Greenhouse Gas Protocol (Location Only) Report for Kinnevik

Assessment Period: 2019

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Assessment Details

Consolidation Approach

Operational Control

Organisational Boundaries

Operations of Kinnevik

Included

- Kinnevik

Operational Boundary

- Air travel
- Cars
- Coffee and fruit
- District heating
- Electricity
- Incinerated waste
- Landfilled waste
- Paper and printed material
- Rail (train, tram, light rail, underground)
- Recycled waste
- Taxi

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Introduction

A greenhouse gas (GHG) emissions assessment quantifies the total greenhouse gases produced directly and indirectly from a business or organisation's activities. Also known as a carbon footprint, it is an essential tool, providing your business with a basis for understanding and managing its climate change impacts.

A GHG assessment quantifies all seven Kyoto greenhouse gases where applicable and is measured in units of carbon dioxide equivalence, or CO_2e[1]. The seven Kyoto gases are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), nitrogen trifluoride (NF_3), sulphur hexafluoride (SF_6) and perfluorocarbons (PFCs). The global warming potential (GWP) of each gas is illustrated in the Table 1.

Table 1. GWP of Kyoto Gases (IPCC 2007)

Greenhouse Gas	GWP
Carbon dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous oxide (N_2O)	298
Hydrofluorocarbons (HFCs)	124 - 14,800
Perfluorocarbons (PFCs)	7,390 - 12,200
Nitrogen trifluoride (NF_3)	17,200
Sulphur hexafluoride (SF_6)	22,800

This assessment has been carried out in accordance with the World Business Council for Sustainable Development and World Resources Institute's (WBCSD/WRI) Greenhouse Gas Protocol; a Corporate Accounting and Reporting Standard. This protocol is considered current best practice for corporate or organisational greenhouse gas emissions reporting.

GHG emissions have been reported by the three WBCSD/WRI Scopes. Scope 1 includes direct GHG emissions from sources that are owned or controlled by the company such as natural gas combustion and company owned vehicles. Scope 2 accounts for GHG emissions from the generation of purchased electricity, heat and steam generated off-site. Scope 3 includes all other indirect emissions such as waste disposal, business travel and staff commuting. Reporting of these activities is optional under the WBCSD/WRI GHG Protocol, but as they can contribute a significant portion of overall emissions Ecometrica recommends they are reported where applicable.

A GHG assessment is an essential tool in the process of monitoring and reducing an organisation's climate change impact as it allows reduction targets to be set and action plans formulated. GHG assessment results can also allow organisations to be transparent about their climate change impacts through reporting of GHG emissions to customers, shareholders, employees and other stakeholders. Regular assessments allow clients to track their progress in achieving reductions over time and provide evidence to support green claims in external marketing initiatives such as product labelling or CSR reporting. Ecometrica GHG assessments are designed to be transparent, consistent and repeatable over time.

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[1] Carbon dioxide equivalent or CO_2e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO_2e signifies the amount of CO_2 which would have the equivalent global warming impact.

Data Quality and Availability

In order to provide the most accurate estimate of an organisation's GHG emissions, primary (actual) data should be used where it is available, up to date and geographically relevant. Secondary data in the form of estimates, extrapolations and industry averages may be used when primary data is not available. Table 2 details the quality of data submitted for this assessment with the key assumptions used stated below.

Data Quality Overview

Accuracy Overview	tCO_2e/year	%
Actual	651	98.8
Estimated	7.81	1.19
Total	659	100

Table 2. Data Quality and Availability

Source of emissions	Data quality
Premises	
District heating	Actual
Electricity	Actual
Incinerated waste	Actual
Landfilled waste	Actual
Recycled waste	Actual
Business Travel	
Air travel	Actual
Rail (train, tram, light rail, underground)	Actual
Taxi	Mixed
Company-Owned/Leased Vehicles	
Cars	Actual
Materials purchased	
Coffee and fruit	Actual
Paper and printed material	Actual

Assessment Summary for Kinnevik

Gross Overall Emissions: 659 tCO_2e

Key Performance Indicators

Absolute GHG emissions will vary over time and often correspond to the expansion or contraction of an organisation. It is useful therefore to use reporting metrics that take these effects into account and monitor relative GHG emissions intensity. A common emissions intensity metric is tonnes of CO_2e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

Data	KPI
772 Floor area (square metres)	0.853 tCO_2e per square metre
39.6 Full Time Equivalent Employees	16.6 tCO_2e per Full Time Equivalent Employee

Summary by Activity (tCO_2e)

By Activity	tCO_2e/year	%
Premises	11.5	1.74
Business Travel	625	94.9
Company-Owned/Leased Vehicles	21.2	3.22
Materials purchased	1.11	0.169
Total	659	100

Summary by WBCSD/WRI Scope (tCO_2e)

Scope	tCO_2e/year	%
Scope 1	17.9	2.72
Scope 2	9.7	1.47
Scope 3	631	95.8
Total	659	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year	tCO_2e/year
CO_2	1	582	582
CH_4	25	0.0307	0.768
N_2O	298	0.0099	2.95
CO_2e	1	72.9	72.9
		Total	659

Detailed Results

Detailed Summary by WBCSD/WRI Scope

Source of Emissions	tCO_2/yr	tCH_4/yr	tN_2O/yr	Total Emissions (tCO_2e/yr)	%
Scope 1 Total	**17**	**0.029**	**7.23e-4**	**17.9**	**2.72%**
Company-Owned/Leased Vehicles Total	17	7.42e-5	7.23e-4	17.2	2.61%
Cars	17	7.42e-5	7.23e-4	17.2	2.61%
Premises Total	0	0.029	0	0.724	0.11%
Incinerated waste	0	0	0	0	0%
Landfilled waste	0	0.029	0	0.724	0.11%
Recycled waste	0	0	0	0	0%
Scope 2 Total	**2.76**	**4.29e-4**	**6.37e-5**	**9.7**	**1.47%**
Premises Total	2.76	4.29e-4	6.37e-5	9.7	1.47%
District heating	0	0	0	6.91	1.05%
Electricity	2.76	4.29e-4	6.37e-5	2.79	0.424%
Scope 3 Total	**562**	**0.00127**	**0.00911**	**631**	**95.8%**
Business Travel Total	561	0.00125	0.00911	625	94.9%
Air travel	546	0.0011	0.00866	549	83.3%
Air travel: Flights, long-haul, business, upstream emissions	0	0	0	43.4	6.58%
Air travel: Flights, long-haul, ecomony, upstream emissions	0	0	0	0.612	0.0929%
Air travel: Flights, long-haul, premium economy, upstream emissions	0	0	0	2.02	0.306%
Air travel: Flights, medium-haul, business, upstream emissions	0	0	0	1.35	0.205%
Air travel: Flights, medium-haul, ecomony, upstream emissions	0	0	0	9.23	1.4%
Air travel: Flights, short-haul, upstream emissions	0	0	0	0.526	0.0798%
Rail (train, tram, light rail, underground)	0.0175	2.36e-6	2.97e-7	0.0176	0.00267%
Rail (train, tram, light rail, underground): Eurostar, upstream emissions	0	0	0	0.00245	3.72e-4%
Taxi	15	1.4e-4	4.51e-4	15.1	2.29%
Taxi: Regular taxi, upstream emissions	0	0	0	4.07	0.618%
Company-Owned/Leased Vehicles Total	0	0	0	3.98	0.604%
Cars: Medium diesel car, upstream emissions	0	0	0	3.97	0.603%
Cars: Medium petrol car, upstream emissions	0	0	0	0.0084	0.00128%
Materials purchased Total	1.1	0	0	1.11	0.169%
Coffee and fruit	1.1	0	0	1.1	0.167%
Paper and printed material	0	0	0	0.0129	0.00196%
Premises Total	0.182	2.83e-5	4.19e-6	1.05	0.159%
District heating: District Heating (Stockholm, Sweden), upstream emissions	0	0	0	0.648	0.0984%

	Electricity: Electricity - transmission & distribution losses (MCR)	0.182	2.83e-5	4.19e-6	0.184	0.0279%
	Electricity: Electricity grid, T&D losses, upstream emissions	0	0	0	0.0123	0.00186%
	Electricity: Electricity grid, generated, upstream emissions	0	0	0	0.205	0.0312%
	Total	**582**	**0.0307**	**0.0099**	**659**	**100%**

Annual Activity Data

Source of Emissions	Value	Unit
Business Travel		
Air travel		
Long-haul, business (RFI 2)	911,222	pass.km
Long-haul, economy (RFI 2)	37,299	pass.km
Long-haul, premium economy (RFI 2)	76,777	pass.km
Medium-haul, business (RFI 2)	52,914	pass.km
Medium-haul, economy (RFI 2)	541,154	pass.km
Short-haul (RFI 2)	18,834	pass.km
Rail (train, tram, light rail, underground)		
Eurostar	2,951	pass.km
Taxi		
Average taxi	60,778	km
Hybrid taxi	20,275	km
Company-Owned/Leased Vehicles		
Cars		
Medium diesel car	10,870	km
Medium diesel car	5,705	l
Medium petrol car	14	l
Materials purchased		
Coffee and fruit		
Mixed fruit	1,097	kg
Paper and printed material		
Office paper (from Sweden)	70	kg
Printed material (from Sweden)	21	kg
Premises		
District heating		
District Heating (Stockholm), Sweden	108	MWh
Electricity		
Electricity consumption	119,866	kWh
Incinerated waste		
Waste, incinerated (heat recovery), MSW	727	kg
Landfilled waste		
Waste, landfilled, MSW	17	m3
Recycled waste		
Waste, recycled	1,620	kg

References

IPCC (2006). Revised IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge.

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BEIS (2019). UK Government conversion factors for greenhouse gas reporting. Department for Business, Energy and Industrial Strategy, London.

CalRecycle (2009). California Department of Resources Recycling and Recovery (CalRecycle). Solid Waste Characterization, http:www.calrecycle.ca.gov/WasteChar.

Defra/DECC (2011). Guidelines to Defra/DECC's GHG conversion factors for company reporting. Department of Environment Food and Rural Affairs/Department for Energy and Climate Change, London.

Department for Business, Energy and Industrial Strategy (2019). 2019 Government GHG Conversion Factors for Company Reporting.

Ecometrica 2010. Internal Paper Profiles Database.

Energi Företagen (2017) Lokala miljävärden 2017. Sweden Available from https://www.energiforetagen.se/statistik/fjarrvarmestatistik/miljovardering-av-fjarrvarme/

IEA (2019). Statistics. http://www.iea.org/stats/index.asp.

IPCC (2006). Revised IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual. Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge.

Paper Profiles (2019). Paper Profiles database. Updated September 2019. Available at: http://www.paperprofile.com/.

Smith, A., K. Brown, S. Ogilvie, K. Rushton, and J. Bates, 2001: Waste management options and climate change. Final Report ED21158R4.1 to the European Commission, DG Environment, AEA Technology, Oxfordshire.

U&W (2011). Client specific LCA (temporary source)