

# Verification of greenhouse gas assertions Hufvudstaden AB 2021

**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 2021 to 31 December 2021. Hufvudstaden needed an independent third-party assurance for their GRESB-reporting in 2022. 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. Scope 3 emissions include renovation, adjustments and special projects, waste 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

CO<sub>2</sub> and HFCs.

## Time period

January 1, 2021 - December 31, 2021

## 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 2021

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 <sub>2</sub> -eq		2021	2020	Change
<b>Scope 1</b>	<b>Total</b>	<b>18,5</b>	<b>329,3</b>	<b>-94%</b>
	Refrigerants	17,0	314,7	
	Cars	1,5	14,6	
<b>Scope 2</b>	<b>Total</b>	<b>774,2</b>	<b>630,0</b>	<b>+23%</b>
	Heating & Cooling	774,2	630,0	
	Electricity	0,0	0,0	
<b>TOTAL</b>	<b>Total</b>	<b>792,7</b>	<b>959,4</b>	<b>-17%</b>

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.

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 <sub>2</sub> -eq. 2021	Location-based method	Market-based method
Electricity	2 905,0	0
District heating	774,2	774,2
<b>Total scope 2 emissions</b>	<b>3 679,2</b>	<b>774,2</b>

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 95% lower than 2020.
- The consumption of district heating was 29% higher, but the average emission factor for district heating was 5% lower, than 2020. Those two factors together contributed to an increase of the emissions of 23% from district heating. Compared to 2019 the emissions from district heating are though 26% lower than 2021.

- The emissions from cars were 89% lower than 2020. Both 2020 and 2021 have been impacted by the Covid-19 pandemic with the result that maintenance employees had to use the car to do their duties.

Also, the consumption of district cooling increased (+8%) while the electricity consumption had a minor decrease. In total the energy consumption increased by 8%.

Energy (MWh)	2021	2020	Change
<b>Electricity</b>	<b>32 135</b>	<b>32 561</b>	<b>-1%</b>
<b>District heating</b>	<b>17 171</b>	<b>13 295</b>	<b>+29%</b>
- whereof Stockholm	11 656	8 577	+36%
- whereof Gothenburg	5 515	4 718	+17%
<b>District cooling</b>	<b>4 344</b>	<b>4 008</b>	<b>+8%</b>
- whereof Stockholm	2 033	1 707	+19%
- whereof Gothenburg	2 310	2 301	+0%
<b>TOTAL</b>	<b>53 650</b>	<b>49 865</b>	<b>+8%</b>

For the first year Hufvudstaden also disclose emissions in scope 3.

Tons CO <sub>2</sub> -eq		2021
<b>Real estate</b>	<b>Total</b>	<b>2 961</b>
	Renovation/Adjustments	1 583
	Special projects	869
	Waste from tenants	37
	Waste from construction and demolition	291
	Fuel and energy related activities	178
<b>NK Retail</b>	<b>Total</b>	<b>66</b>
	Purchased transports and district heating	66
<b>Scope 3</b>	<b>Total</b>	<b>3 024</b>

## 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 2021. 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 the tenant's energy use and purchased goods and services for NK Retail. Business travel for 2021 was negligible.

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