



Greenhouse gas (GHG) accounting report

Glitterind

2019

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Details

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Acronyms and abbreviations

AC	air-conditioning
BSI	British Standards Institution
BEIS	United Kingdom Department for Business, Energy and Industrial Strategy
CH ₄	methane
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
GHG	greenhouse gas
GRI	Global Reporting Initiative
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
MWh	megawatt-hour
N ₂ O	nitrous oxide
NOK	Norwegian Krone
pkm	passenger-kilometre
t	tonne
T&D	transmission and distribution
WRI	World Resources Institute
WTT	well-to-tank
UNFCCC	United Nations Framework Convention on Climate Change

Executive summary

The objective of this report is to present the results of the greenhouse gas (GHG) accounting of Advokatfirmaet Glittertind's emissions during 2019 and to give recommendations on how they can reduce their carbon footprint.

In 2019, the reported emissions of GHGs from Glittertind's operations were 191.0 tonnes of CO₂-equivalents (tCO₂e). The largest emissions came from flights (33.3% and 63.7 tCO₂e), production of electricity for ventilation (28.9% and 55.2 tCO₂e) and food production (16.5% and 31.6 tCO₂e).

The main recommendations to reduce the emissions are to reduce flying and to switch to renewable electricity for the ventilation system.

Table 1: Summary of Key Performance Indicators (KPIs)

Number of employees	38	tCO₂e/employee	5.1
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(Source: South Pole, based on Glittertind, 2020)

Table 2: GHG emissions by emission source

Scope	Emissions (tCO ₂ e)	% of total
Scope 1: direct GHG emissions	0	0%
Scope 2: indirect GHG emissions from purchased electricity, heating and cooling	59	31%
Gross emissions without contractual instruments	60	
Avoided emissions from contractual instruments ¹	1	
Scope 3: other indirect GHG emissions²	132	69%
Total GHG emissions	191	100%

(Source: South Pole, based on Glittertind, 2020)

The emissions split up in different activities is shown in Figure 1 below.

¹ Contractual instruments refer to renewable energy purchase instruments and contracts such as renewable energy certificates, renewable power contracts, power purchase agreements and GoldPower offsets.

² Of these emissions, 0.25 tCO₂e from the carbon neutral paper have already been offset.

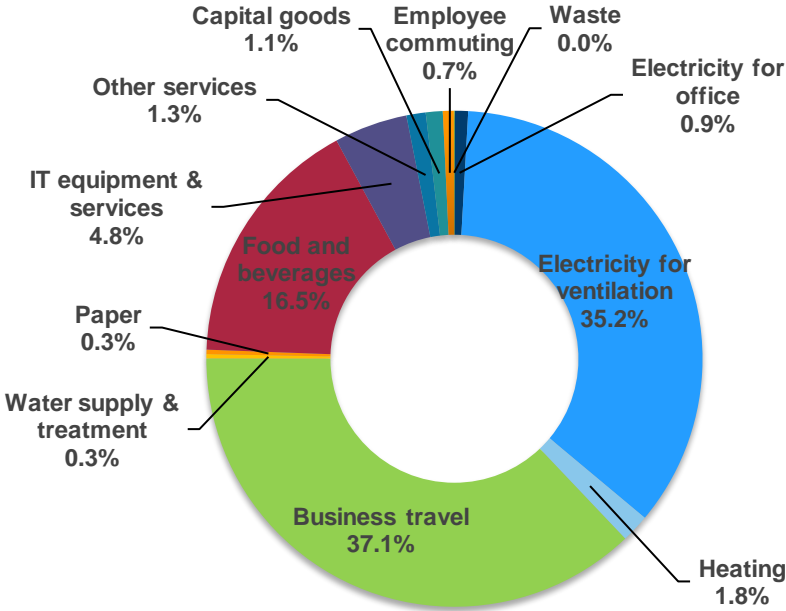


Figure 1: Sources of GHG emissions in 2019

(Source: South Pole, 2020)

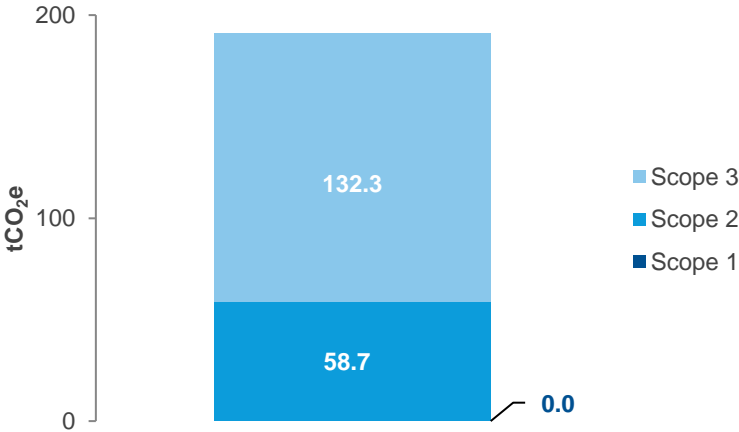


Figure 2: GHG emissions (tCO_{2e}) by scope in 2019

(Source: South Pole, 2020)

1 Introduction

Advokatfirmaet Glittertind is a leading Norwegian law firm focusing on general commercial litigation pertaining to company law and real estate. It has approximately 40 employees and mainly has activities in Norway, as well as clients further afield, mainly in Europe. Due to the increased importance of sustainability issues, Advokatfirmaet Glittertind wishes to assess and improve its carbon footprint and contribute to sustainable development. The company is also interested in becoming a climate-neutral company. This report provides a summary of the GHG emissions from the operations of Glittertind from 1 January 2019 to 31 December 2019.

Company information and the reporting period are presented in Table 3.

Table 3: Company information

Company information	
Website	www.glittertind.no
Business area	Law firm
Reporting period	1.1.2019 – 31.1.2019

(Source: South Pole, based on Glittertind, 2020)

1.1 Methodology

The GHG accounting and reporting procedure is based on the ‘The Greenhouse Gas Protocol: GHG Protocol: A Corporate Accounting and Reporting Standard – Revised Edition’ (GHG Protocol) and the complementary ‘Corporate Value Chain (Scope 3) Accounting and Reporting Standard’ – the most widely used international accounting tools for government and business leaders to understand, quantify, and manage GHG emissions. The standards were developed in a partnership between the World Resources Institute and the World Business Council for Sustainable Development.

The accounting was based on the principles of the ‘GHG Protocol’:

- **Relevance:** an appropriate inventory boundary that reflects the GHG emissions of the company and serves the decision-making needs of users;
- **Completeness:** accounting includes all emission sources within the chosen inventory boundary. Any specific exclusion is disclosed and specified;
- **Consistency:** meaningful comparison of information over time and transparently documented changes to the data;
- **Transparency:** data inventory sufficiency and clarity, where relevant issues are addressed in a coherent manner; and
- **Accuracy:** minimised uncertainty and avoided systematic over- or under-quantification of GHG emissions.

1.2 Operational boundaries

Under the ‘GHG Protocol’, emissions are divided into direct and indirect emissions. Direct emissions are those originating from sources owned or controlled by the reporting entity. Indirect emissions are generated as a consequence of the reporting entity’s activities, yet they occur at sources owned or controlled by another entity.

The direct and indirect emissions are divided into three scopes, as found below.

Scope 1

Scope 1 includes all carbon emissions that can be directly managed by the organisation (direct GHG emissions). This includes the emissions from the combustion of fossil fuels in mobile and stationary sources (e.g. owned or controlled boilers, power generators and vehicles) and carbon emissions generated by chemical and physical processes, as well as fugitive emissions from the use of cooling and air conditioning (AC) equipment. Table 4 (below) gives an overview of the emission sources considered in Scope 1, based on the information provided by Glittertind.

Table 4: Overview of Scope 1 emission sources for 2019

Category	Emission sources	Boundary
Stationary combustion	Generation of electricity and heat	Not applicable
Mobile combustion	Company-owned or -leased vehicles	Not applicable
Physical or chemical processing	Manufacture or processing of chemicals and materials	Not applicable
Fugitive emissions	Emissions from the use of cooling systems and AC equipment, leakage from CO ₂ tanks or methane tubes	Not applicable

Scope 2

Scope 2 includes indirect GHG emissions from the generation of purchased electricity, steam, heat or cooling purchased by the organisation from external energy providers. Table 5 below gives an overview of the emission sources considered in Scope 2.

Table 5: Overview of Scope 2 emission sources for 2019

Category	Emission sources	Boundary
Electricity	Purchased electricity	Included, both for the office and for ventilation (heating and cooling)
Steam	Purchased steam	Not applicable
District heating	Purchased district heating	Included
District cooling	Purchased district cooling	Not applicable

Scope 3

Scope 3 includes other indirect emissions, such as emissions from the extraction and production of purchased materials and services, vehicles not owned or controlled by the reporting entity, outsourced activities, waste disposal, etc.

According to the 'GHG Protocol', companies shall separately account for and report on emissions from Scope 1 and 2. Scope 3 is an optional reporting category but its reporting is often required for Climate Neutrality Labels.

Table 6 below gives an overview of the emission sources considered in Scope 3.

Table 6: Overview of Scope 3 emission sources for 2019

Category	Emission sources	Boundary
Purchased goods and services	Purchased goods (raw materials) and services	Included (water supply and treatment, paper production, food and beverage, IT equipment, cloud services, crafts services)
Capital goods	Production of capital goods (e.g., machinery, etc.)	Included (electric bicycles, shuffleboard)
Fuel- and energy-related activities	Upstream life cycle emissions from fuel and electricity generation, incl. transmission and distribution losses	Included
Upstream transportation and distribution	Transportation and distribution of goods and services to the company	Included (carrier service)
Waste generated in operations	Waste management of operational waste (landfilling, recycling, etc.)	Included
Business travel	Travel and accommodation of employees/contractors	Included (flights, staff car reimbursement, leased vehicle, taxi, long-distance bus, train, accommodation)
Employee commuting	Employee travel between home and work	Included
Upstream leased assets	Operation of assets leased by the organisation (lessee) in the reporting year and not included in Scope 1 or 2	Not applicable
Downstream transportation and distribution	Transportation and distribution of products sold by the organisation	Not applicable
Processing of sold products	Processing of intermediate products sold by the organisation	Not applicable
Use of sold products	Use of sold goods that require energy to operate	Not applicable
End-of-life treatment of sold products	Waste disposal and treatment of sold products	Not applicable
Downstream leased assets	Operation of assets owned by the company (lessor) and leased to other entities, not included in Scope 1 or 2	Not applicable
Franchises	Operation of franchises not included in Scope 1 or 2	Not applicable
Investments	Operation of investments not included in Scope 1 or 2	Not included

1.3 Data inventory and assumptions

The data was provided by the client through a data collection sheet and was supplemented by additional information via e-mail. The reported data covered information about the number of employees, office size, consumption of electricity and district heating for Scope 2. For Scope 3, the data reported covered water consumption, flight routes, distance driven by staff car, spend on leased vehicles and taxi and public transportation and carrier services and number of hotel nights. Furthermore, it also covered paper consumption, number of IT products, electric bikes and users of cloud services, as well as spend on other consumables, furniture, and volume of waste generated.

Overall, the data inventory, emission factors, and assumptions are based on the 'GHG Protocol'. The choice of assumptions and emission factors followed a conservative approach. Unless otherwise specified, all emission values in this report are given in metric tonnes of carbon dioxide equivalent (tCO_{2e}).

Where activity data of the inventory was lacking, extrapolations and estimations were made. The employee commuting emissions were extrapolated based on the respondents to all employees. To calculate the emissions from food, an emissions factor based on Swedish food prices was used, which is why the result is slightly conservative. The non-meat groceries from Lunsj.no were assumed to be butter, cheese, eggs, yoghurt, margarine, milk, bread and vegetables, so an average emission factor based on those products was used. The emission factor for the products from IKEA and the shuffleboard was based on supply chain emissions data from the UK Department of Business, Energy and Industry Strategy (BEIS) for furniture and other manufactured goods. To estimate the emissions from the carrier service, the price for such a service within Oslo was based on online prices by Jetpak and Postnord since no carrier service prices for Bring could be found online.

1.4 Global Warming Potentials (GWP)

Global Warming Potential (GWP) is a measure of the climate impact of a GHG compared to carbon dioxide over a time horizon. GHG emissions have different GWP values depending on their efficiency in absorbing longwave radiation and the atmospheric lifetime of the gas. The GWP values used in GHG accounting include the six GHGs covered by the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol and combinations of these, presented in Table 7. These are the GWP used by BEIS and are based on the 'Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4)'. Although the 'AR5' is more recent, it has not been accepted internationally by all stakeholders.

Table 7: Applied GWP

GHG	GWP (100 years)
Carbon dioxide (CO ₂)	1
Methane (CH ₄)	25
Nitrous oxide (N ₂ O)	298

(Source: IPCC AR4, 2007)

2 Results

2.1 Results from the GHG accounting

The calculation of the emissions was performed in Excel, using emission factors from the sources listed in Annex I; this has undergone a technical review. The results are presented in this chapter in Table 8, as well as in Figure 3 to Figure 5.

“Total emissions” in this report refers to the emissions sources covered, as described in Section 1.2 Operational boundaries. Please note that, due to rounding of numbers, the figures may not add up exactly to the total provided.

Table 8: GHG emissions by scope and activity for 2019

Activity	Consumption	Unit	Emissions (tCO _{2e})	Percentage of total
Scope 1: direct GHG emissions			0.0	0.0%
Scope 2: indirect GHG emissions from purchased electricity, heating and cooling			58.7	30.7%
Electricity	259.3	MWh	55.2	28.9%
Office electricity (renewable)	153.2	MWh	0.0	0.0%
Electricity for ventilation (grid)	106.1	MWh	55.2	28.9%
Heating	71.6	MWh	3.51	1.8%
District heating	71.6	MWh	3.51	1.8%
Scope 3: other indirect GHG emissions			132.3	69.3%
Business travel			70.88	37.1%
Flights	276 158	pkm	63.69	33.3%
< 463 km	141 674	pkm	40.07	21.0%
463–3,700 km	134 484	pkm	23.62	12.4%
> 3,700 km	0	pkm	0.00	0.0%
Staff car reimbursement	12 873	pkm	2.36	1.2%
Leased vehicle	100	pkm	0.02	0.0%
Taxi	3 954	pkm	0.55	0.3%
Long-distance bus	8 294	pkm	0.49	0.3%
Train	35 782	pkm	0.21	0.1%
Accommodation	286	guest nights	3.54	1.9%
Purchased goods and services			44.05	23.1%
Water	507.5	m ³	0.53	0.3%
Supply	507.5	m ³	0.17	0.1%

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Activity	Consumption	Unit	Emissions (tCO ₂ e)	Percentage of total
Treatment	507.5	m ³	0.36	0.2%
Paper	0.99	t	0.54	0.3%
Carbon neutral paper	0.46	t	0.25	0.1%
FSC-labelled paper	0.53	t	0.29	0.2%
Food and beverages	917 982	NOK	31.58	16.5%
IT equipment	162	no. of devices	8.96	4.7%
Computer screens	76	no. of devices	5.40	2.8%
Laptops	40	no. of devices	2.40	1.3%
Other devices	46	no. of devices	1.16	0.6%
Cloud services	41+42	users	0.16	0.1%
Crafts services	64,459	NOK	2.27	1.2%
Capital goods	94,284	NOK	2.10	1.1%
Electric bicycles	48,000	NOK	0.38	0.2%
Furniture and shuffleboard	46,284	NOK	1.72	0.9%
Employee commuting	155,632	pkm	1.37	0.7%
Walking, running, bicycle	17,876	pkm	0.00	0.0%
Electric scooter	309	pkm	<0.01	<0.1%
Tram	9,284	pkm	0.06	<0.1%
Metro	28,601	pkm	0.31	0.2%
Regional train	87,100	pkm	0.52	0.3%
Bus	7,889	pkm	0.18	0.1%
Car, petrol	572	pkm	0.12	0.1%
Car, hybrid electric vehicle	1,715	pkm	0.11	0.1%
Car, battery electric vehicle	2,287	pkm	0.05	<0.1%
Upstream transportation and distribution			0.13	0.1%
Carrier service	30,458	NOK	0.13	0.1%

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Activity	Consumption	Unit	Emissions (tCO ₂ e)	Percentage of total
Waste generated in operations	3.67	t	0.06	<0.1%
General waste	0.04	t	0.00	<0.1%
Food waste	1.31	t	0.01	<0.1%
Plastic waste	0.14	t	0.00	<0.1%
Paper and cardboard	2.17	t	0.05	<0.1%
Batteries	0.00	t	0.00	<0.1%
Fuel and energy-related activities			13.73	7.2%
Well-to-tank (WTT)	331	MWh	6.78	3.5%
Electricity for office	153	MWh	1.57	0.8%
Electricity for heating	106	MWh	5.20	2.7%
Heating (district heating)	72	MWh	<0.01	<0.1%
Transmission and distribution (T&D)	259	MWh	6.95	3.6%
Electricity for office	153	MWh	0.12	0.1%
Electricity for heating	106	MWh	6.83	3.6%
Total GHG emissions			191.0	100%

(Source: South Pole, based on Glittertind, 2020)

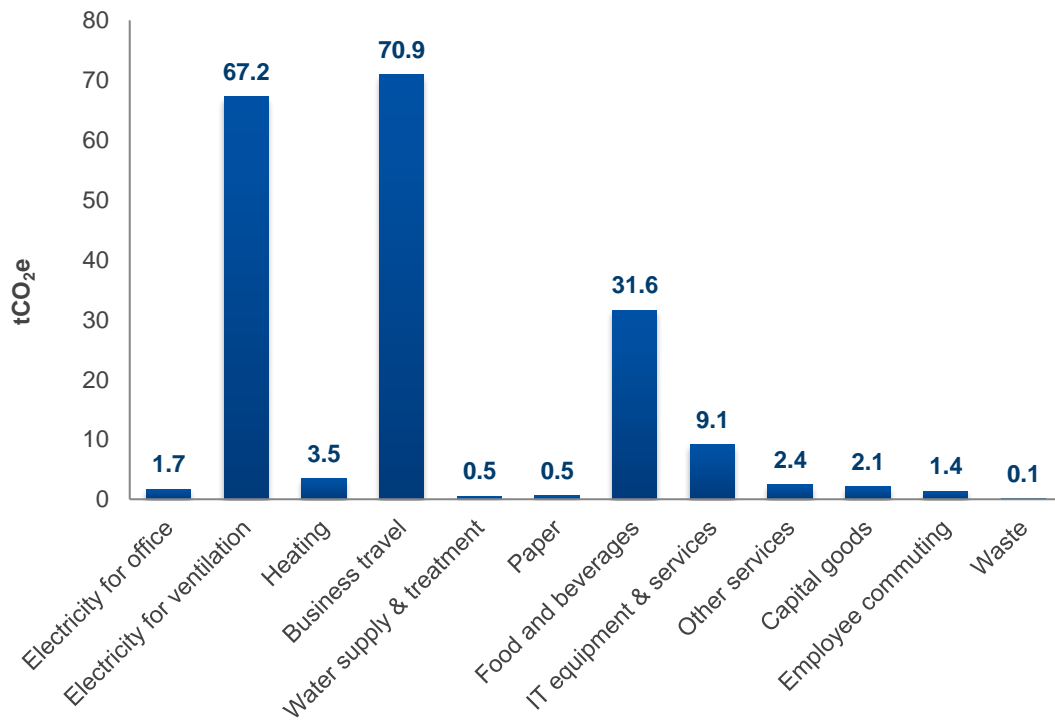


Figure 3: GHG emissions for 2019, by source

(Source: South Pole, 2020)

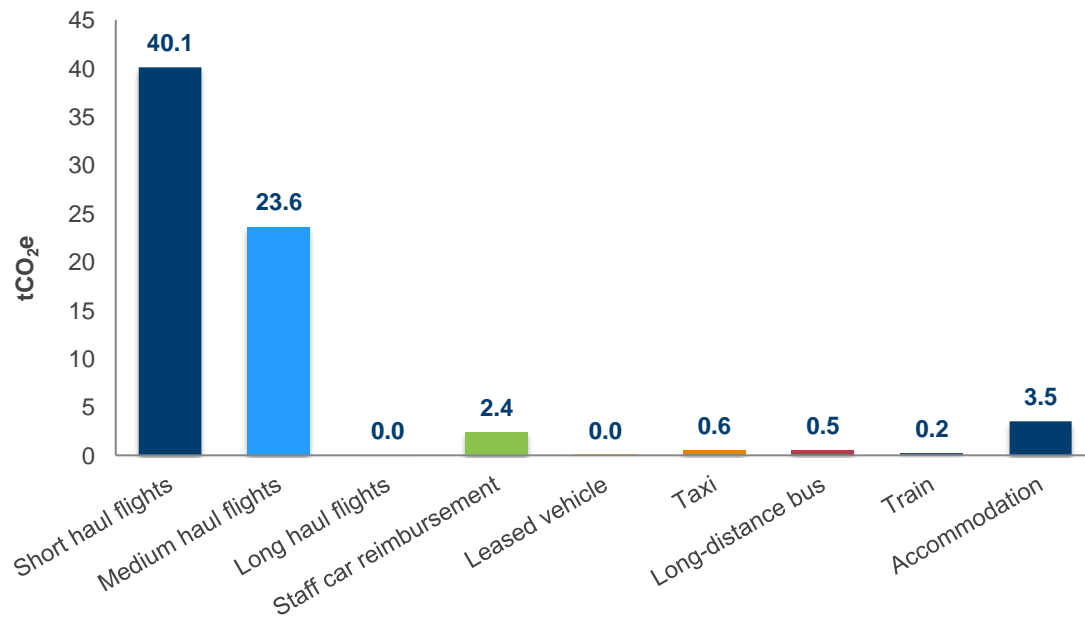


Figure 4: Sources of GHG emissions business travel

(Source: South Pole, 2020)

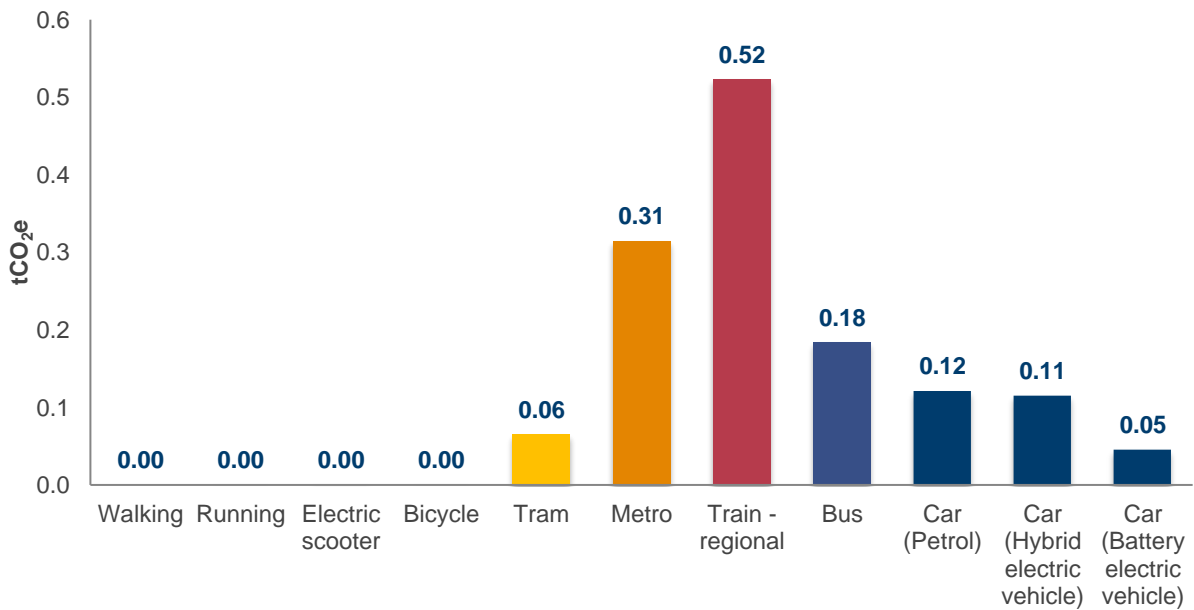


Figure 5: Sources of GHG emissions commuter travel

(Source: South Pole, 2020)

2.2 Comments and recommendations for reducing emissions

The largest source of emissions is air travel (63.7 tCO₂e). To reduce those emissions, employees can be encouraged to use video conferencing and to choose land-based transportation alternatives, such as trains and buses. If business flights are seen as necessary, Glittertind could consider only allowing one person to fly (instead of two), or journeys could be combined if visiting places close to one other during the same trip.

The second largest source of emissions is the production of electricity for ventilation (heating and cooling), which gives rise to 55.2 tCO₂e in Scope 2 and 12.0 tCO₂e in Scope 3. Since it is not specifically renewable electricity, an emission factor for the production mix – excluding renewable energy – is used according to the 'GHG Protocol' (according to the market-based method), which drives up the emissions. A recommendation is to communicate with the building manager to try to purchase renewable electricity for the ventilation system instead.

The third largest emission source is the production of food (31.6 tCO₂e). This is based on spend values, which makes the result less precise compared to receiving information on the consumed weight of the food. The calculation of emissions from food production can be improved next year if information on consumed weight of the different types of food are received. To reduce the emissions from food, more vegetarian and vegan options can be chosen, which cause lower emissions of GHGs during production. If meat is seen as necessary, poultry and fish dishes have lower emissions than pork and beef dishes.

3 South Pole’s Climate Neutrality Labels

South Pole offers Climate Neutrality Labels for companies, products and events. The South Pole Climate Neutrality Labels are closely aligned with international standards such as PAS 2060³ – the leading international standard for demonstrating carbon neutrality, developed in 2014 by the British Standards Institution (BSI). The underlying GHG accounting must follow recognised international standards such as the ‘GHG Protocol’⁴ or ISO 14064-1⁵.

The principles of relevance, completeness, consistency, transparency and accuracy of the ‘GHG Protocol’ provide the basis for achieving the Climate Neutrality Labels. In addition, and in reflection of South Pole’s commitment to long-lasting impact, the South Pole labels include the principles of ‘Conservativeness and Continuity’.

To achieve the Climate Neutrality Labels, South Pole has outlined seven steps, which are presented in Figure 6. A detailed description of the steps and the aforementioned principles is provided in the [Technical Guidance for South Pole Climate Neutrality and Renewable Electricity Labels](#) (available online).

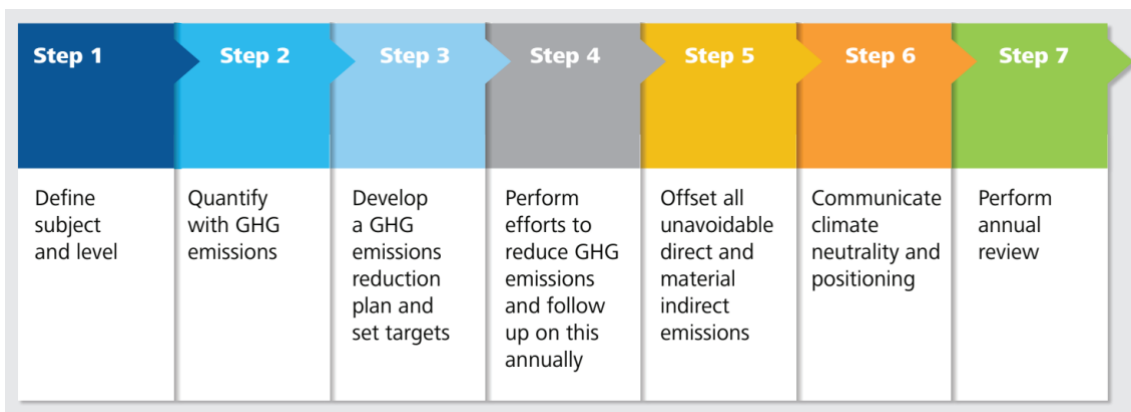


Figure 6: Seven steps to achieving South Pole’s Climate Neutrality label

(Source: South Pole, 2018)

3.1 Emissions reduction plan and targets

The GHG accounting fulfils all criteria for the label ‘Climate Neutral Company’. The label is provided if Glittertind:

- communicates its climate neutrality and their footprint, e.g. by sharing the GHG report on its website;
- develops a plan for how to reduce its GHG emissions (a reduction plan), which is shared with South Pole; and
- reviews its emissions annually.

³ PAS 2060 Standard for Carbon Neutrality (2014) British Standards Institution, Published by BSI Standards Limited.

⁴ Greenhouse Gas Protocol: a corporate reporting and accounting standard, developed by the World Business Council for Sustainable Development (WBCSD), Geneva, Switzerland and World Resources Institute (WRI), Washington D.C., 2004.

⁵ ISO 14064-1 International Standard for GHG Emissions Inventories and Verification (2006) International Organization for Standardization, Geneva, Switzerland.

Annex I

Emissions factors

Table 9: Emissions factors

Activity	Emission factor references ⁶
Electricity and district heating	Hafslund Varme AS, 2016; International Energy Agency, 2019; Norwegian Water Resources and Energy Directorate (<i>Noregs vassdrags- og energidirektorat</i>), 2018
Business travel	BEIS, 2019; Cornell Hotel Sustainability Benchmarking, 2018; IVL Svenska Miljöinstitutet, 2018; Swedish Transport Administration (<i>Trafikverket</i>), 2019; South Pole's internal database, 2020
Water supply and treatment	BEIS, 2019
Paper	South Poles internal database, 2020
Food	South Poles internal database, 2020
IT equipment and services	Dell, 2014; Hewlett Packard, 2017–2019; South Pole's internal database, 2020; different life cycle analyses
Craft and carrier services	BEIS, 2019; Swedish Transport Administration (<i>Trafikverket</i>), 2019
Capital goods (furniture and e-bikes)	BEIS, 2019; Ecoinvent, 2016 based on LCA by Spielmann M. et al, 2007
Commuter travel	IVL Svenska Miljöinstitutet, 2018; Swedish Transport Administration (<i>Trafikverket</i>), 2019
Waste	BEIS, 2019
T&D and WTT	Association of Issuing Bodies, 2018; International Energy Agency, 2017; South Pole's internal database, 2020; Statistisk sentralbyrå, 2018; Vattenfall, 2017

⁶ South Pole derives its emission factors from reliable and credible sources. South Pole is not responsible for inaccuracies in emission factors provided by third parties.

