



Greenhouse Gas Protocol (Dual Reporting) Report for Avanza

Assessment Period: 2017

Produced on Jan. 31, 2018 by *Our Impacts* on behalf of U&W

Assessment Details

Consolidation Approach

Operational Control

Organisational Boundaries

Operations of Avanza

Included

- Avanza

Operational Boundary

- Air travel
- Cars
- District cooling
- Electricity
- Employee owned cars
- Paper and printed material
- Rail (train, tram, light rail, underground)
- 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 CO₂e¹. The seven Kyoto gases are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), nitrogen trifluoride (NF₃), sulphur hexafluoride (SF₆) 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 ₂ O)	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, including the GHG Protocol Scope 2 Guidance. 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. As the subject of this assessment operates in markets which offer contractual instruments with product or supplier-specific data, scope 2 emissions are reported using both the location-based method and the market-based method. The location-based method applies average emission factors that correspond to the grid where consumption occurs, whereas the market-based method applies emission factors that correspond to energy purchased (or not purchased) through contractual instruments. Contractual instruments include energy attribute certificates, direct energy contracts, and supplier specific emission rates. The subject of this assessment has ensured that any contractual instruments used in the market-based method have met the Scope 2 Quality Criteria, as defined in the Guidance. Where contractual instruments do not meet the Quality Criteria, or where contractual instruments were not purchased, market-based scope 2 emissions have been calculated using residual mix emission factors. Where residual mix emission factors are not available, market-based scope 2 emissions have been calculated using default location grid-average emission factors, per the Protocol hierarchy. This may result in double counting between electricity consumers, as an adjusted emission factor taking into account voluntary purchases of electricity with specific attributes was not available.

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.

¹ Carbon dioxide equivalent or CO₂e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO₂e signifies the amount of CO₂ 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



Location-based Accuracy Overview		
	tCO ₂ e/year	%
Actual	70	89.6
Estimated	8.14	10.4
Total	78.1	100



Market-based Accuracy Overview		
	tCO ₂ e/year	%
Actual	58.6	94
Estimated	3.72	5.97
Total	62.4	100

Table 2. Data Quality and Availability

Source of emissions	Data quality
Business Travel	
Air travel	Actual
Employee owned cars	Actual
Hired cars	N/A
Hotel night stays	N/A
Rail (train, tram, light rail, underground)	Actual
Taxi	Actual
Company-Owned/Leased Vehicles	
Cars	Actual
Electricity and Heating	
Electricity	Actual
Office supply	
Coffee and fruit	N/A
Copy Paper	N/A
Paper and printed material	Actual
Hosted servers	

District cooling

Estimated

Electricity

Mixed

Assessment Summary for Avanza

Gross Overall Emissions (location-based): 78.1 tCO₂e

Gross Overall Emissions (market-based): 62.4 tCO₂e

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 CO₂e per full time equivalent. This has been calculated, along with other relevant metrics, in the table below:

Data	KPI
252,189 Portföljvärde (MSEK)	3.1e-4 tCO ₂ e per Portföljvärde (MSEK) (Location-Based)
985,000 Turnover (KSEK)	7.93e-5 tCO ₂ e per Turnover (KSEK) (Location-Based)
379 Full Time Equivalent Employees	0.206 tCO ₂ e per Full Time Equivalent Employee (Location-Based)
252,189 Portföljvärde (MSEK)	2.47e-4 tCO ₂ e per Portföljvärde (MSEK) (Market-Based)
985,000 Turnover (KSEK)	6.33e-5 tCO ₂ e per Turnover (KSEK) (Market-Based)
379 Full Time Equivalent Employees	0.165 tCO ₂ e per Full Time Equivalent Employee (Market-Based)

Summary by Activity (Location-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Business Travel	18.3	23.4
Company-Owned/Leased Vehicles	14.7	18.8
Electricity and Heating	14.2	18.2
Office supply	14.9	19.1
Hosted servers	16	20.5
Total	78.1	100

Summary by Activity (Market-Based, tCO₂e)



By Activity	tCO ₂ e/year	%
Business Travel	18.3	29.3
Company-Owned/Leased Vehicles	14.7	23.6
Electricity and Heating	5.75	9.23
Office supply	14.9	23.9
Hosted servers	8.74	14
Total	62.4	100

Summary by WBCSD/WRI Scope (Location-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	12.4	15.9
Scope 3	65.7	84.1
Total	78.1	100

Summary by WBCSD/WRI Scope (Market-Based, tCO₂e)



Scope	tCO ₂ e/year	%
Scope 2	0.0229	0.0368
Scope 3	62.3	100
Total	62.4	100

Summary by Greenhouse Gas

Greenhouse Gas	GWP	tGHG/year (Location-Based)	tCO ₂ e/year (Location-Based)	tGHG/year (Market-Based)	tCO ₂ e/year (Market-Based)
CO ₂	1	58.4	58.4	31.6	31.6
CH ₄	25	0.00478	0.12	0.00102	0.0255
N ₂ O	298	0.00115	0.341	5.7e-4	0.17
CO ₂ e	1	19.2	19.2	30.5	30.5
Total			78.1		62.4

Summary of Scope 2 Market-Based Method for Avanza

Energy Consumed and Emissions By Factor Type In Scope 2 Market-Based Method

Scope 2 Market-Based Energy



Scope 2 Market-Based Emissions



Emission Factor Type	Energy		Market-Based Emissions	
	MWh	%	tCO ₂ e	%
Client-supplied market-based instrument	573	100	0.0229	100
Residual mix factors	0	0	0	0
Default location-based factors	0	0	0	0
Total	573	100	0.0229	100

Detailed Results

Detailed Summary by WBCSD/WRI Scope

Location-Based methodology

Source of Emissions	tCO ₂ /yr	tCH ₄ /yr	tN ₂ O/yr	Total Emissions (tCO ₂ e/yr)	%
Scope 2 Total	12.3	0.00172	2.64e-4	12.4	15.9%
Electricity and Heating Total	12.3	0.00172	2.64e-4	12.4	15.9%
Electricity	12.3	0.00172	2.64e-4	12.4	15.9%
Scope 3 Total	46.2	0.00306	8.82e-4	65.7	84.1%
Business Travel Total	16.4	9.73e-5	2.66e-4	18.3	23.4%
Air travel	15.1	9.56e-5	2.41e-4	15.2	19.4%
Air travel: Flights, medium-haul, economy, upstream emissions	0	0	0	0.573	0.733%
Air travel: Flights, short-haul, upstream emissions	0	0	0	1.01	1.29%
Employee owned cars	0.376	0	0	0.376	0.482%
Rail (train, tram, light rail, underground)	0	0	0	0.0242	0.0309%
Taxi	0.891	1.64e-6	2.57e-5	0.899	1.15%
Taxi: Regular taxi, upstream emissions	0	0	0	0.214	0.274%
Company-Owned/Leased Vehicles Total	14.6	9.23e-4	3.03e-4	14.7	18.8%
Cars	14.6	9.23e-4	3.03e-4	14.7	18.8%
Electricity and Heating Total	0.6	8.42e-5	1.29e-5	1.8	2.3%
Electricity: Electricity - transmission & distribution losses (MCR)	0.6	8.42e-5	1.29e-5	0.606	0.776%
Electricity: Electricity grid, T&D losses, upstream emissions	0	0	0	0.0688	0.088%
Electricity: Electricity grid, generated, upstream emissions	0	0	0	1.12	1.44%
Hosted servers Total	14.6	0.00195	2.99e-4	16	20.5%
District cooling	0.708	0	0	0.708	0.907%
Electricity	13.3	0.00186	2.85e-4	13.4	17.1%
Electricity: Electricity - transmission & distribution losses (MCR)	0.648	9.09e-5	1.39e-5	0.655	0.838%
Electricity: Electricity grid, T&D losses, upstream emissions	0	0	0	0.0742	0.095%
Electricity: Electricity grid, generated, upstream emissions	0	0	0	1.21	1.55%
Office supply Total	0	0	0	14.9	19.1%
Paper and printed material	0	0	0	14.9	19.1%
Total	58.4	0.00478	0.00115	78.1	100%

Market-Based methodology

Source of Emissions	tCO ₂ /yr	tCH ₄ /yr	tN ₂ O/yr	Total Emissions (tCO ₂ e/yr)	%
Scope 2 Total	0	0	0	0.0229	0.0368%
Electricity and Heating Total	0	0	0	0.0229	0.0368%
Electricity	0	0	0	0.0229	0.0368%
Scope 3 Total	31.6	0.00102	5.7e-4	62.3	100%
Business Travel Total	16.4	9.73e-5	2.66e-4	18.3	29.3%
Air travel	15.1	9.56e-5	2.41e-4	15.2	24.3%
Air travel: Flights, medium-haul, economy, upstream emissions	0	0	0	0.573	0.919%
Air travel: Flights, short-haul, upstream emissions	0	0	0	1.01	1.61%
Employee owned cars	0.376	0	0	0.376	0.604%
Rail (train, tram, light rail, underground)	0	0	0	0.0242	0.0388%
Taxi	0.891	1.64e-6	2.57e-5	0.899	1.44%
Taxi: Regular taxi, upstream emissions	0	0	0	0.214	0.343%
Company-Owned/Leased Vehicles Total	14.6	9.23e-4	3.03e-4	14.7	23.6%
Cars	14.6	9.23e-4	3.03e-4	14.7	23.6%
Electricity and Heating Total	0	0	0	5.73	9.19%
Electricity: MBI Upstream Emissions	0	0	0	5.73	9.19%
Hosted servers Total	0.708	0	0	8.74	14%
District cooling	0.708	0	0	0.708	1.14%
Electricity	0	0	0	0.404	0.648%
Electricity: MBI Upstream Emissions	0	0	0	7.63	12.2%
Office supply Total	0	0	0	14.9	23.9%
Paper and printed material	0	0	0	14.9	23.9%
Total	31.6	0.00102	5.7e-4	62.4	100%

Annual Activity Data

Source of Emissions	Value	Unit
Business Travel		
Air travel		
Medium-haul, economy (RFI 2)	33,001	pass.km
Short-haul (RFI 2)	34,339	pass.km
Employee owned cars		
Average swedish car	3,060	km
Rail (train, tram, light rail, underground)		
Swedish rail	109,887	pass.km
Taxi		
Average taxi	115,490	SEK
Company-Owned/Leased Vehicles		
Cars		
Small car (unknown fuel)	96,166	km
Electricity and Heating		
Electricity		
Electricity consumption (Nordic Market)	573	MWh
Hosted servers		
District cooling		
District cooling (Linköping Tekniska Verken)	44,262	kWh
Electricity		
Electricity consumption	618,685	kWh
Office supply		
Paper and printed material		
Office paper (from Sweden)	150,720	kg

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