

Verification of greenhouse gas assertions Hufvudstaden AB for the year 2022

Used standard: SS-EN ISO 14064-3:2006

Reporting organization

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Introduction

2050 Consulting was commissioned by Hufvudstaden to provide independent third-party assurance over the content of their greenhouse gas (GHG) accounting and the energy consumption in facilities covering 1 January 2022 to 31 December 2022. Hufvudstaden needed an independent third-party assurance for their GRESB-reporting in 2023. The verification of Hufvudstaden's greenhouse gas assertions was performed according to the standard SS-EN ISO 14064-3:2006.

Hufvudstaden has been responsible for providing relevant climate-impact related data and the data for energy consumption. 2050 Consulting has assessed GHG data, energy consumption data, GHG information and information systems control in order to validate the reliability and completeness of GHG information and assertion.

No significant changes in the organization's GHG inventory have been made since the last reporting period.

Verification scope

Hufvudstaden's climate impact occurs in the company's properties situated in Gothenburg and Stockholm, Sweden. The impact in scope 1-2 includes car travel, own purchased energy sources for properties, energy consumption for heating and cooling, electricity use and leakage from entropy pumps. New for 2022 is the reporting of energy consumption in the building projects. Scope 3 emissions include renovation, adjustments and special projects, waste and energy use from tenants and construction and demolition, fuel and energy related activities and purchased transports for NK Retail.

Criteria

GHG Protocol: Corporate standard and ISO 14064-3.
GRI Guidelines for GHG accounting and reporting.

Level of assurance

Reasonable assurance engagement.

Types of GHG

CO₂ and HFCs.

Time period

January 1, 2022 - December 31, 2022

Verification techniques

- Interviews with Hufvudstaden employees responsible for collecting and compiling the data.
- Control of samples of the vouchers of used data.
- Control of all sources of used emission factors.
- Control of the calculations, key ratios and baseline scenario.

Hufvudstaden's GHG disclosure 2022

The table below contains the following information:

- Year-over-year change in emissions (scope 1)
- Year-over-year change in emissions (scope 2)

Tons CO ₂ -eq		2022	2021	Change 2022-2021
Scope 1	Total	78	19	+308%
	Refrigerants	77	17	
	Cars	1	2	
Scope 2	Total	820	770	+6%
	Heating & Cooling	765	770	
	Electricity	0	0	
	Energy consumption in projects	55	- ¹	
TOTAL	Total	898	789	+14%

Hufvudstaden has chosen to report normal year corrected heat consumption in the section Energy.

For the calculation of GHG's though the actual heat consumption has been used in accordance with ISO 14064-3.

¹ Not calculated.

Hufvudstaden has chosen the **market-based method** for the calculation of the scope 2 emissions. In the table below you find the comparison of the scope 2 emissions if Hufvudstaden had chosen the location-based method:

Tons CO ₂ -eq. 2021	Location-based method	Market-based method
Electricity	2 220	0
District heating ²	820	820
Total scope 2 emissions	3 040	820

The energy consumption has been validated both regarding the actual consumption and the normal year corrected heat consumption.

The reason for the changes of emissions is basically:

- Leakage of refrigerants vary from year to year and the climate impact from the leakage was 76% lower than 2020, but 353% higher than 2021.
- The consumption of district heating in properties was 19% lower than 2021, but the average emission factor for district heating was 20% higher. Those two factors together contributed to a decrease of the emissions of 3% from district heating.
- The emissions from cars were 73% lower than 2021.

The consumption of district cooling increased (+42%), caused by one building (quarter of Rännilen) that closed down the cooling equipment. Without that special event the district cooling consumption for all the other buildings decreased by 7%. The electricity consumption had a minor decrease of 1%. In total the energy consumption decreased by 3%.

Energy (MWh)	2022	2021	Change
Electricity	31 903	32 135	-1%
District heating	13 890	17 171	-19%
- whereof Stockholm	10 859	11 656	-7%
- whereof Gothenburg	3 031	5 515	-45%
District cooling	6 178	4 344	+42%
- whereof Stockholm	4 445	2 034	+119%
- whereof Gothenburg	1 733	2 310	-25%
TOTAL	51 972	53 650	-3%

For the second year Hufvudstaden also disclose emissions in scope 3. Reported emissions in scope 3 are higher in 2022 than 2021, but the post “tenants’ energy use” is new. A comparison between 2022 and 2021 excluding the new post, shows a 7% decrease. Note though that the accuracy of the scope 3 emissions is lower than for the scope 1 and scope 2 emissions.

² Including 55 tons CO₂-eq. for district heating in projects.

Tons CO ₂ -eq		2022	2021
Real estate	Total	3 593	3 022
	Renovation/Adjustments	900	1 600
	Special projects	1 500	900
	Waste from tenants	40	40
	Waste from construction and demolition	200	300
	Fuel and energy related activities	150	180
	Business travel	3	2
	Tenants' energy use	800	- ³
NK Retail	Total	70	70
	Purchased transports and district heating	70	70
Scope 3	Total	3 663	3 092

Conclusion statement

Hufvudstaden has accounted for their GHG emissions in accordance with GHG protocol: Corporate standard, ISO 14064-3 and GRI reporting guidelines. Hufvudstaden has a proper control over the company's energy use in its buildings and the leakage of refrigerants. All relevant aspects of Hufvudstaden's activities in scope 1 and 2 are accounted for. 2050 Consulting has verified the calculations, samples of vouchers for the data and origin of used emission factors. Based on the verification process, the GHG assertions is materially correct and is a fair representation of the GHG data and information. With a reasonable assurance, the presented figures give a correct estimate of Hufvudstaden's GHG emissions in scope 1 and 2 and the energy consumption during 2022. The energy consumption data has been verified, both the actual consumption and normal year corrected heat consumption. Hufvudstaden's disclosure of scope 3 emissions cover many of the most material emissions but not all. Examples of relevant emission sources that are not disclosed are purchased goods and services for NK Retail.

Stockholm, 13th of March 2023



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³ Not calculated.