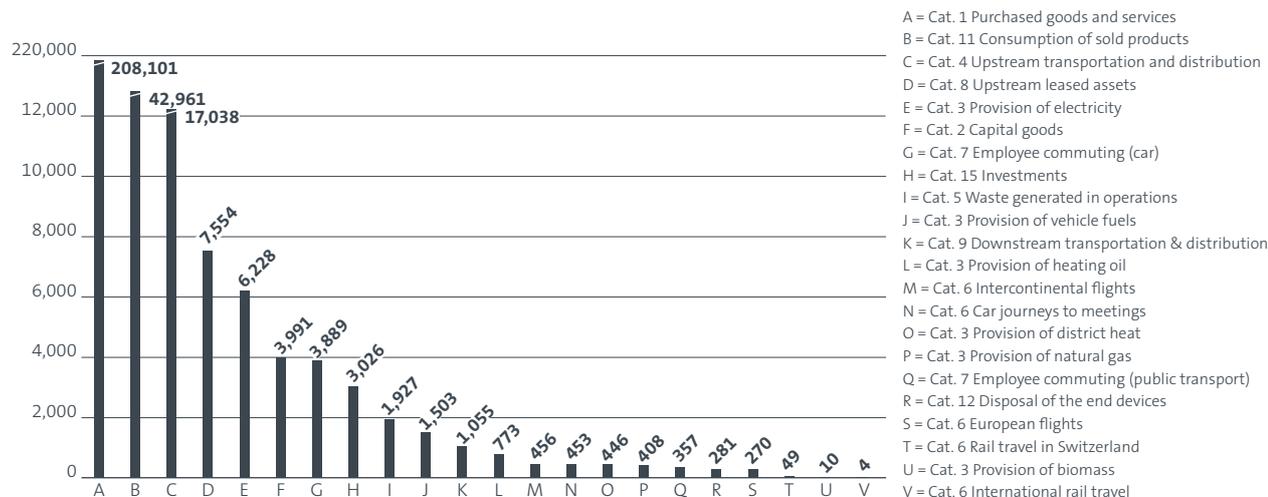
Emissions in the supply chain (Categories 1, 2, 4 and 8) fell sharply in 2020, mainly due to a lower purchase volume than in the previous year and the lower CO₂ intensity of new or newly included suppliers. The additional Scope -3 emissions fell slightly year on year. Emissions from commuting (Category 7) decreased in line with the new staffing levels and especially due to the pandemic,

during which working at home became more widespread. The same applies to emissions from business trips (Category 6), significantly affected due to the pandemic.

With Category 11 (consumption of sold products), emissions decreased due to the smaller number of devices bought by customers.

Chart 2: All scope 3 emissions by GHG category

in tonnes CO₂ eq

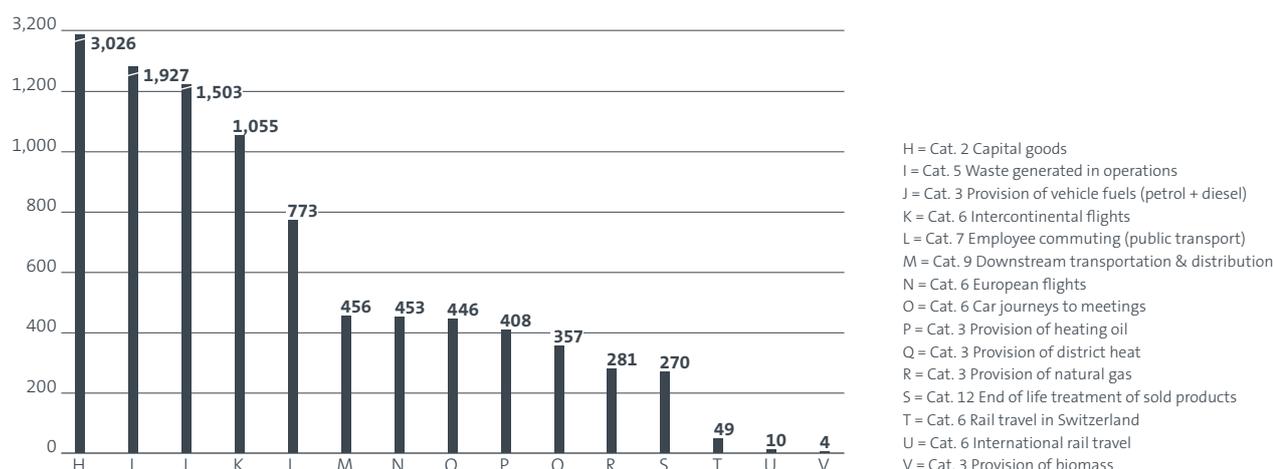


- A = Cat. 1 Purchased goods and services
- B = Cat. 11 Consumption of sold products
- C = Cat. 4 Upstream transportation and distribution
- D = Cat. 8 Upstream leased assets
- E = Cat. 3 Provision of electricity
- F = Cat. 2 Capital goods
- G = Cat. 7 Employee commuting (car)
- H = Cat. 15 Investments
- I = Cat. 5 Waste generated in operations
- J = Cat. 3 Provision of vehicle fuels
- K = Cat. 9 Downstream transportation & distribution
- L = Cat. 3 Provision of heating oil
- M = Cat. 6 Intercontinental flights
- N = Cat. 6 Car journeys to meetings
- O = Cat. 3 Provision of district heat
- P = Cat. 3 Provision of natural gas
- Q = Cat. 7 Employee commuting (public transport)
- R = Cat. 12 Disposal of the end devices
- S = Cat. 6 European flights
- T = Cat. 6 Rail travel in Switzerland
- U = Cat. 3 Provision of biomass
- V = Cat. 6 International rail travel

Chart 3 provides a detailed view of the categories with low emissions.

Chart 3: Selected scope 3 emissions by GHG category

in tonnes CO₂ eq



- H = Cat. 2 Capital goods
- I = Cat. 5 Waste generated in operations
- J = Cat. 3 Provision of vehicle fuels (petrol + diesel)
- K = Cat. 6 Intercontinental flights
- L = Cat. 7 Employee commuting (public transport)
- M = Cat. 9 Downstream transportation & distribution
- N = Cat. 6 European flights
- O = Cat. 6 Car journeys to meetings
- P = Cat. 3 Provision of heating oil
- Q = Cat. 3 Provision of district heat
- R = Cat. 3 Provision of natural gas
- S = Cat. 12 End of life treatment of sold products
- T = Cat. 6 Rail travel in Switzerland
- U = Cat. 6 International rail travel
- V = Cat. 3 Provision of biomass

Both the graphics show the emissions in descending order. The most important emissions come from categories not controlled by Swisscom (supply chain, transport, etc.). Joint efforts with suppliers are required here in order to achieve the targets. This is primarily done via the CDP. Where Swisscom has the potential to exert influence, it uses this and agrees on targets with its

partners – such as for logistics (Category 9) – in two steps: Recording emissions in accordance with the standard which is customary for transport (EN 16258), as well as subsequent optimisation. Indirect emissions from own activities are reduced by Swisscom as part of its efficiency and reduction programmes (Categories 3, 5 and 6).

4. Details of savings

4.1. Overview of savings measures

Measures that lead to energy savings and reduced greenhouse gas emissions are described in the report as “directed actions” and “enabling effects”. These relate firstly to measures that lead within Swisscom to a reduction in the consumption of heating and vehicle fuels and of electricity or to the offsetting of emissions (directed actions) and secondly to savings by customers due to the

use of Green ICT services or due to offsetting (enabling effects, Scope 4). Since 2018, the saving of greenhouse gas emissions thanks to the use of Green ICT services has been calculated in accordance with the ICT Sector Guidance built on the GHG Protocol Product Life Cycle Accounting and Reporting Standard.

Table 6: Measures to reduce Swisscom’s Scope 1-3 emissions (directed actions)

Scope		Directed Actions
Scope 1	emissions	Increase efficiency, reduce demand (target 2:1 and target 2025) <ul style="list-style-type: none"> • Fleet roadmap: spec. emissions down to 95 g CO₂/km in 2020 • Route planning and coordinated deployment of personnel (work-force management) • Building refurbishment, abandonment of oil heating systems • Offsetting emissions
Scope 2	emissions	Increase efficiency (+35% by 2020 from 2016; +25% by 2025 from 2020) <p>Implementation of a programme to increase energy efficiency</p> <ul style="list-style-type: none"> • Offsetting with guarantees of origin • Virtualisation of servers • Cooling of the networks with fresh air (Mistral and new Levante and Scirocco) • Low PUE values of the data centres
Scope 3 cat.1	purchased goods	Selective measures in the supply chain <p>Integration of suppliers in the CDP supply chain module and Action Exchange Program</p>
Scope 3 cat.2	capital goods	Selective measures in the supply chain <p>Integration of suppliers in the CDP supply chain module and Action Exchange Program</p>
Scope 3 cat.3	Provision of electricity	Increase in efficiency (+35% by 2020 from 2016; +25% by 2025 from 2020) <p>Most important measure: cooling of the grids with fresh air (Mistral and new Levante and Scirocco)</p>
Scope 3 cat.3	provision of car fuels (F+D)	Increasing efficiency, reducing the need (-3 g CO ₂ / km per year) <p>Most important measure: Fleet roadmap: spec. emission down to 95 g CO₂ / km in 2020</p>
Scope 3 cat.3	provision of heating fuels	Increase efficiency, reduce the need (2: 1 and 2025 targets) <p>Most important measure: building renovations, abandonment of heating fuels</p>
Scope 3 cat.3	provision of natural gas	Increase efficiency, reduce the need (2: 1 and 2025 targets) <p>Most important measure: building renovations, abandonment of heating fuels</p>
Scope 3 cat. 4	Upstream transport and distribution	Selective measures in the supply chain <p>Integration of suppliers in the CDP supply chain module and Action Exchange Program</p>
Scope 3 cat. 5	Disposal of operational waste	Waste separation and recycling, local disposal
Scope 3 cat. 6	Rail travel Switzerland	Replacement with virtual mobility (Unified Communication and Collaboration (UCC)), telepresence meetings
Scope 3 cat. 6	Rail travel international	Same
Scope 3 cat. 6	Flights Europe	Same, plus stricter approval process for flights
Scope 3 cat. 6	Flights intercontinental	Same, plus stricter approval process for flights
Scope 3 cat. 6	Car journeys to meetings	Replacement with telepresence/videoconferencing
Scope 3 cat. 7	Commuter traffic public transport	Promotion of home office (remote working), home office guidelines
Scope 3 cat. 7	Commuter traffic passenger car	Promotion of home office (remote working), home office guidelines, reduction of parking spaces, promotion of public transport
Scope 3 cat. 8	Rented sales areas	Selective measures in the supply chain
Scope 3 cat. 9	Downstream transportation and distribution (to the customers)	Selective measures in the supply chain <p>Integration of suppliers in the CDP supply chain module</p>
Scope 3 cat. 11	Use of products sold	Reduction of energy consumption of the device <ul style="list-style-type: none"> • “1-Watt” set-top boxes • Internet Box 2 with savings parameters
Scope 3 cat. 12	Disposal of the terminals	Sorting and recycling, local elimination, Program Mobile Aid (re-use)
Scope 3 cat. 15	Capital expenditure	Environmental management at subsidiary Fastweb, aims to reduce of energy consumption and use green electricity

4.2. Savings and efficiency improvements at Swisscom (directed actions)

4.2.1 Savings and efficiency improvements in operations/eligible projects of the green bond

As part of a target agreement on energy efficiency improvements and CO₂ reduction with the Energy Agency of the Swiss Private Sector (EnAW), Swisscom reports annually on its efficiency improvements and CO₂ footprint. The target agreement runs until 2022. It aims to increase energy efficiency and is based on the Energy Act and the Swiss CO₂ Act. Its execution is governed by the implementing directive issued by the Federal Offices for the Environment and Energy on 9 November 2011. Swisscom's aim according to the target agreement is to increase its energy efficiency by 35% by 2020 (compared with 1 January 2016) and by an additional 25% by 2025 (compared with 1 January 2020).

To reduce the ecological footprint in the company's operations, Swisscom adopts savings measures which fall into the following three categories:

a) **Savings thanks to operational measures (eligible projects of the green bond):**

The operational efficiency measures are set out in a catalogue of measures and implemented on an ongoing basis. The catalogue lists a total of eight measures (whereby the previous 17 measures have been newly grouped by theme): These include improvement measures in operations, especially the introduction of network equipment with an output that meets the requirements of the European Code of Conduct for broadband and FTTH equipment, efficient cooling of the networks (including the Mistral and Levante fresh-air cooling methods, but also free cooling and mixed systems), the use of low-CO₂ energy sources, heat recovery and the increased use of heat pumps, which ensure increased efficiency. So far as the vehicle fleet is concerned, there was no capital expenditure in 2020 – because such investments would not have made sense during the Covid-19 pandemic. However, cost-cutting measures are again planned after the end of the Covid-19 pandemic. However, the number of kilometres driven decreased in 2020, which led to a reduction in CO₂ emissions. The three most effective measures are the virtualisation of servers in data centres, the use of fresh-air cooling for networks and since 2015 the activation of savings functions in the mobile network. Efficiency measures amounted to 55.2 GWh, of which 51.6 GWh is electric. The remainder relates to measures for buildings and the vehicle fleet.

b) **Savings thanks to own electricity generation (eligible project of the green bond):**

Where economically feasible, Swisscom constructs its own photovoltaic installations to generate solar power. At the end of 2020, the total installed capacity of the 84 installations was 3,321 kWp. The installa-

tions supplied Swisscom with 2.9 GWh for its own consumption.

c) **Savings using guarantees of origin:**

Since 2010, Swisscom has offset the proportion of nuclear power, electricity of unknown origin and electricity from fossil fuels in its electricity mix or used for its network infrastructure and the buildings it manages by purchasing guarantees of origin (HKNs). Since 2019, it has also offset district heating. Thus, Swisscom once again used 100% renewable electricity in 2020, as certified independently. The use of HKNs reduces CO₂ emissions from electricity and from district heating to indirect emissions (see Table 4, Details of Scope 2 emissions).

4.2.2 Reduction in Swisscom's activity-related CO₂ emissions

Swisscom makes its customers aware of the many options available for reducing energy consumption, as well as offering concrete solutions:

a) **Campaigns and apps:** In recent years, Swisscom has participated in awareness-raising and information campaigns run by the Swiss Federal Office of Energy (SFOE). The goal of these campaigns has been to optimise the energy consumption of devices such as modems, routers and TV set-top boxes by encouraging customers to use the optimum settings. Swisscom augmented these educational measures by continuing to inform its customers about energy consumption and explaining energy-optimised settings on its website. In 2019, Swisscom also launched the Swiss Climate Challenge app in partnership with other Swiss companies to raise awareness among customers and the general public of the impact of mobility on the climate.

b) **Swisscom TV:** Despite a steady growth in customer numbers at Swisscom TV, Swisscom has reduced the energy consumption of all set-top boxes in operation from 80 GWh to 62 GWh since 2013. This was achieved thanks to extensive efficiency improvements in the box as well as the software or operating system. More and more customers are now using the efficient UHD box. Swisscom also launched the newly developed Swisscom Box at the end of 2019.

c) **Routers:** The current Internet Box 2 offers several energy-saving features. One is a time switch allowing users to set times during which the Wi-Fi, central storage or telephony (Digital Enhanced Cordless Telecommunications – DECT) functions are switched off. Furthermore, the Internet Box 2 means fewer and fewer devices are used in the home network. This is because the box replaces the multiple devices that used to be required to connect computers, TVs and HD fixed-line telephony wirelessly, thereby significantly reducing energy consumption. Swisscom launched the Internet Box 3 at the end of 2019. With a similar power consumption, this new box is even more powerful than its predecessor.

4.2.3 Reduction of emissions in the supply chain – Supply Chain Program

Swisscom has no direct control over indirect emissions in the supply chain. However, it does have the means to exert influence by promoting joint efforts by suppliers through the Global e-Sustainability Initiative (GeSI), the Joint Audit Cooperation (JAC) and the Carbon Disclosure Project (CDP). In the year under review, Swisscom continued its cooperation with the CDP. The CDP is a non-profit organisation founded in 2000. The organisation encourages companies to publish relevant environmental data, including data on harmful greenhouse gas emissions and water consumption. Once a year, the CDP, on behalf of investors, uses standardised questionnaires to collect information and data from companies on a voluntary basis as regards CO₂ emissions, climate risks and reduction goals and strategies. The CDP maintains the world's largest database of this kind.

As part of its cooperation with the CDP, Swisscom contacted and surveyed 78 (prior year: 77) of its key suppliers. The suppliers surveyed have a high order volume (61%) or a high degree of environmental relevance. The response rate was 92% (prior year: 91%), which again allowed the survey to be brought to a successful conclusion. In the fourth quarter of 2019, the CDP analysed the responses and applied a scoring system to rate the suppliers who took part. The results are partially incorporated into the E-TASC platform from EcoVadis and used as a basis on which to comprehensively assess Swisscom's key suppliers. As the emissions and results of the individual suppliers are available on the CDP platform, Swisscom does not publish any further details.

As part of its new CR Strategy 2025, Swisscom is once again pursuing a defined target in the area of climate protection. As the supply chain is responsible for a major portion of Scope 3 emissions, CO₂ emissions in the supply chain play a fundamental role in climate protection. Swisscom again took part in the Action Exchange Program (AEP) in 2020 as part of its work with the CDP and defined specific development plans with individual suppliers. Thanks to the emission data that the CDP collects from suppliers, Swisscom has a reliable basis for determining reduction targets for itself as well as for its key suppliers.

4.3. Savings by customers (enabling effects through the portfolio)

Customers can reduce their emissions by using the sustainable portfolio made available to them by Swisscom. The sustainable portfolio offers seven types of savings:

a) Savings through services that help customers to replace some of their travel. These include such offer-

ings as conferencing services, managed unified communications and collaboration (MCC/UCC) and remote access (home office) as well as solutions that combine telephony, e-mail, instant messaging, desktop sharing, and telephone and video conferencing and that allow users to exchange images, sound and data over distances and to work on the move.

- b) Savings through services that enable customers to control devices or vehicles intelligently via the Internet of Things (IoT). These services help, for example, to optimise logistics systems by improving route selection or to monitor filling levels, such as oil tanks or waste containers, efficiently. These services reduce the number of transport kilometres travelled by logistics fleets. They also make it possible to control heating remotely.
- c) Savings through services that enable customers to give up their own data centres and servers and outsource them to highly efficient data centres with a considerable level of server virtualisation.
- d) Savings through services that help to reduce paper consumption. These include electronic billing and the electronic trading platform Conextrade, on which companies can handle all their transactions electronically. Further paper savings are achieved with the Dynamic Printing service, which significantly reduces paper waste through an intelligent zone concept and features such as follow-me printing (documents are not printed until the user is at the printer).
- e) Savings through "dematerialisation" services. This refers to customers replacing previously physical items with data transmitted via a broadband connection.
- f) Savings through services that target reductions in shopping trips due to online ordering and in retail space as physical shops are replaced by virtual ones (e-commerce).
- g) Savings through services that extend the life of mobile phones. As part of its circular economy initiative, Swisscom recycles used but still functioning mobile handsets for further use in developing countries. This extends their useful life and gives people in developing countries access to low-cost devices.

The savings achieved through Green ICT services are listed in Table 7.

Swisscom developed the calculation method in collaboration with the myclimate foundation. With our current calculation models, it is not possible to clearly distinguish between the effect of savings and the effect due to the pandemic. The results show the overall level of emissions avoided by the portfolio. Swisscom plans to revise its calculation models to take account of changes in working and travel habits.

Table 7: Savings using Green ICT services

CO ₂ eq. emissions [tonnes]	Service group	Service	2018	2019	2020
Reducing travel	Virtual conferences	Conferencing service	27,769	43,870	47,493
		MCC/UCC	138,519	116,153	265,774
	Home office	Home office services	196,129	178,896	354,740
		Machine-to-Machine	Logistics, heating	40,897	48,182
Saving energy	Data centre services	Hosting	44,377	48,145	47,320
		Housing	1,148	1,193	1,309
Saving paper	Saving paper	e-bill, Conextrade, printing	1,439	1,544	1,232
Dematerialisation		Data carriers and retail space	116,689	71,451	72,695
E-commerce				17,301	6,624
Mobile Aid			2,035	2,930	17,651
Total CO₂ eq. savings portfolio			569,003	529,665	895,092

Conferencing and Home Office: The increase in CO₂ savings in this category is primarily explained by the pandemic.

Machine to machine (IoT, Internet of Things): The increased savings are due to the increased number of partner companies that have shared their information with Swisscom.

The increase for the MobilAid category comes from new measures and services introduced in 2020 as part of our circular economy programme. Repair, reuse and recycling reduce the consumption of resources and CO₂ emissions.

Swisscom separates the categories of e-commerce and “dematerialisation”. In both categories a rebound effect can be observed, which – as investigations in the year under review show – is due to the increased return of goods and the corresponding increase in freight traffic. The impact of the rebound effect is taken into account, which reduces the savings accordingly.

4.4 Offsetting of CO₂ emissions

4.4.1 Climate-neutral operations

Swisscom has significantly reduced its CO₂ emissions and intends to reduce them further. The remaining emissions from operations will be offset from 2020,

making Swisscom’s operations climate-neutral. Offsetting covers emissions from the networks, the heating of buildings, mobility and related activities such as the purchase of network equipment, its transport, business travel and waste disposal. This includes emissions under Scope 1 and Scope 3 Category 1 (purchased goods, only network equipment such as routers for Internet access and set-top boxes), Category 3 (provision of energy), Category 5 (waste) and Category 6 (business travel). To cover these emissions, Swisscom buys CO₂ certificates (CER) according to the gold standard (1 certificate = 1 tonne of CO₂), from a biogas project in India. The external partner myclimate has guided this initiative. Emissions under Scope 2 (purchase of energy, electricity and district heating) are offset by another mechanism (guarantees of origin, HKN). The non-renewable part of the electricity or district heating is offset by guarantees of origin for renewable and CO₂-free energy (e.g. wind, solar or geothermal energy). Swisscom therefore restricts the choice of guarantees of origin in two ways.

4.4.2 Climate-compensated products

CO₂ emissions from purchased products such as smartphones, tablets or accessories are not covered by climate-neutral operations. For this reason, Swisscom offers its customers the opportunity to offset the CO₂ emissions of these products for a small surcharge. A biogas plant in India and two reforestation projects in the Congo and Switzerland offset this CO₂. The external partner South Pole has guided this initiative.

5. Summary of direct and indirect emissions and savings

5.1. Summary of emissions

Table 8: Summary of Scope 1, 2 and 3 emissions

CO ₂ eq. emissions [tonnes]	2017	2018	2019	2020
Scope 1 (from consumption of fossil energies)	18,119	16,171	16,295	14,384
Scope 1 (from refrigerants)	352	118	153	36
Scope 2 (from electricity, "location-based")	56,054	58,168	54,691	53,490
Scope 2 (from district heating, "location-based")	948	1,052	1,011	511
Total Scopes 1, 2 ("location-based")	75,473	75,509	72,150	68,422
Scope 1 (from consumption of fossil energies)	18,119	16,171	16,295	14,384
Scope 1 (from refrigerants)	352	118	153	36
Scope 2 (from electricity, "market-based")	0	0	0	–
Scope 2 (from district heating, from 2019 "market-based")	948	1,052	–	–
Total Scopes 1, 2 ("market-based")	19,419	17,341	16,448	14,420
Scope 3	386,265	425,093	344,524	300,779
Total Scopes 1, 2 ("location-based"), 3	461,738	500,602	416,674	369,201
Total Scopes 1, 2 ("market-based"), 3	405,684	442,433	360,972	315,199

5.2. Summary of savings

Table 9: Impact of directed actions and enabling effects:

CO ₂ eq. emissions [tonnes]	2017	2018	2019	2020
Enabling effects: Savings for customers thanks to sustainable ICT portfolio	498,273	569,003	529,665	895,092
Offsetting with GoO (electricity and district heating / green electricity)	56,054	58,168	55,702	54,001
Offsetting with CER (emissions from operations)	–	–	–	39,107
Total Enabling Effects und Directed Actions	554,326	627,172	585,367	988,201

The reductions in energy consumption and emissions resulting from increased energy efficiency and savings

measures (4.2.1a) are already included and not calculated a second time here.

5.3. Ratio and difference between savings and emissions

Table 10: Ratio and difference between savings and emissions

Target 2:1 (2020) / target 2025	2017	2018	2019	2020
Savings by customers thanks to the sustainable ICT portfolio (enabling effects)	498,273	569,003	529,665	895,092
Emissions (without Fastweb, with HKN offsets)	400,800	437,491	357,749	312,173
Ratio savings to emissions	1.24	1.30	1.48	2.87
Difference savings to emissions	97,473	131,512	171,916	582,919

The ratio of savings by customers to emissions by Swisscom (excluding Fastweb and offset by electricity and district heating) was 2.87 in 2020.

sions in Switzerland (as last published by the Federal Office for the Environment (FOEN) in 2020).

The difference between savings and emissions is 582,919 tonnes of CO₂ eq., and amounts to 1.26% of total emis-

The calculation is made without offsetting to ensure comparability with previous years.

5.4. Summary of target achievement

Table 11: Target achievement

Partnership	Target agreement	Status 2020	Target year	Target
Swisscom	Ratio CO ₂ savings achieved by customers to CO ₂ emissions Swisscom	2.87	2020	2:1
Swisscom	Energy efficiency (savings measures over total energy consumption, not weighted)	38.0%	2020	35%
EnAW	Energy efficiency (savings measures over total energy consumption, weighted)	39.3%	2022	35%
EnAW	CO ₂ intensity of heating fuels (CO ₂ emissions as a proportion of total CO ₂ emissions) ¹ and CO ₂ savings)	-8.8%	2022	-8%
EnAW	CO ₂ intensity of fuels (CO ₂ emissions as a proportion of total CO ₂ emissions) ¹ and CO ₂ savings)	-36.5%	2022	-24%
VBE	Energy efficiency (savings measures over total energy consumption, not weighted) ¹	49.1%	2020	25%
SBTI	CO ₂ Reduction Scope 1	-40.1%	2020	-10%
SBTI	CO ₂ Reduction Scope 2	-100.0%	2020	-100%
SBTI	CO ₂ Reduction Scope 3	-28.9%	2020	-18%

¹ Data from previous year (externa reports)

Goals for 2020 were achieved! In 2020 Swisscom achieved all of its targets for CO₂ reduction and improved energy efficiency which it had set in 2013 and 2016. The targets for 2022 agreed with the EnAW were already achieved by the end of December 2020, two years earlier

than planned. NB The indicators of the EnAW and the VBE are consistent with the values for 2019 defined by the partners of the target agreements, as the indicators for 2020 will not be available until March 2021.

5.5. Summary of CO₂ intensities

Table 12: CO₂ intensities

Tonnes CO ₂ eq. or To/unit	Unit	2016	2017	2018	2019	2020
CO ₂ scope 1	tonnes	20,057	18,471	16,289	16,448	14,420
CO ₂ Scope 2 ("market based")	tonnes	826	948	1,052	–	0
CO ₂ -intensity of energy	Tonnes / TJ	10.8	9.8	8.6	8.1	7.1
CO ₂ -intensity turnover	Tonnes / mio. CHF	2.16	2.05	1.87	1.83	1.67
CO ₂ -intensity EBITDA	Tonnes / mio. CHF	5.8	5.6	5.1	4.7	4.1

The intensities are calculated based on the verified indicators and published in Swisscom's sustainability reports or annual reports. Only Scope 1 and 2 emissions related to operations are considered. The revenue is Swisscom's revenue in Switzerland. The CO₂ intensity of Swisscom's energy mix is declining. This is a direct result

of the efficiency and emission reduction programmes implemented in recent years, particularly in buildings. Swisscom, for example, is systematically replacing oil heating systems with heat pumps or wood heating systems; it also reuses residual heat from IT processes wherever possible.

5.6. Summary of the impact of eligible projects (green bond)

Table 13: Impact of projects

ICMA GBP categories	impact indicator	2020
Energy efficiency	Annual direct energy savings (in MWh)	55200
	Efficiency increase (%) compared to the base year (2013)	42.3
	Annual GHG emissions according to Scopes 1 and 2 (in tonnes CO ₂ -eq)	14420
	GHG intensity (tonnes CO ₂ eq / TJ)	7.1
	GHG intensity (tonnes CO ₂ eq / CHF million)	1.67
renewable energy	Annual additional energy capacity (kW)	158
	Annual GHG emissions avoided (tonnes CO ₂ eq)	432
Clean transport	Number of vehicles (#)	1723
	Share of vehicles in energy efficiency categories (A + B)	87.3
	GHG emissions Scope 1 Mobility (tonnes CO ₂ eq per year)	7648

The above table shows the environmental impact of the projects realised in 2020. The indicators are consistent

with the handbook “Harmonised Framework for Impact Reporting” (ICMA 2019) and the GRI standards.

6. Explanations and assumptions

6.1. Base year

The base year for Scope 1 and 2 emissions is 2012. 2012 is also the start year for the second target agreement with the Energy Agency for Industry (EnAW). Swisscom has energy data for the base year, which have been published in previous climate reports. There have been no material changes in the scope of the report since 2012. Swisscom is still engaged in the same activities as in 2012, with any changes (purchase or sale of small companies, slight changes in the real estate structure) immaterial in terms of CO₂ emissions.

6.2. Recalculation of the base year emissions

In accordance with the ISO 14064-1 standard, significant changes in the scope of consolidation, changes of ownership or control, or the application of new or corrected emission factors shall lead to a recalculation of the base year emissions, provided these changes result in a change to the greenhouse gas emissions of more than 10% (compared with the emissions in the same year before the changes).

Scope 1: No significant changes in the scope of consolidation in 2020.

Scope 2: There are no changes to report in 2020 compared with the previous year.

Scope 3: The base year was not recalculated in 2020. The Scope 3 emissions included in Category 3 are based on electricity with guarantees of origin ("market-based" approach).

6.3. Activities and energy consumption

Swisscom takes the following forms of consumption into account under Scope 1 (direct emissions):

- all fuel used to operate the company's own vehicles: In the case of allocated vehicles, this covers business journeys to customers and to switching centres (regional exchanges, base stations, street cabinets, etc.), while in the case of pool vehicles, it covers journeys to meetings.
- Fuel for heating of buildings that are owned, under "operational control" or rented. The reduction measures only apply to the company's own operations and to operations under "operational control", not to rental properties.
- fuel for emergency power systems
- refilling of refrigerants

Under Scope 2 (indirect emissions), Swisscom considers emissions from electricity consumption for the operation of the following systems and facilities:

- all types of switching equipment (access network, i.e. DSL, FTTH, FTTS and core network)
- base stations (mobile) and transmitter stations (radio and television)
- cooling systems, lighting and ventilation in buildings
- shops (lighting and ventilation)
- computerised office workplaces
- data centres, minus the electricity consumed for hosting and housing
- Swisscom TV (servers)

Swisscom takes emissions from district heating into account under Scope 2.

Swisscom takes the following categories into account under Scope 3:

- **Category 1:** Purchased goods
- **Category 2:** Capital goods
- **Category 3:** Provision of energy (electricity, vehicle and heating fuels)
- **Category 4:** Upstream transportation and distribution from places of origin to distribution centres in Switzerland
- **Category 5:** Waste generated in operations
- **Category 6:** Business travel (flights, rail travel and journeys to meetings in private cars)
- **Category 7:** Employee commuting
- **Category 8:** Leased assets (retail space including shops which are located outside Swisscom buildings – 75% of Swisscom Shops or 102 shops)
- **Category 9:** Downstream transportation and distribution from distribution centres in Switzerland to customers (according to estimates based on the previous year)
- **Category 11:** Use of sold products
- **Category 12:** Disposal of terminals
- **Category 15:** Investments and/or the subsidiary Fastweb in Italy

All other Scope 3 categories according to the GHG Protocol are not included in this report. These other Scope 3 categories, namely Categories 10 (processing of sold products), 13 (downstream leased assets) and 14 (franchises), are not relevant for Swisscom.

6.4. Biomass, removal and CO₂ sinks

As in previous years, Swisscom did not make use of any forms of CO₂ removal or CO₂ sinks within the operational scope of the company in 2020. It has renovated several additional sites and now heats some of them with wood pellets (biomass). The heating systems are the auto-

matic pellet firing type with an output of less than 50 kW (system category 11). The amount of biomass consumed is recorded again and the emissions are calculated. Swisscom uses numerous wooden telephone masts in mountain regions. Some of the masts have a long service life. Swisscom is checking whether these telephone masts meet the criteria for CO₂ sinks.

6.5. Greenhouse gas inventory according to ISO 14064

A greenhouse gas inventory according to ISO 14064 includes the emissions of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and, since 2013, nitrogen trifluoride (NF₃). This selection is consistent with the requirements of the Kyoto Protocol. Swisscom reports on its emissions in aggregated form of the CO₂ equivalents for CO₂, CH₄ and N₂O. Emissions from refrigerants are listed separately. The emission sources are as follows:

Combustion:

- **CO₂**: combustion of fossil fuels (heating and mobility) or from the processes to produce electricity (biogenic CO₂ from biomass combustion – i.e. from wood heating – continues to remain at a marginal level)
- **CH₄**: combustion of fossil fuels (heating and mobility)
- **N₂O**: combustion of fossil fuels (heating and mobility)

Cooling:

- **HFC**: losses of refrigerants from cooling systems
- **PFC**: losses of refrigerants

The following greenhouse gases are not included in the inventory:

- **SF₆**: These emissions are beyond the control of Swisscom. SF₆ is used as an insulation medium in electrical transformers and electrical switchboards. The installations are operated by the power utility companies.
- **Others**: The emissions from fire extinguishers are negligible or non-existent (halon).
- **NF₃**: Emissions from the production of LCD monitors (displays) are not currently included in the inventory due to a lack of clarity regarding their detection.

6.6. Upstream and downstream levels for Scope 3 analysis

The analysis of Scope 3 emissions in Categories 6 and 7 (travel and commuting) considers not only direct operations but also the upstream and downstream activities in connection with the manufacture of vehicles (trains and cars) and the construction of infrastructure (road and rail). The consideration of upstream and downstream levels is optional under the GHG Protocol stand-

ard. Upstream and downstream activities for the other categories are not recorded due to a lack of data.

6.7. Emission factors

Emission factors for Scope 1 emissions:

Since 2015, Swisscom has used the emission factors of the ecoinvent life cycle inventory database for Scope 1 emissions from the consumption of fossil fuels. For Scope 1 emissions from refrigerants, Swisscom uses the corresponding global warming potential with a horizon of 100 years (GWP100), and reports the emissions in tonnes of CO₂ eq. (5th Assessment Report IPCC 2013).

Other sources of emissions such as emissions from fire extinguishers are negligible, non-existent (halon) or outside Swisscom's control (SF₆).

Emission factors for Scope 2 emissions:

The emission factors set out in Table 3 are used by Swisscom for Scope 2 emissions from electricity from 2018 onwards, with the emissions reported in tonnes of CO₂ eq. These emission factors were calculated by myclimate based on a study of the Swiss electricity mix (environmental review: electricity mix Switzerland 2014 from 7 December 2016) and on the basis of the data provided for the individual scopes by ecoinvent version 3.1 and version 3.6 from 2018 onwards. From 2019, the emission factors for electricity will be based on the individual scopes published in a supplement to the above-mentioned study.

Swisscom sources its district heating from different heat networks. From 2018 onwards, the emission factor for district heating has been calculated by scope (Scope 2 and 3).

Emission factors for Scope 3 emissions:

For Scope 3 emissions in the year under review, Swisscom uses the emission factors from the ecoinvent life cycle inventory database version 2.2 for mobility, as is shown in the mobitool, or, wherever possible, version 3.6.

Specific emission factors are incorporated as follows:

- **Emissions in the supply chain (Categories 1, 2, 4 and 8)**: The relevant emission factors are calculated for the individual scopes based on data from ecoinvent version 3.6 by treeze Ltd. (methodology for determining greenhouse gas emissions in the ICT sector supply chain).
- **Emissions from the provision of electricity (Category 3, Table 3), the disposal of waste (Category 5), and the use and disposal of terminals (Categories 11 and 12)**: The relevant emission factors are calculated for the individual scopes by myclimate based on data from ecoinvent version 3.6.
- **Emissions from the provision of district heating (Category 3, Table 3)**: In 2020, the respective emission fac-

tors were calculated based on ecoinvent version 3.6 data.

- **Business travel (Category 6):** The relevant emission factors and emissions are calculated by the partner companies (SBB or Kuoni Business Travel).
- **Mobility (Category 7):** The relevant emission factors correspond to those of mobitool, based on ecoinvent version 2.2.
- **Emissions from downstream transportation and distribution to customers (Category 9):** The relevant

emission factors are determined by the logistics partner.

Emission factors for savings (Scope 4):

Emission factors for determining customer savings thanks to Green ICT:

- The relevant emission factors are calculated for the individual scopes by myclimate based on data from ecoinvent version 3.6 and various external studies, as well as Swisscom's own data.

6.8. References

6.8.1 Other reports

- **Swisscom Sustainability Report 2020:** <http://report.swisscom.ch/en>
- Swisscom Climate Reports 2018 and 2019
- **Carbon Disclosure Project (CDP):** <https://www.cdp.net>

6.8.2 Regulations and guidelines

- **Swiss Federal Act** of 25 September 2020 on the Reduction of Greenhouse Gas Emissions (CO₂ Act); SR 641.71; www.admin.ch/ch/d/sr/c641_71.html
- **Ordinance** of 30 November 2012 on the Reduction of CO₂ Emissions
- Swiss Federal Energy Act of 30 September 2016 (EnG); SR 730.0; www.admin.ch/ch/d/sr/c730_0.html
- **Guideline:** Target agreements with the federal government to boost energy efficiency. Berne, 14 March 2014

6.8.3 References for emission factors

- **FOEN:** “CO₂ emission factors for greenhouse gas inventory in Switzerland” fact sheet (15 April 2019) [https://www.bafu.admin.ch/dam/bafu/de/dokumente/klima/fachinfo-daten/CO₂_Emissionsfaktoren_THG_Inventar.pdf.download.pdf/CO₂_Emissionsfaktoren.pdf](https://www.bafu.admin.ch/dam/bafu/de/dokumente/klima/fachinfo-daten/CO2_Emissionsfaktoren_THG_Inventar.pdf.download.pdf/CO2_Emissionsfaktoren.pdf)
- **ecoinvent life cycle inventory database version 2.2 (2010) and version 3.6:** www.ecoinvent.org
- **mobitool:** www.mobitool.ch. the mobitool database takes its data from the ecoinvent life cycle inventory database (version 2.2).
- **Emission factor for district heating:** district heat calculator from treeze Ltd., http://treeze.ch/fileadmin/user_upload/calculators/KBOB_Rechner/Fernwaerme.html
- **Greenhouse gas emissions of the electricity and district heating mixes in Switzerland according to the GHG Protocol,** Martina Alig, Laura Tschümperlin, Rolf Frischknecht, Uster, 14 July 2017
- **District heating:** Scope 2 and 3 emission factors, myclimate, drawn from the ecoinvent life cycle inventory database (version 3.6)
- **SFOE:** Swiss wood energy statistics, 2018 survey
- **Swisscom’s supply chain greenhouse gas emissions (Scope 3):** Methodology report (11 January 2020). Luana Krebs, Rolf Frischknecht, treeze Ltd. Swisscom internal document, unpublished emission factors for directed actions (savings or Scope 4)
- **“Green ICT effect”:** Swisscom internal document, not published

6.8.4 Other references

- **EnAW (Energy Agency of the Swiss Private Sector):** <https://enaw.ch>
- **VBE (“Exemplary in energy” initiative):** www.energie-vorbild.admin.ch/vbe/en/home.html
- **SBTI (Science Based Targets Initiative):** <https://sciencebasedtargets.org/>
- **Energy Strategy 2050 Swiss federal government:** www.bfe.admin.ch/energiestrategie2050/index.html?lang=en
- **Climate change in Switzerland:** www.bafu.admin.ch/bafu/en/home/topics/climate/info-specialists/climate-change.html
- **MeteoSwiss (climate indicators):** www.meteoswiss.admin.ch/home/climate/swiss-climate-in-detail/climate-indicators.html
- **Climate change scenarios in 2018:** www.meteoswiss.admin.ch/home/climate/climate-change-in-switzerland/climate-change-scenarios.html
- **TCFD:** Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board (FSB)
- **Green Bond Principles of the International Capital Market Association (ICMA):** www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/

7. Recommendations of the TCFD

7.1. Climate change carries risks and affords opportunities

Swisscom takes into account the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board (FSB) in the areas of governance and strategy. It publishes qualitative information on its approach to risk adjustment and mitigation and on its corresponding conclusions. Swisscom plans to fully implement the TCFD recommendations in the 2021 financial year, and will continue to develop the quantitative aspects relating to risks and the relevant metrics.

7.1.1 Governance

Environmental and climate protection is part of Swisscom's corporate responsibility. The governance of this responsibility is described in the Sustainability Report on page 21. It is broad-based and therefore also includes aspects relating to climate change. The coordination and management of the corresponding areas of activity are carried out by the Corporate Responsibility team (CR team) and are subject to a clear Group directive (Communications and Corporate Responsibility Directive). Sustainable business management is part of Swisscom's corporate policy. Its objectives and principles are approved by the Board of Directors. Accordingly, the Board of Directors acknowledges the long-term sustainability strategy. This strategy contains the strategic priorities and long-term sustainability goals, their scope and the corresponding governance. At the end of every year, it also acknowledges the goals for the following year. Every six months, it is informed in half-yearly reports, and also verbally in December, on the implementation status of the sustainability strategy and the extent to which the goals have been achieved.

The Group Executive Board convenes twice a year to discuss the further development and implementation of the sustainability strategy. Every November, it reviews the past year and approves the goals and measures for the following year. It has approved the goals for the relevant contributions per division as part of the 2025 Sustainability Strategy. These contributions are devised as a collaboration between the divisions and Group Communications & Responsibility for the year in question, then approved by the relevant division managers and finally adopted as an overarching roadmap for the year in question. Members of the Group Executive Board as well as the Head of Group Communications & Responsibility are sponsors for the different strands of the sustainability strategy and contribute accordingly.

7.1.2 Strategy

Swisscom is presented with opportunities to generate revenue from climate change in the set-up and further

development of a "green" – in other words, sustainable – portfolio of products and services. The impact of the portfolio on the climate and specifically the reduction in CO₂ emissions on the customer side thanks to the use of products from the portfolio are explained in detail in section 5 of this report. Further detailed information on the sustainable portfolio can be found under "Doing more for the environment" in the Sustainability Report. The revenue from this portfolio is not discussed separately; information of a financial nature can be found in the Swisscom Annual Report.

Opportunities and risks arise from the following three factors:

- **Adjustments to the legal framework:** Stricter requirements and standards for product efficiency and CO₂ emissions as well as new or more stringent energy taxation and legislation make it necessary to continuously improve operational processes (such as monitoring of energy consumption) or develop new products (such as more efficient network and terminal devices). Swisscom supports its customers in this process by working with its suppliers to develop more energy-efficient devices or devices for which a standby profile can be configured on request. See section 4 of this report for more information. However, adjustments to the legal framework may also pose a risk to Swisscom, in particular the impact of the increase in the CO₂ levy, which currently amounts to CHF 96 per tonne of CO₂, i.e. additional costs of CHF 0.25 per litre of heating oil or CHF 0.25 per kg of gas, but which could rise to CHF 120 per tonne of CO₂ if Switzerland fails to meet its targets set out in the Paris Agreement.
- **Acutely or chronically changed physical parameters:** Swisscom's operations are particularly affected by increasingly intensive precipitation, changes in average temperatures and temperature extremes. The consequences of this can be seen in more and more extreme and frequent events, right up to the warming of the permafrost. The Swiss Federal Office of Meteorology and Climatology (MeteoSwiss) measures the corresponding physical parameters and publishes them on its website. Berne, for example, will see a decrease in heating degree days (HDDs) by 143 HDDs per decade or an increase in the number of days with heavy precipitation (i.e. days with precipitation above 20 cm). The resulting developments could impact the operability of Swisscom's telecoms infrastructure, particularly in view of the potential risk to base stations, transmitter stations and local exchanges.
- **Other economic or reputation-related factors:** Stakeholder groups are adapting their behaviour and expectations to the new climate situation. In this

context, the proactive positioning of Swisscom can create trust and enhance its reputation.

In the year under review, Swisscom endeavoured to better characterise the physical risk caused by rising average and extreme temperatures. This risk may raise operating costs due to increased cooling requirements or even lead to an interruption in operations if the temperature rises above the specified temperature range of the electronic devices and systems used.

Methodical approach: Swisscom uses the Swiss climate scenarios (climate scenarios CH2018) of the Federal Office for the Environment (FOEN) and the National Centre for Climate Services (NCCS) for 2035 and 2060. It takes into account the two CO₂ emission scenarios RCP 2.6 (consistent climate protection measures limit warming to 2°C) and RCP 8.5 (no climate protection measures are taken). In doing so, it uses its GIS mapping service and has mapped its facilities taking into account the temperature development resulting from the CO₂ emission scenarios. This allows Swisscom to determine the number and location of sites that could suffer from excessively high temperatures in the future.

In the year under review, Swisscom characterised with greater precision the transition risks that exist in connection with Swiss and European legislation and the supply of electrical energy. These risks could result in increased compliance costs or impair supply. Due to the importance of electricity for its activities, Swisscom must take greater account of the climate-related risks in the electricity sector, particularly as it plans to source 100% of its energy consumption from electrical energy.

Methodical approach: Collection and analysis of information from open sources (desk research). Swisscom has reliable information on European power generation scenarios (covering Switzerland) and their suitability to meet demand. The Mid-term Adequacy Forecast (MAF) 2019 deals with the climate-related physical risks for the years 2021, 2023 and 2025 under a low-carbon scenario. For Switzerland, the MAF 2019 shows that the probability of an adequacy problem is extremely low. The adequacy study carried out by the Swiss Federal Office of Energy in 2019 reached a similar conclusion. The ECom study on the security of electricity supply in Switzerland, which was published in July 2020, has made a more precise forecast. It concludes that system operation will become more complex in the next three to five years due to the emergence of renewable energies. The probability of an n-1 breach (balancing energy) has increased in recent years during the summer months due to the general rise in temperature. An increased probability of n-1 breaches due to the temperature rise comes under the physical risks as classified by the TCFD.

The (n-1) criterion (i.e. N minus one criterion) or (n-1) security describes the principle that, in the event of the

failure of one component, redundancies prevent the failure of the entire system. It is a principle of Swiss network planning and it ensures a high level of network security as follows. Thanks to the (n-1) criterion, the failure of a component such as a circuit does not lead to an interruption of supply or an extension of the fault due to alternative possibilities. The (n-1) criterion must be guaranteed at maximum load. If the network is not fully utilised, higher levels such as (n-2) can be achieved. In some networks – such as the critical infrastructure networks – an (n-2) connection is even mandatory. Source: www.next-kraftwerke.de/wissen/n-1-kriterium

7.1.3 Risk management

Changes in the environment are drivers of risk. Swisscom identifies, assesses, manages and monitors its economic, social and ecological risks in an ongoing, systematic process. Using a holistic approach, it identifies environmental risks, climate change or complex supply chains and classifies them as risk factors. Its Group-wide enterprise risk management (ERM) system takes both internal and external events into account.

Swisscom complies with the established standards COSO II and ISO 31000. Swisscom's risk management therefore fulfils the various requirements of its own corporate governance as well as the requirements of Swiss law.

Risks, if they were to occur, could have an impact on operations and business. Swisscom has a business continuity management system and a resilience management system to prevent the occurrence of risks and their corresponding impact. Climate risks can be mitigated partly by reducing CO₂ emissions, not only in the supply chain thanks to cooperation with suppliers and directly within the company, but also indirectly by customers through the use of a sustainable portfolio of products and services.

7.1.4 Metrics and targets

In order to continuously improve environmental and climate protection, Swisscom has defined Key Performance Indicators (KPIs). The corresponding measures are aimed at increasing Swisscom's market opportunities (portfolio activities, sustainable portfolio) and lowering operating costs, primarily by boosting energy efficiency in operations and by consistently dispensing with energy from fossil sources. Swisscom measures its performance in absolute terms (consumption and emissions) and in relative terms (CO₂ intensity and energy efficiency).

The latest data on the indicators used by Swisscom and an inventory of greenhouse gases under Scopes 1, 2 and 3 are published in this climate report together with the reduction targets and the achievement of the targets. Section 5 summarises the services provided by Swisscom.

7.2 Conclusions

Swisscom is well positioned. It has the necessary methods, management systems and resources as well as appropriate governance. Full implementation of the rec-

ommendations of the TCFD is planned for the 2021 financial year.

The first risk analysis does not indicate any increased risk for Swisscom as a result of climate change in the near future (up to 2025).

8. Contact and further questions

Swisscom Group
Communications & Responsibility
Corporate Responsibility
3050 Berne

Contact: Saskia Günther/Pascal Salina

Team mailbox: corporate.responsibility@swisscom.com

9. Verification



Greenhouse Gas Verification Statement Number
CCP.ISO1406401(1500615)2021/01/28

The inventory of Greenhouse Gas emissions in the period
01/01/2020 – 31/12/2020 for
Swisscom AG

Alte Tiefenastrasse 6, CH-3050 Bern

has been verified in accordance with ISO 14064-3:2006 as
meeting the requirements of

ISO 14064-1 and
WRI/WBCSD GHG Protocol – A
Corporate Accounting and Reporting
Standard

To represent a total amount of:

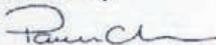
68'422 t CO₂ equivalent
(Scope 1+2; gross location-based scope 2 emissions)

14'420 t CO₂ equivalent
(Scope 1+2; gross market-based scope 2 emissions)

300'779 t CO₂ equivalent
(Scope 3 emissions)

For the following activities
Network and transmission infrastructure for telecommunication operation,
data centre and administration of Swisscom AG in Switzerland

Lead Assessor: Daniel Aegerter
Technical Reviewer: Peter Simmonds

Authorised by:

Pamela Chadwick
Business Manager
SGS United Kingdom Ltd

Verification Statement Date 27th January 2021

This Statement is not valid without the full verification scope, objectives, criteria and conclusion available
on pages 2 to 4 of this Statement.



Schedule Accompanying Greenhouse Gas Verification Statement Number CCP.ISO1406401(1500615)2021/01/28

Brief Description of Verification Process

SGS has been contracted by Swisscom AG (hereinafter referred to as "Swisscom") for the verification of direct and indirect carbon dioxide (CO₂) equivalent emissions as provided by Swisscom, Alte Tiefenastrasse 6, in their GHG Assertion in the form of a Greenhouse Gas Emissions Report covering CO₂ equivalent emissions.

Roles and responsibilities

The management of Swisscom is responsible for the organization's GHG information system, the development and maintenance of records and reporting procedures in accordance with that system, including the calculation and determination of GHG emissions information and the reported GHG emissions.

It is SGS' responsibility to express an independent GHG verification opinion on the emissions as provided in the Swisscom GHG Assertion for the period 01/01/2020 – 31/12/2020.

SGS conducted a third-party verification following the requirements of ISO 14064-3:2006 of the provided CO₂ equivalent assertion in the period November 2020 to January 2021.

The assessment included a desk review and remote based audit of personnel based at the headquarters in Worblaufen (Switzerland). The verification was based on the verification scope, objectives and criteria as agreed between Swisscom and SGS on 17/08/2020.

Level of Assurance

The level of assurance agreed is that of reasonable assurance for Scope 1 and 2 emissions, and that of limited assurance for Scope 3 emissions.

Scope

Swisscom has commissioned an independent verification by SGS of reported CO₂ equivalent emissions arising from their activities, to establish conformance with the requirements of ISO 14064-1:2006 and "GHG Protocol Company Accounting and Reporting Standard" within the scope of the verification as outlined below. Data and information supporting the CO₂ equivalent assertion were historical in nature and proven by evidence.

This engagement covers verification of emissions from anthropogenic sources of greenhouse gases included within the organization's boundary and meets the requirements of ISO 14064-3:2006.

- The organizational boundary was established following the operational control approach.
- Title or description of activities: Network and transmission infrastructure for telecommunication operation, data centre and administration
- Location/boundary of the activities: Switzerland
- Physical infrastructure, activities, technologies and processes of the organization: Network and transmission infrastructure for telecommunication operation, data centre and administration.
- GHG sources, sinks and/or reservoirs included:
 - Scope 1 - stationary combustion, mobile combustion, fugitive emissions;
 - Scope 2 – purchased electricity and district heat;
 - Scope 3 – purchased goods and services, capital goods, energy upstream emissions, upstream transportation and distribution, waste generated, business travel, employee commuting, downstream transportation and

distribution, use of sold products, end of life treatment of sold products, investments.

- Types of GHGs included: CO₂, N₂O, CH₄ and HFCs
- Directed actions: efficiency improvements in operations, fuel switching, enabling effects due to ICT services.
- Contractual instruments: use of green electricity from certified renewable supplies
- GHG information for the following period was verified: 01/01/2020 – 31/12/2020
- Intended user of the verification statement: Stakeholders such as national and international NGO's, customers, general public, regulators and rating agencies.

Objective

The purposes of this verification exercise are, by review of objective evidence, to independently review:

- Whether the CO₂ equivalent emissions are as declared by the organization's CO₂ equivalent assertion
- That the data reported are accurate, complete, consistent, transparent and free of material error or omission.

Criteria

Criteria against which the verification assessment is undertaken are the requirements of ISO 14064-1:2006 and WRI/WBCSD GHG Protocol – A Corporate Accounting and Reporting Standard

Materiality

The materiality required of the verification was considered by SGS to be below 5% for Scope 1 and Scope 2 emissions, based on the needs of the intended user of the GHG Assertion

Conclusion

Swisscom provided the GHG assertion based on the requirements of ISO 14064-1:2006. The GHG information for the period 01/01/2020 – 31/12/2020 disclosing Scope 1 and 2 emissions of 68'422 metric tonnes of CO₂ equivalent (including gross location-based scope 2 emissions) are verified by SGS to a reasonable level of assurance, consistent with the agreed verification scope, objectives and criteria. The amount of 68'422 tonnes CO₂ equivalent represents mandatory reportable emissions according to boundaries as defined by ISO 14064-1. A further 300'779 tonnes CO₂ equivalent from Scope 3 sources are verified by SGS to a limited level of assurance, consistent with the agreed verification scope, objectives and criteria.

Included in the Swisscom GHG assertion for the period 01/01/2020 to 31/12/2020, and in addition to scope 1 and 2 emissions of 68'422 metric tonnes CO₂ equivalent (including scope 2 location-based emissions), is a disclosure of emissions of 14'420 tonnes CO₂ equivalent including scope 2 market-based emissions. This figure includes renewable electricity and district heat used by Swisscom AG and amounting to 100% of electricity and district heat consumption originating from renewable sources without Scope 2 emissions. These emissions have been verified by SGS based on WRI GHG Protocol Scope 2 Guidance.

Included in the GHG assertion for the period 01/01/2020 to 31/12/2020 is the claim of carbon neutrality of the operations by purchase of Emission Reduction Certificates (ERC). SGS confirms that the purchase of ERC by Swisscom cover direct emissions under Scope 1 and indirect emissions under Scope 3 Category 1 (routers for internet access and set-top boxes only), Category 3 (provision of energy), Category 5, (waste) and Category 6 (business travel).

SGS' approach is risk-based, drawing on an understanding of the risks associated with modeling GHG emission information and the controls in place to mitigate these

risks. Our examination included assessment, on a sample basis, of evidence relevant to the voluntary reporting of emission information.

SGS concludes with reasonable assurance for Scope 1 and Scope 2 emissions that the presented CO₂ equivalent assertion is materially correct and is a fair representation of the CO₂ equivalent data and information and is prepared following the requirements of ISO 14064-1.

We planned and performed our work to obtain the information, explanations and evidence that we considered necessary to provide a reasonable level of assurance that the Scope 1 and Scope 2 CO₂ equivalent emissions for the period 01/01/2020 – 31/12/2020 are fairly stated.

The scope 3 emissions are verified to a limited level of assurance. SGS concludes with limited assurance that there is no evidence to suggest that the presented CO₂ equivalent assertion is not materially correct and is not a fair representation of the CO₂ equivalent data and information.

This statement shall be interpreted with the CO₂ equivalent assertion of Swisscom as a whole.

Note This Statement is issued, on behalf of Client, by SGS United Kingdom Ltd, Rossmore Business Park, Inward Way, Ellesmere Port, Cheshire, CH65 3EN ("SGS") under its General Conditions for GHG Validation and Verification Services. The findings recorded hereon are based upon an audit performed by SGS. A full copy of this statement and the supporting GHG Assertion may be consulted at **Swisscom website (www.swisscom.ch)**. This Statement does not relieve Client from compliance with any bylaws, federal, national or regional acts and regulations or with any guidelines issued pursuant to such regulations. Stipulations to the contrary are not binding on SGS and SGS shall have no responsibility vis-à-vis parties other than its Client.