



Achmea B.V.

Green Bond Impact Report

31 December 2023

Achmea B.V. Green Bond Impact Reporting

31 December 2023

Metrics regarding projects' environmental impacts

Portfolio based green bond report in accordance with the Handbook - Harmonized Framework for Impact Reporting (June 2023)¹. Calculation of CO₂-emissions are in line with the recommendations of the Partnership for Carbon Accounting Financials (PCAF).

Eligible project Category	Number of units	Eligible portfolio (EURm)	Share of Total Financing	Eligibility for Green Bonds	Annual energy consumption (KWh/m ²)	Annual reduced and/or avoided emissions of CO ₂ (tons)	Rentable area certified to an eligible green building standard (m ²)
a/		b/	c/	d/	e/	f/	g/
Eligible Green Project Portfolio	10.452	2.438	100%	100%	26,6	10,754	n/a
Total			100%	100%			n/a

a/ Eligible category

b/ Signed/budgeted amount committed by the issuer for the portfolio or portfolio components eligible for Green Bond financing

c/ This is the share of the total budget financing

d/ This the share of the total portfolio costs that is Green Bond Eligible

e/ Estimated ex-ante annual energy consumption in KWh/m²

f/ Estimated annual reduced and/or avoided emissions in tons of CO₂ equivalent

g/ Rentable area (m²) of commercial real-estate certified to an eligible green building standard

¹ ICMA Handbook - Harmonized Framework for Impact Reporting (June 2023)



Impact Assessment Eligible Green Project Portfolio Achmea

Project: 2024 Green Bond impact report Achmea

Subject: CO₂ emission reduction calculation

Date: 10-07-2024

Status: Final

CFP Green Buildings has been asked to compare the greenhouse gas emissions¹ of a specific, energy-efficient group of residential real estate (in this document indicated as Eligible Green Project Portfolio^{2,3}) to that of a comparable group of residential real estate with an average energy efficiency (indicated as “Reference” or “Reference Group”⁴). The objective of this analysis is to demonstrate that the selected buildings belong to the top most sustainable buildings in the Netherlands. In this document, the results of this analysis are shown. The Eligible Green Project Portfolio of Achmea complies with the criteria of the EU Taxonomy Delegated Regulation from June 2021. This document outlines the results of this analysis.

Preface

Achmea, an insurer with a cooperative identity, is one of the largest insurance companies in the Netherlands, providing a wide scope of financial services and products. The organization serves around 10 million retail and business customers, both domestically and abroad. In the retail market, Achmea focuses with Life and Non-life insurance products

through various brands on basic insurance products at moderate premiums. The company provides corporate clients with financial propositions in the field of fiduciary and asset management services including real estate and mortgages via Achmea Investment Management, Achmea Mortgages and Achmea Real Estate.

Achmea has established a Green Finance Framework under which Achmea can issue Green Finance Instruments to finance and/or refinance a portfolio of loans and/or investments relating to 1) new and existing energy efficient residential buildings in the Netherlands (Residential Real Estate) and 2) energy efficient commercial buildings in the Netherlands and internationally (Commercial Real Estate). This Green Finance Framework is based on the Green Bond Principles (ICMA, 2021 with 2022 Appendix I) and the Green Loan Principles (APLMA/LMA/LSTA, 2023).

The Eligible Green Project Portfolio

Assets in the Eligible Green Project Portfolio either have a registered energy label A or higher, belong to the top 15% of the national or regional building stock expressed as operational Primary Energy Demand, as required by the EU taxonomy, or meet the requirements for a PED lower than 10% threshold set for a Nearly Zero Energy Building (NZEB), as required by the 2024 Green Finance Framework of Achmea⁵.

¹ Greenhouse gas emissions are calculated in CO₂-equivalent, which will be referred to as CO₂ throughout this document.

² When referring to the Eligible Green Project Portfolio in this document, we refer to Dutch Residential Green Buildings only.

³ The Eligible Green Project Portfolio consists of 10,452 objects.

⁴ The Reference Group represents the average CO₂-emissions of residential buildings in the Netherlands, taking the floor area of the eligible assets into account.

⁵ All assets in the Eligible Green Project Portfolio are selected by Achmea Real Estate.

The year in which a new building was introduced is used as a criterion to determine the top 15% building stock as described in the Green Residential Buildings Methodology Assessment Document of Achmea. Over time, the Dutch Building Regulations require higher energy efficiency and improved sustainability for new buildings. Therefore, the year in which a building regulations is introduced is used as a criterion to define the Eligible Green Project Portfolio of Achmea. Since around 12% of the total Dutch housing stock is built since 2006 the selected year of construction (2006) can be used to determine the top 15% building stock in terms of PED.⁶ This way, the buildings in Achmea Eligible Green Project Portfolio belong to the top 15% of most energy-efficient buildings of the Dutch real estate market.

Methodology

The GHG emissions associated with the 10,452⁷ eligible objects have been determined based on estimates of the annual energy consumption (natural gas and electricity) multiplied with GHG emission factor indicating the average emissions per unit of energy consumption.

The energy usage is based on algorithms and benchmarks from the expert system of CFP Green Buildings. CFP's Expert system is a database consisting of actual energy data of buildings. A section of this anonymised data provides live energy data derived from CFP's Energy Monitoring projects. Moreover, public big data, for example yearly updated average energy usage of homes in the Netherlands provided by Centraal Bureau Statistiek (CBS), is used to improve and check the

benchmarking model. In this study, the calculated energy consumption of the Reference Group was determined based on data from CBS, RVO, Kadaster and CFP⁸. The Netherlands' average CO₂ emissions per square meter per building type are calculated based on these sources. These averages are regularly updated as the public sources are also updated regularly. The Reference Group is a group of residential buildings with comparable floor area to the Achmea portfolio.

The total energy consumption can be converted to GHG emissions by using GHG conversion / emission factors. We have applied GHG emissions factors indicating the average emissions per unit of energy consumption for all energy consumed on the Dutch energy grid. This is in accordance with the generally accepted PCAF⁹ methodology. The used emission factors originate from www.co2emissiefactoren.nl. This is a collaboration of multiple parties, including the Ministry for Economic Affairs and Climate policy, that regularly publishes updated GHG emission factors which have been reviewed by experts. Which has become a widely trusted source for valid and reliable GHG emission factors for the Dutch context. Because of continuous changes in Dutch electricity mix, the factor for electricity is updated. The applied methodology is in line with the location-based approach as specified in the GHG-protocol. This leads to the following emission factors:

Applied GHG emission factors¹⁰

Natural gas	1.779	kg CO ₂ e /m ³
Electricity	0.270	kg CO ₂ e /kWh

Table 1: Dutch GHG-emission factors

⁶ The methodology to define the top 15% is described in more detail in "Achmea Green Residential Buildings Methodology Assessment Document CFP".

⁷ Because of data privacy constraints, an eligibility check utilizing public databases was infeasible. Consequently, Achmea chose eligible assets to include in the Green Bond portfolio"

⁸ The reference group has the same floor area as the eligible objects. The CO₂-emissions are calculated by CFP algorithms taking into account the energy usage of

all residential buildings in the Netherlands.

⁹ Partnership for Carbon Accounting Financials (PCAF) is a global partnership of financial institutions that work together to develop and implement a harmonized approach to assess and disclose the greenhouse gas (GHG) emissions associated with their loans and investments.

¹⁰ Source: <https://www.co2emissiefactoren.nl> using TTW emissions.

Table 2 shows the distribution of the assets in the Eligible Green Project Portfolio among the three different criteria:

1. Buildings with an Energy Label A \geq (built before 2021).
2. The top 15% of the national or regional stock, expressed as primary energy demand¹¹.
3. Buildings built after 31 December 2020 that have a PED that is 10% lower than the NZEB requirements.

Criteria	Objects
Buildings registered A \geq labels built before 31 st of December 2020	8,221
Building built between 2006-2020 (top 15%) without registered A label	2,147
Buildings built after 31 December 2020 with PED of NZEB -10%	84

Table 2: Assets in the Green Residential Buildings Portfolio

Energy consumption

Table 3 shows the calculated energy consumption per year of the Eligible Green Project Portfolio. The calculated annual energy consumption is 37.4 million kWh of electricity and approximately 11.1 million m³ of natural gas. To calculate the total energy consumption in kWh, the natural gas consumption in m³ needs to be converted to kWh¹², giving a consumption of 107.9 million kWh. The total calculated energy consumption is 145.3 million kWh which translates to 103.4 kWh per m².

Estimated positive impact

Table 4 shows the estimated carbon footprint of the Eligible Green Project Portfolio and the Reference Group. The total estimated annual GHG emissions associated with the Eligible Green Project Portfolio are 29,743 tonnes CO₂e per year, compared to 40,497 tonnes CO₂ per year for the Reference Group. Resulting in less GHG emissions of 10,754 tonnes of CO₂ for 2024.

	Electricity consumption		Natural gas consumption		
	(x1,000 kWh)	(kWh/m ²)	(x1,000 m ³)	(m ³ /m ²)	(kWh/m ²)
Buildings A label \geq ¹³	29,177	26.7	9,155	8.4	82.0
Buildings Top 15% ¹⁴	7,784	25.6	1,878	6.2	60.4
NZEB - 10% >2021 ¹⁵	389	34.5	17	1.6	15.1
Eligible Green Project Portfolio	37,350	26.6	11,050	7.9	76.8

Table 3: Calculated energy consumption Eligible Green Project Portfolio

¹¹ As described in the Green Residential Buildings Methodology Assessment Document of Achmea, buildings constructed in and between 2006 and 2020 belong to the top 15% of the national building stock.

¹² Conversion factor for natural gas: 1 m³ = 9.769 kWh

¹³ Buildings registered A labels or higher built before 31st of December 2020

¹⁴ Building built between 2006-2020 (top 15%) without registered A label

¹⁵ Buildings built since 2021 with PED of NZEB -10%

	GHG emission		
	Eligible Green Project Portfolio (tonnes CO ₂ e)	GHG emission Reference (tonnes CO ₂ e)	GHG emissions Avoided (tonnes CO ₂ e)
<i>Buildings A label</i> ¹⁶	24,164	31,426	7,262
<i>Buildings Top 15%</i> ¹⁷	5,443	8,747	3,303
<i>NZEB - 10% >2021</i> ¹⁸	136	325	188
<i>Eligible Green Project Portfolio</i>	29,743	40,497	10,754

Table 4: CO₂-emission Eligible Green Project Portfolio compared to the Reference Group

Conclusion

The following conclusions are drawn from this study:

- The buildings in the Eligible Green Project Portfolio are estimated to emit 10.754 tonnes of CO₂ per year less than the Reference Group, which is a difference of 26.6%.
- The total average estimated energy consumption is calculated at 103.4 kWh/m²/per year¹⁹.
- All buildings in the Eligible Green Project Portfolio deliver a substantial contribution to climate change mitigation following the EU Taxonomy definition, either by having an EPC class A or higher rating, belonging to the top 15% of the national building stock expressed as operational PED or by meeting the requirements for a PED lower than 10% threshold set for a Nearly Zero Energy Building (NZEB) for buildings built after 31 December 2020.

¹⁶ Buildings registered A labels and higher built before 31st of December 2020

¹⁷ Building built between 2006-2020 (top 15%) without registered A label

¹⁸ Buildings built since 2021 with PED of NZEB -10%

¹⁹ The total average estimated energy consumption is not only based on the fossil energy consumption of the building (PED), but also on other sources. The Primary Energy Demand only refers to the fossil energy demand.