

Greenhouse gas emissions report: South Pole Group

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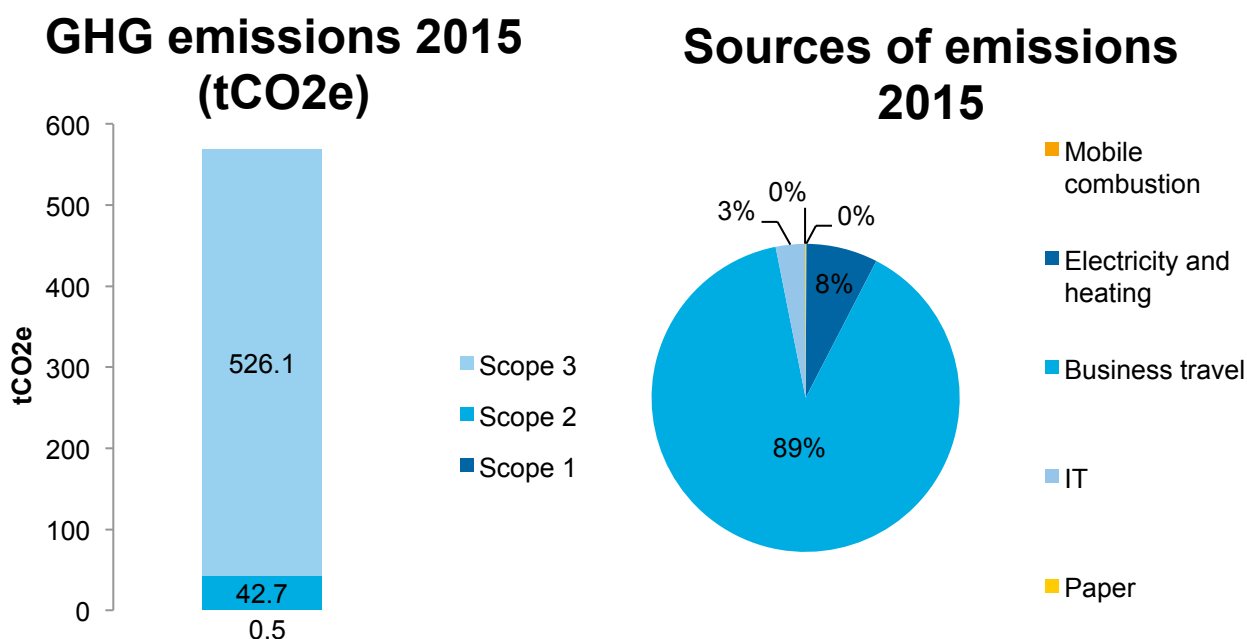
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Acronyms and Abbreviations

CH ₄	Methane
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
GHG	Greenhouse gas
GJ	Giga joule
HFCs	Hydrofluorocarbons
kg	Kilogram
MWh	Megawatt hour
N ₂ O	Nitrous oxide
t	tonne
UNFCCC	United Nations Framework Convention on Climate Change

1 Summary



1.1 About South Pole Group

South Pole Group (SPG) is a leading sustainability solution provider. Initially focused on the development of premium carbon emission reduction projects, the company now offers a wide spectrum of sustainability services, including climate policy and strategy advisory. Its expertise covers the areas of climate change, forests and land use, water, sustainable cities and buildings, as well as renewable energy and energy efficiency. The company is determined to help its clients grow their business with ground-breaking solutions, which positively impact the environment and the needs of society.

1.2 Company information

Table 1. Company information

Website:	www.thesouthpolegroup.com
Business area:	Consultancy services
Reporting period:	2015
Employees:	124

1.3 Climate Impact Inventory 2015

System boundaries

System boundaries were defined by the control approach, i.e. covering all entities where SPG has operational control. The 2015 accounting included the offices in Bangkok, Beijing, Medellin, Addis Ababa, Hong Kong, New Delhi, Jakarta, Mexico City, Zurich¹, London, Melbourne, Sydney and Stockholm.

The GHG accounting covers direct emissions from mobile and stationary combustion (Scope 1), indirect emissions from purchased electricity, heat and cooling (Scope 2) and other indirect emissions from business travel, IT-equipment and paper consumption (Scope 3).

Data inventory

The data inventory, emission factors and emission estimations are based on the Greenhouse Gas Protocol, an international standard for calculating and reporting climate impact from business activities (www.ghgprotocol.org).

SPG's regional offices have provided data regarding electricity, fuels, district heating, paper consumption, IT equipment and some business travels. Additional information regarding business travels was derived from the accounting department at the SPG head office in Zurich. Assumptions have been made regarding fuels and travel routes.

Unless other is specified all emissions in this report are given in tonnes.

¹ The Zurich office additionally includes employees based in San Fransisco, San Paulo and Rio de Janeiro.

1.4 Key figures according to the Global Reporting Initiative (G4)

Table 2. Key figures according to the Global Reporting Initiative, GRI (G4)

EN3	Direct energy consumption by primary source (GJ)	7.5
	Diesel ²	7.5
EN4	Indirect energy consumption by primary sources (GJ)	530.6
	Grid electricity	367.6
	Renewable electricity	41.6
	District Heating	89.8
	Natural gas	31.5
EN15	Direct greenhouse gas emissions (Scope 1) (tCO ₂ e)	0.5
EN16	Indirect greenhouse gas emissions (Scope 2) (tCO ₂ e)	42.7
EN17	Other indirect greenhouse gas emissions (Scope 3) (tCO ₂ e)	526.1
EN18	Greenhouse gas emissions per full-time employee (tCO ₂ e per employee)	4.6

1.5 South Pole Group: GHG emissions 2015 by scope in tCO₂e

Table 3. South Pole Group: GHG emissions 2015 by scope in tCO₂e

	tCO₂e	Percentage
Scope 1 Direct GHG emissions	0.5	0.1%
Scope 2 Indirect GHG emissions from purchased electricity, heat and cooling (market-based method)	42.7	7.5%
<i>Gross emissions (location-based method)</i>	<i>50.3</i>	
<i>Avoided emissions from contractual instruments³</i>	<i>-7.6</i>	
Scope 3 Other indirect GHG emissions	526.1	92.4%
Total GHG emissions	569.3	100.0%

² Fuel of company car in Bangkok

³ SPG has two offices that procure renewable energy: 1) Medellin office which procures hydropower (100% of its annual consumption) and 2) Melbourne which procures a renewable power mix from Australian Green Power. In addition, our Sydney office procures the electricity consisting of the conventional grid mix, but it is offsetting the entire annual consumption with help of Green Power (<http://www.greenpower.gov.au/>).

1.6 South Pole Group GHG emissions 2015 by scope in tCO₂e

Table 4. South Pole Group: GHG emissions 2015 by scope in tCO₂e

	tCO ₂ e	Percentage
Scope 1 Direct GHG emissions	0.5	0.1%
Diesel	0.5	0.1%
Scope 2 Indirect GHG emissions from purchased electricity, heat and cooling	48.8	7.5%
Electricity	42.7	7.0%
Renewable	0.0	0.0%
Grid	39.6	7.0%
Heat	3.1	0.5%
District heating ⁴	1.5	0.3%
Natural gas	1.6	0.3%
Scope 3 Other indirect GHG emissions	526.1	92.4%
Business travel	508.2	89.3%
Air	481.1	84.5%
<500 km	16.5	2.9%
500-1200 km	48.0	8.4%
>1200 km	382.2	67.1%
<i>Directly reported</i> ⁵	34.3	6.0%
Car	12.8	2.2%
Rail	0.9	0.2%
Bus	1.6	0.3%
Ferry	0.1	0.0%
Directly reported public transportation ⁶	11.8	2.1%
IT	17.5	3.1%
Mobile phone	1.1	0.2%
Laptop	14.4	2.5%
Desktop	1.4	0.2%
Server	0.4	0.1%
Tablet	0.1	0.0%
Printer	0.2	0.0%
Paper	0.4	0.1%
Unspecified	0.3	0.1%
Recycled	0.0	0.0%
Total GHG emissions	569.3	100.0%
Offsets by suppliers (see footnotes)	46.2	
Total net GHG emissions	523.1	

⁴ 0.1 tCO₂e has been offset by the district heating provider Fortum. Total net emissions from district heating are 1.4 tCO₂e.

⁵ Emissions via the Cornercard Climate Credit Card. All emissions of 34.3 tCO₂e are offset through the credit card provider.

⁶ Emissions via the Cornercard Climate Credit Card. All emissions of 11.8 tCO₂e are offset through the credit card provider.

1.7 South Pole Group GHG emissions 2015 per office in tCO₂e

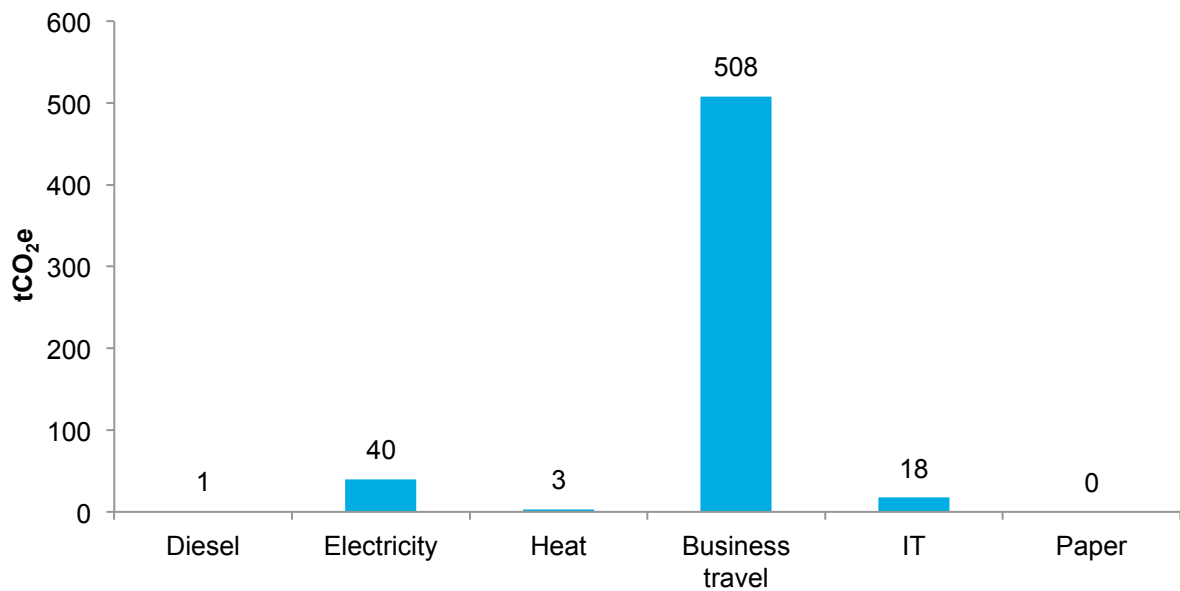
Table 5. South Pole Group: GHG emissions 2015 per office ⁷ tCO ₂ e												
	BKK	BEJ	JKT	MDE	MEX	DEL	ZRH ⁸	STK	HGK	LON	AUS	ADD
Scope 1	0.5	-	-	-	-	-	-	-	-	-	-	-
Diesel	0.5	-	-	-	-	-	-	-	-	-	-	-
Scope 2	11.5	3.4	6.0	0.0	0.6	3.8	5.1	0.9	0.8	10.3	0.0	0.2
Electricity - grid	11.5	3.4	6.0	-	0.6	3.8	3.8	0.7	0.8	8.7	-	0.2
Electricity – renewable	-	-	-	0.0	-	-	-	-	-	-	0.0	-
District heating	-	-	-	-	-	-	1.3	0.2	-	-	-	-
Natural gas	-	-	-	-	-	-	-	-	-	1.6	-	-
Scope 3	28.6	19.3	34.1	64.4	9.0	29.0	191.3	6.2	3.2	17.3	115.7	7.9
Air	26.0	17.9	27.1	62.4	8.0	26.9	170.3	5.1	2.9	16.1	110.7	7.8
Car	0.8	0.3	5.3	1.0	0.2	1.2	0.8	0.2	0.1	0.2	2.8	-
Rail	0.1	0.0	0.0	0.2	0.0	0.0	0.5	0.0	0.0	0.1	-	-
Bus	0.2	0.1	0.1	0.4	0.0	0.1	0.8	0.0	0.0	0.0	-	-
Public transportation	-	-	-	-	-	-	11.8	-	-	-	-	-
Paper	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0
IT	1.4	1.0	1.7	0.4	0.8	0.8	7.1	0.8	0.2	1.0	2.1	0.2
Total GHG emissions	40.6	22.7	40.1	64.4	9.6	32.8	196.4	7.1	3.9	27.7	115.7	8.2
No of employees	14	6	10	13	5	5	43	4	1	6	16	1
Emissions per employee (tCO₂e/employee)	2.9	3.8	4.0	5.0	1.9	6.6	4.6	1.8	3.9	4.6	7.2	8.2

⁷ The included offices are located in Bangkok (BKK), Beijing (BEJ), Jakarta (JKT), Medellin (MDE), Mexico City (MEX), New Delhi (DEL), Zurich (ZRH), Stockholm (STK), Hong Kong (HGK), London (LON), Sydney and Melbourne (AUS) and Addis Ababa (ADD).

⁸ The Zurich office includes emissions from San Fransisco, San Paulo and Rio de Janeiro.

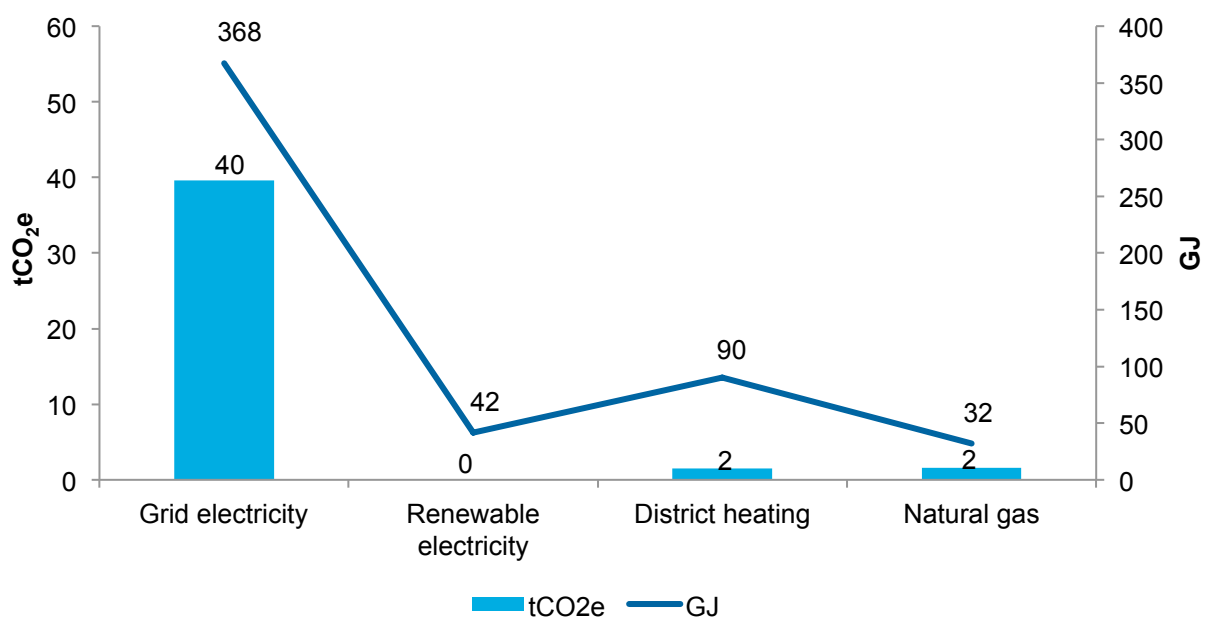
1.8 Sources of GHG emissions (tCO₂e) 2015

Figure 1. Sources of GHG emissions (tCO₂e)



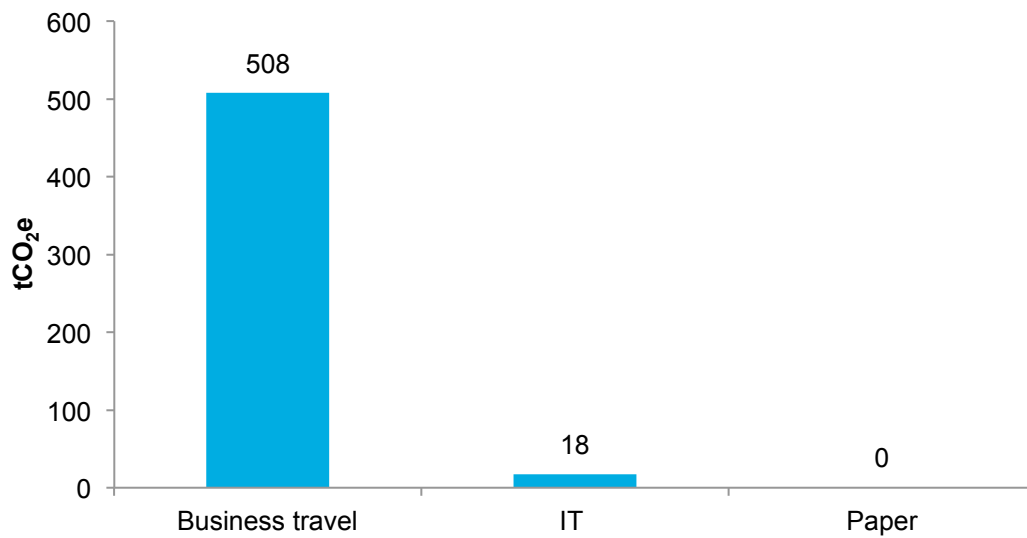
1.9 Sources of GHG emissions Scope 2 (tCO₂e) 2015

Figure 2. Sources of GHG emissions Scope 2 (tCO₂e) and energy use (GJ)



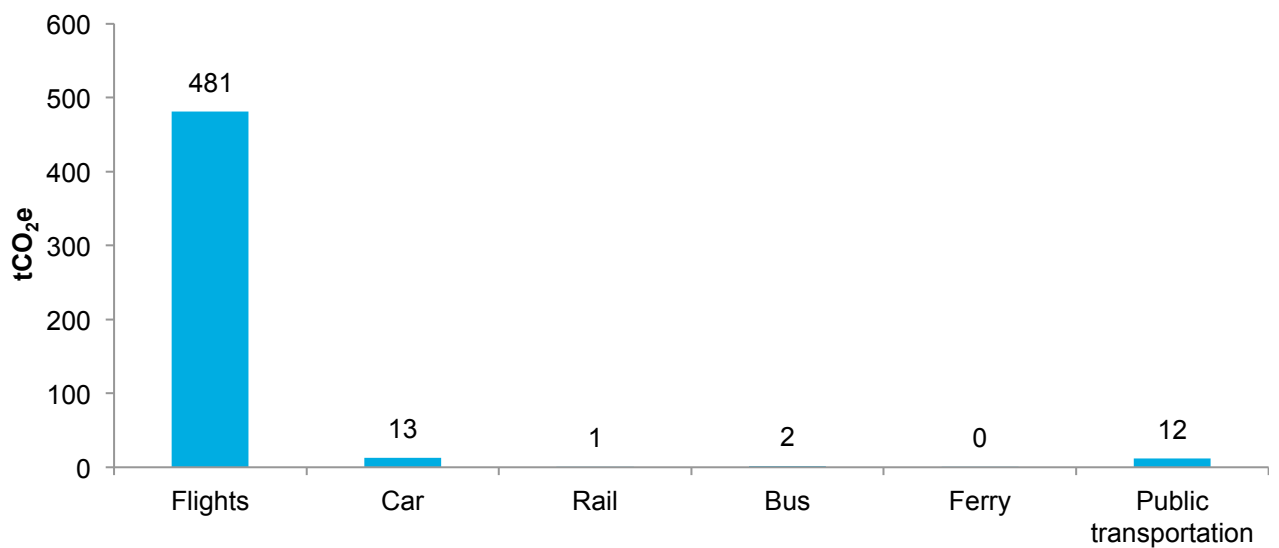
1.10 Sources of GHG emissions Scope 3 (tCO₂e) 2015

Figure 3. Sources of GHG emissions Scope 3 (tCO₂e)



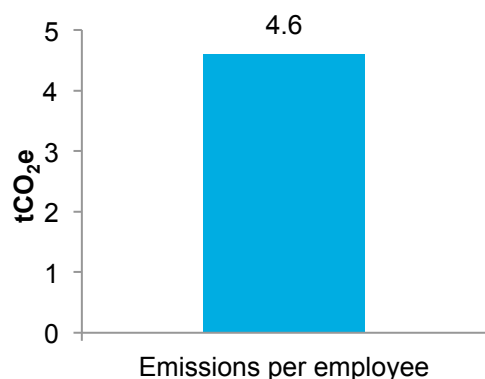
1.11 Sources of GHG emissions for business travel (tCO₂e) 2015

Figure 4. Sources of GHG emissions for business travel (tCO₂e)



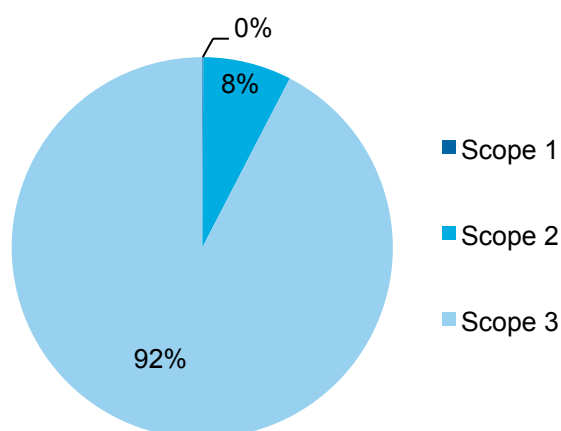
1.12 Emissions per employee (tCO₂e/employee) 2015

Figure 5. Emissions per employee (tCO₂e/employee) 2015



1.13 Emissions per employee per scope (tCO₂e/employee) 2015

Figure 6. Emissions per employee per scope 2015



1.14 Applied global warming potentials, IPCC fourth Assessment Report (2007)

Table 6. Applied global warming potentials, IPCC Fourth Assessment Report (2007)

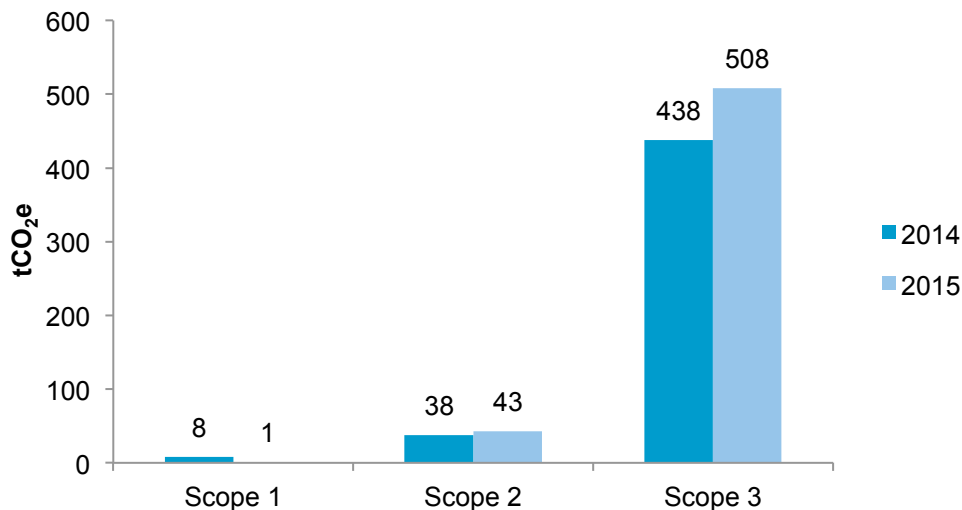
GHG	GWP (100-yr)
CO ₂	1
CH ₄	25
N ₂ O	298

2 Comparison of emissions

The greenhouse gas accounting in 2014 covered direct emissions from mobile and stationary combustion (Scope 1), indirect emissions from purchased electricity, heat and cooling (Scope 2) and other indirect emissions from business travel. The total emissions in 2014 were 483 tCO₂e. The result in 2015 shows an increase of Scope 2 and 3 emissions when compared within the boundaries in 2014 (Figure 7), particularly from electricity, heat and flights (Figure 8). During 2015 SPG opened one office in London and increased the number of employees. Furthermore, an update in the emission factors for flights were made. Within the boundaries from 2014 the emissions per employee have decreased by 0.1 tCO₂e in 2015 (Figure 9).

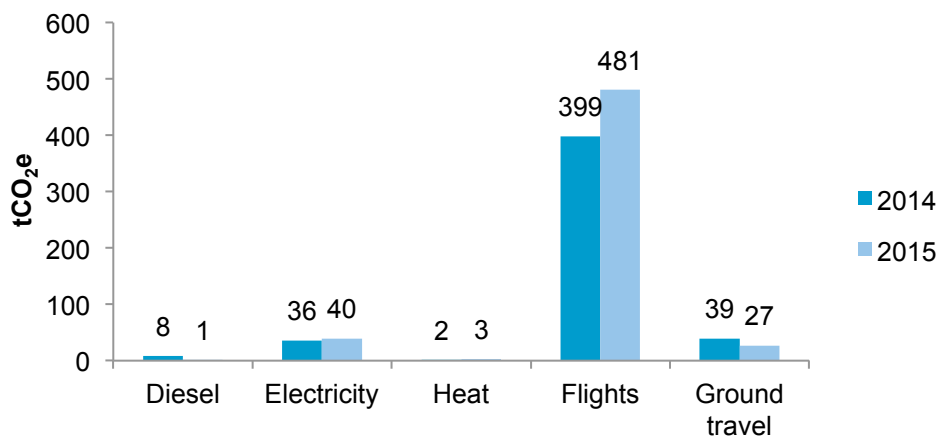
2.1 GHG emissions (tCO₂e) per scope 2014 and 2015

Figure 7. GHG emissions (tCO₂e) Scope 1, 2 and business travel (Scope 3) 2014 and 2015



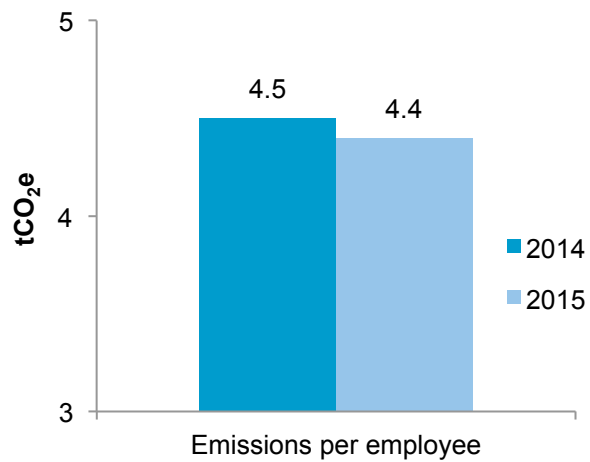
2.2 Sources of GHG emissions (tCO₂e) 2014 and 2015

Figure 8. Sources of GHG emissions (tCO₂e) 2014 and 2015



2.3 Emissions per employee (tCO₂e/employee) 2014 and 2015

Figure 9. Emissions per employee (tCO₂e/employee) for Scope 1, 2 and business travel 2014 and 2015



The 2015 number is lower in Figure 9 than Figure 5, due to an adjustment towards the 2014 scope and emissions for IT and paper are not included.

3 Information on emissions

The calculation and reporting procedure is based on the Greenhouse Gas Protocol (GHG Protocol) Corporate Standard revised edition, the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. The standard was developed by the World Resources Institute and the World Business Council for Sustainable Development.

Direct and indirect emissions

Emissions are divided into direct and indirect emissions. Direct emissions are emissions from sources that are 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:

- Scope 1: All direct greenhouse gas emissions (owned vehicles, burned fuel etc.)
- Scope 2: Indirect greenhouse gas emissions from consumption of purchased electricity heat or steam
- Scope 3: Other indirect emissions, such as the extraction and production of purchased materials and fuels, vehicles not owned or controlled by the reporting entity, outsourced activities, waste disposal, etc.

4 Accounting principles

According to the GHG Protocol accounting and reporting should be based on principles listed below:

- **Relevance:** Appropriate inventory boundary that reflects the greenhouse gas emissions of the company and serves decision-making needs of users.
- **Completeness:** Accounting all emission sources, any specific exclusion is disclosed and specified.
- **Consistency:** Meaningful comparison of information over time, transparently documented changes to the data.
- **Transparency:** Data inventory sufficiency and clarity, relevant issues are addressed in a coherent manner.
- **Accuracy:** Minimized uncertainty, avoided systematic over or under quantification of greenhouse gas emissions.

Appendix

Emission factors

Table 7. Emission factors

Source of emission	Emission factor reference ⁹
Fuel	Department for Environment, Food & Rural Affairs in the UK (DEFRA)
Electricity	DEFRA, International Energy Agency, Swedish Energy Markets Inspectorate
Heat	Fortum, Fernvärme Zurich, DEFRA
Air travel	DEFRA
Other travel	DEFRA, SPG internal database
IT	Apple, Lenovo, Dell, Weber C. Carnegie Mellon University, Samsung
Paper	DEFRA

⁹ South Pole Group derives its emission factors from reliable and credible sources. South Pole Group is not responsible for inaccuracies in emission factors provided by third parties.