



GHG EMISSIONS REPORT  
ACHMEA BANK  
MORTGAGE PORTFOLIO

2020

## Foreword

Addressing the urgent challenge of climate change, and decarbonizing our economy, is more pressing now than ever. Financial institutions can facilitate the energy transition. That is why we have committed ourselves to the Paris Climate Agreement and measure and disclose the greenhouse gas (GHG) emissions associated with our mortgage portfolio. This creates transparency and accountability, and enables us to align our portfolio with our climate goals.

We have joined the Partnership for Carbon Accounting Financials (PCAF) and use the PCAF methodology to calculate the carbon footprint of our mortgage portfolio. 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 loans and investments.

We believe we can make a positive impact by helping our customers to make their homes more energy efficient. Therefore we proactively inform our customers about the various options they have to make their home more sustainable through our brands Centraal Beheer and Woonfonds. Our main On the Centraal Beheer website we offer an online home scan which provides an insight of specific measures the homeowner can take and we offer solutions such as solar panels and isolation for roofs, floors and walls. We also offer financing options through our mortgages.

In 2020 we also became a member of the Sustainable Living Sector Collective (“Sectorcollectief Duurzaam Wonen”). About eighty parties in the Dutch mortgage market, including our Centraal Beheer and Woonfonds brands, have joined forces to accelerate the sustainability of the housing market. This collaboration aims to make sustainability a part of every mortgage advice. As part of this initiative our mortgage staff followed the online training ‘Advisor sustainable living’.

This is our second GHG emissions report. Since the previous report we have made significant progress in calculating the carbon footprint of our portfolio by using location specific data of grid operators. As carbon accounting is still developing and underlying data improves over time we will continue to improve the quality of our report in the future.

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# Introduction

A significant amount of carbon emissions in the Netherlands is caused by homes. In order to achieve the ambitions of the Paris climate agreement, a large part of the Dutch housing stock must be made more sustainable. As a provider of mortgages, we have a social responsibility to contribute to the reduction of the greenhouse gas emissions of the buildings we finance. That is why we offer financing options to make homes more sustainable. We also actively encourage our customers to make their homes more sustainable, thus reducing emissions.

## Portfolio energy labels

As regulated by EU policy, energy labels have become mandatory for residential buildings in the Netherlands. These labels give an indication of the energy efficiency of the building, providing information on which the gas and electricity usage can be estimated. All buildings in The Netherlands have a provisional energy label based on general information that the authorities have about the property, such as the type of building, floor area and the year of construction. Home owners can request a definitive energy label, which is a more reliable measure of the energy performance of the building. Every home owner who wants to sell or rent out their property must also provide a definitive energy label.

The Netherlands Enterprise Agency (RVO) registers all indicative and definitive energy labels in the Netherlands. Figure 1 shows the division of energy labels in our mortgage portfolio on 31 December 2020.

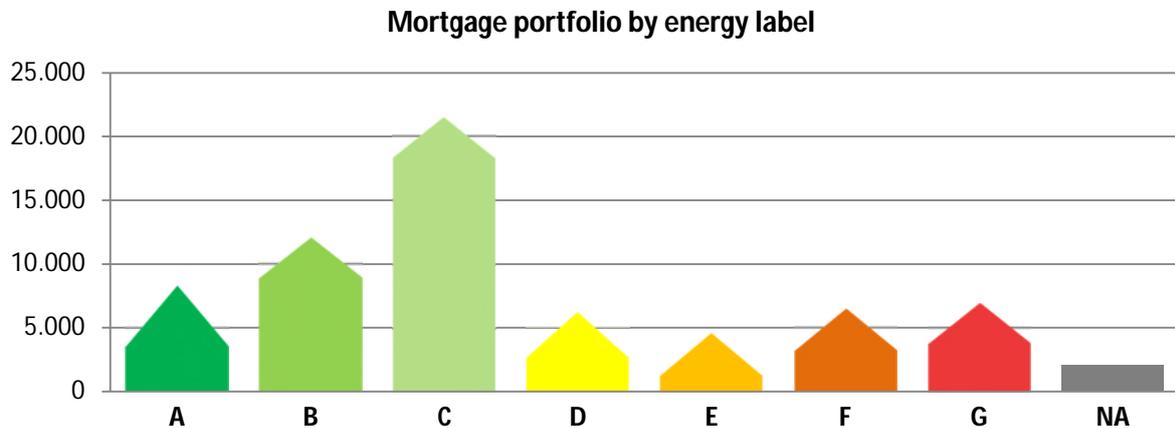


Figure 1. Composition of Achmea Bank mortgage portfolio by energy label (number of mortgages)

We derive the energy labels from Calcasa. Calcasa is the leading automated valuation model (AVM) provider in the Netherlands. On a quarterly basis, the Calcasa database is matched by address to our mortgage portfolio. Calcasa retrieves the energy labels from the RVO. About 34% (2019: 22%) of matched addresses have a definitive energy label. If there is no definitive energy label, the provisional label is used. For a small portion of the portfolio, energy labels do not exist - or no match could be made due to data quality issues like differences in suffix notation in addresses. For this small portion<sup>1</sup>, the same composition of energy labels is assumed as for the rest of the mortgage portfolio. The resulting division of energy labels in our portfolio is shown in figure 2.

### Mortgage portfolio by energy label (%)

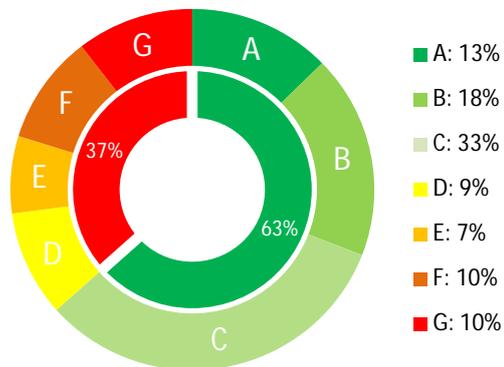


Figure 2. Composition of mortgage portfolio by energy label (%)

<sup>1</sup> About 3% of the portfolio.

## PCAF methodology

In 2019 we started calculating the CO2 emissions of our mortgage portfolio. In 2020 we altered the calculation method from average energy usage based on energy label to postal code specific energy usage based on open data published by energy grid operators. The new PCAF Global Standard methodology was also updated to include the Attribution Factor in calculating financed CO2 emissions. Both changes were also applied retroactively to the reporting year 2019 for comparative figures.

The carbon emissions from our mortgage portfolio are calculated by using the methodology of the Platform for Carbon Accounting Financials (PCAF). 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. This harmonized accounting approach provides financial institutions with a solid basis for setting science-based targets and aligning their portfolio with the Paris Climate Agreement. PCAF enables transparency and accountability and has developed an open-source, global carbon accounting standard for financial institutions. The PCAF methodology provides standardized guidelines for calculating the carbon footprint of financial assets such as mortgages.

### Data collection

Data availability on energy consumption of houses has improved considerably thanks to policy regulations that apply to the built environment (like EPC norms and energy labels). In the Netherlands, energy grid operators publish average energy usage data per postal code. By matching this data with postal codes of our mortgages, we are able to estimate the average gas and electricity consumption per building based on the location.

Using this method we were able to match 97% of all available postal codes within our portfolio. Due to privacy restrictions, addresses of acquired portfolio's (a.s.r., Obvion and BinckBank) are not available for matching. For these mortgages, energy usage was matched using the average usage per energy label of the rest of the portfolio (figure 4). According to the PCAF Global Standard data-quality score this qualifies as Score 5. Since data on the floor area per building is not available, we are not able to measure at Score 3 or 4.

(score 1 = highest data quality; score 5 = lowest data quality)

Data Quality	Options to estimate the financed emissions	When to use each option
Score 1	Option 1: Actual building emissions	1a Primary data on <b>actual building energy consumption</b> (i.e., metered data) is available. Emissions are calculated using actual building energy consumption and <b>supplier-specific emission factors</b> specific to the respective energy source.
Score 2		1b Primary data on <b>actual building energy consumption</b> (i.e., metered data) is available. Emissions are calculated using actual building energy consumption and <b>average emission factors</b> specific to the respective energy source.
Score 3	Option 2: Estimated building emissions based on floor area	2a <b>Estimated building energy consumption per floor area based on official building energy labels AND the floor area</b> are available. Emissions are calculated using estimated building energy consumption and <b>average emission factors</b> specific to the respective energy source.
Score 4		2b <b>Estimated building energy consumption per floor area based on building type and location-specific statistical data AND the floor area</b> are available. Emissions are calculated using estimated building energy consumption and <b>average emission factors</b> specific to the respective energy source.
Score 5	Option 3: Estimated building emissions based on number of buildings	3 <b>Estimated building energy consumption per building based on building type and location specific statistical data AND the number of buildings</b> are available. Emissions are calculated using estimated building energy consumption and <b>average emission factors</b> specific to the respective energy source.

Figure 3. PCAF Global Standard data quality score table

**Average energy consumption & grid emission factors**

Using the average energy consumption per postal code also allows us to calculate the energy usage of buildings where energy labels are not available. Categorizing the average energy usage by energy labels also allows us to apply the averages to buildings without matched postal codes (like the aforementioned acquired portfolios) based on their energy labels. This methodology does not take in account floor area or number of inhabitants, since this data is not available at this time.

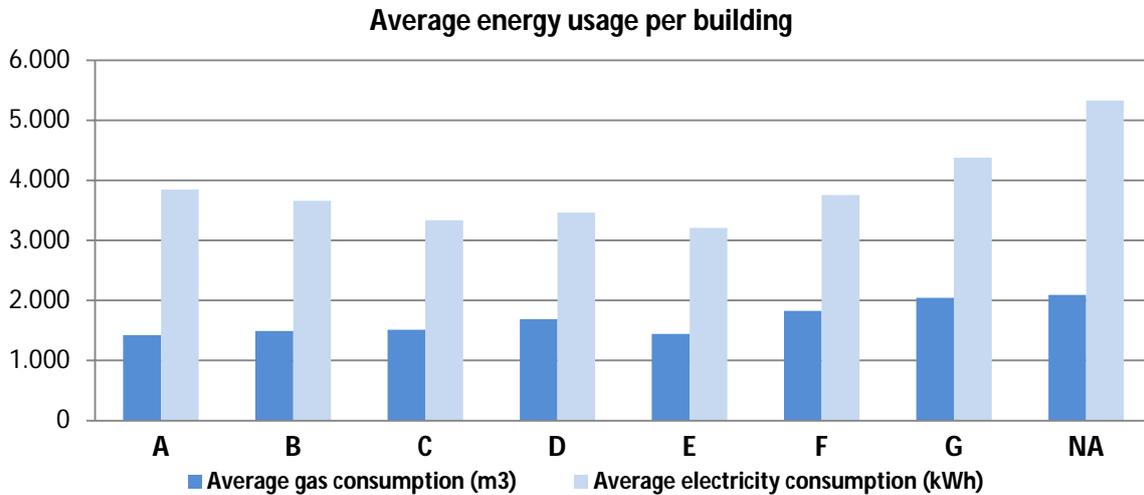


Figure 4. Average yearly energy usage per building in 2020

The average gas and electricity consumed at building level can be converted into CO2e emissions using grid emission factors. The Dutch website [www.co2emissiefactoren.nl](http://www.co2emissiefactoren.nl) provides a list of widely accepted and uniform grid emission factors. PCAF has chosen to use the grid emission factor relating to direct emissions as shown in the column “TTW value” on [www.co2emissiefactoren.nl](http://www.co2emissiefactoren.nl). If the origin of the consumed electricity is unknown, the emission factor for electricity from undefined energy sources should be used. The factor for electricity is updated regularly to reflect changes in the Dutch electricity mix.

The measurements taken in 2020 resulted in the following emission factors: 0.405 kg CO2/kWh for electricity (2019: 0.361) and 1.785 kg CO2/m3 for natural gas (2019: 1.791). By multiplying the emission factors with the gas and electricity consumption, the total CO2e emissions per building can be calculated. The following formula is used to calculate the absolute GHG emissions:

$$Total\ kg\ CO2e = (gas\ consumption * emission\ factor\ gas) + (electricity\ consumption * emission\ factor\ electricity)$$

**Attribution**

When calculating financed emissions, a building’s annual emissions are attributed to the mortgage provider using a loan-to-value approach. Thus, the attribution is equal to the ratio of the sum of outstanding amount at the time of GHG accounting to the sum of property value at loan origination. When these values at origination are not available, the latest available property value will be used as denominator.

$$Attribution\ Factor = \frac{\sum Outstanding\ Amount\ Nominal\ Value}{\sum Property\ Value\ At\ Origination}$$

Achmea Bank’s Attribution Factor as of 31 December 2020 was 0.61 (2019: 0.63).

# Financed carbon emissions

## Absolute emissions

The absolute portfolio emissions are calculated by multiplying the calculated CO2 emissions with the Attribution Factor. This information can be further specified and translated into relative emissions (or CO2 intensity). Figure 5 shows the average emissions per energy label of buildings in our portfolio.

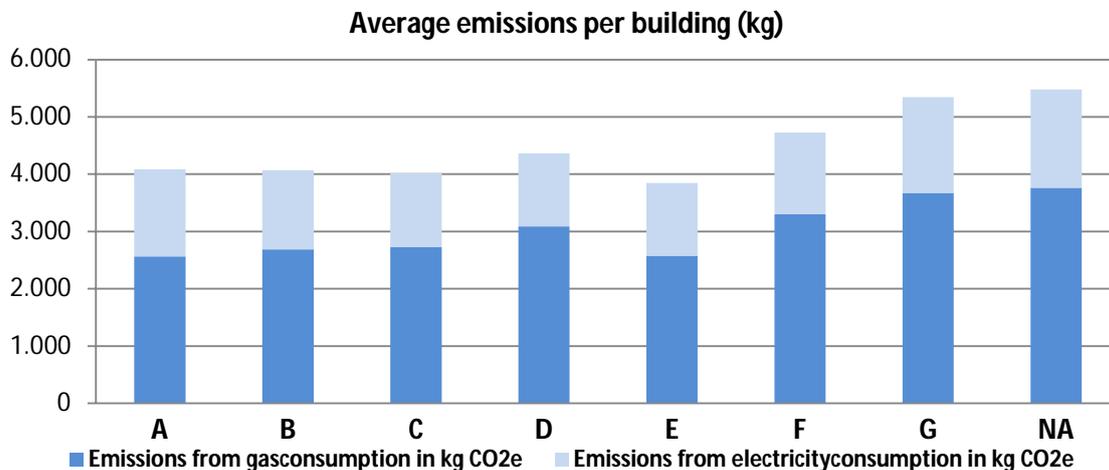


Figure 5. Average yearly emissions per building in kg CO2e in 2020

All outstanding private residential mortgages in our portfolio fall within the scope of this report with the exception the Acier portfolio, due to the unique characteristics of this portfolio. We account for the Scope 1 and Scope 2 emissions of each building (i.e. the natural gas used to heat the building and the electricity purchased by the owner/user of the building = the total energy consumption of the building). In line with PCAF accounting methods, the Scope 1 and 2 emissions associated with a residential mortgage are attributed to Achmea Bank, taking into account the Attribution Factor of 61%. In 2020 this amounted to a total of 184.8 ktonne CO2e (2019: 196.1).

## Financed CO2 emissions of our mortgage portfolio (ktonne)

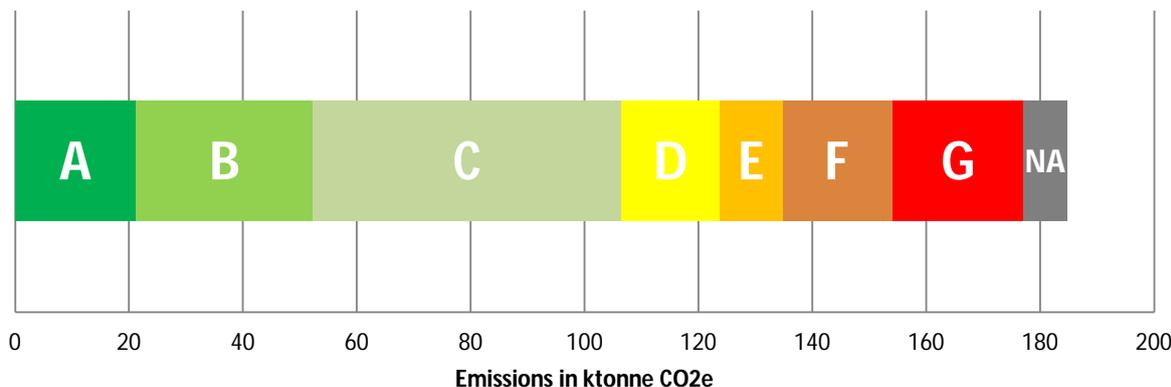


Figure 6. Total emissions of our mortgage portfolio in ktonne CO2e in 2020

## Relative emissions

To reflect the emissions of our portfolio more comparatively, relative emissions (or carbon intensity) have been calculated. Unlike absolute emissions, the carbon intensity also reflects changes in the size and value of outstanding loans in our portfolio<sup>2</sup>. The following formula was used to calculate the carbon intensity:

$$Carbon\ intensity = \frac{\sum Financed\ emissions\ in\ ktonne\ CO2e}{\sum Total\ outstanding\ loans\ in\ billion\ EUR}$$

In 2020 this amounted to a carbon intensity of 17.0 ktonne CO2e/billion EUR (2019: 17.3).

<sup>2</sup> Amount of total outstanding loans is based on nominal value (excluding the Acier portfolio)

## Comparative figures 2019–2020

### Energy Labels

Over the course of 2020 energy labels in our portfolio improved across the board, as illustrated in figure 7. The number of buildings decreased in all categories except for a +19% increase in A-labels. The largest decreases were found in F and G-labels (-13% and -16% respectively). These changes are mostly due to inflow of newer mortgages (including the acquired portfolios) and outflow of older mortgage loans. There were also changes in the labels of buildings of existing loans. Due to changes in energy label regulation, many homeowners were incentivized to update the status of their energy label in 2020. As a result the percentage of buildings with a 'definitive' labels increased to 34% (2019: 22%). This resulted in an improvement of many labels because 'provisional' labels were conservatively estimated. Since all newly sold buildings require a definitive label, this figure will continue to improve over time.

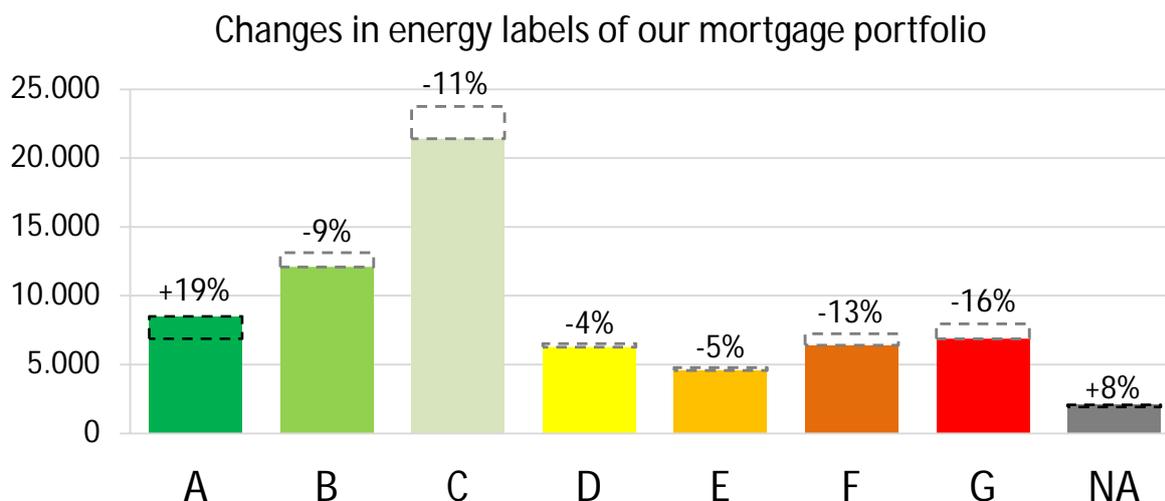


Figure 7. Changes in energy labels between Q4 2019 and Q4 2020

### Carbon emissions

Carbon emissions over 2019 were recalculated based on changes in our methodology, including energy usage based on postal code and the new Attribution Factor. These two changes made a significant difference compared to our previous report, in which we reported a total emission of 290.9 kt. CO<sub>2</sub>e. The recalculated financed emission in 2019 is 196.1 ktonne CO<sub>2</sub>e and a carbon intensity of 17.3 ktonne CO<sub>2</sub>e per billion EUR. Both figures decreased in 2020 due to a lower Attribution Factor, better energy labels in our portfolio and lower outstanding loans. This was partly offset with a higher carbon emission factor for electricity of 0,405 kg CO<sub>2</sub>e/kWh (2019: 0.361). There was a less significant decrease in the emission factor for gas to 1.785 kg CO<sub>2</sub>e/m<sup>3</sup> (2019: 1.791).

Year	Total outstanding loans (bn. EUR - nominal value)	Attribution Factor	Financed emissions (kt. CO <sub>2</sub> e)	Carbon intensity (kt. CO <sub>2</sub> e/bn. EUR)
2019	€ 11.3	0.63	196.1	17.3
2020	€ 10.8	0.61	184.8	17.0

## Sources

The following sources were used for this report.

Source	Internet address
PCAF	<a href="http://www.carbonaccountingfinancials.com">www.carbonaccountingfinancials.com</a>
RVO	<a href="http://www.rvo.nl/onderwerpen/duurzaam-ondernemen/gebouwen/wetten-en-regels/bestaande-bouw/energielabel-woningen">www.rvo.nl/onderwerpen/duurzaam-ondernemen/gebouwen/wetten-en-regels/bestaande-bouw/energielabel-woningen</a>
Emissions factors	<a href="http://www.co2emissiefactoren.nl/">www.co2emissiefactoren.nl/</a>
Open data published by energy grid operators	<a href="https://www.enexis.nl/">https://www.enexis.nl/</a> <a href="https://www.stedin.net/">https://www.stedin.net/</a> <a href="https://www.liander.nl/">https://www.liander.nl/</a> <a href="https://www.enduris.nl/">https://www.enduris.nl/</a> <a href="https://coteqnetbeheer.nl/">https://coteqnetbeheer.nl/</a> <a href="https://www.westlandinfra.nl/">https://www.westlandinfra.nl/</a> <a href="https://www.rendonetwerken.nl/">https://www.rendonetwerken.nl/</a>

## Colophon

This is the English version of our GHG report which can be downloaded from our website [achmeabank.com](http://achmeabank.com). There is no Dutch version of the report. We will be glad to receive your feedback about this annual report which can be sent to the address below.

### About Achmea Bank

Achmea Bank is part of Achmea and provides mortgages and savings products to the retail market in the Netherlands via the Centraal Beheer and Woonfonds brands. Achmea Bank is licensed to provide financial services under the Financial Supervision Act (Wft). Achmea Bank has a lending portfolio of approximately €12 billion and manages savings of approximately €7 billion. Achmea Bank is located in Tilburg.

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