



Pre-issuance Green Bond Impact Report

Nationale-Nederlanden Bank N.V.

Financial Year 2020

NN Bank Green Bond Impact Reporting

31 December 2020

Metrics regarding projects' environmental impacts:

Portfolio based green bond report in accordance with the ICMA Handbook - Harmonized Framework for Impact Reporting (December 2020)¹. Calculation of CO₂-emissions are in line with the recommendations of the Partnership for Carbon Accounting Financials (PCAF).

Eligible Project Category	SBP/GBP	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)
a/	b/		c/	d/	e/	f/	f/
Green Buildings	GBP	12,870	3,834	100%	100%	115.00	14.200
Total			3,834	100%	100%	115.00	14.200

a/ Eligible category

b/ Whether bond falls under social or green bond principles

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

d/ This is the share of the total budget financing

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

f/ Impact indicators

EU Taxonomy Alignment summary

Summary of Eligible Green Loans selected	New and existing mortgages for energy efficient residential buildings in the Netherlands
Alignment with EU Taxonomy Technical Screening Criteria (Delegated Acts)	100%
Do No Significant Harm & Social Safeguards	NN Bank will ensure that all selected Eligible Green Loans comply with official national and international standards and local laws and regulations on a best effort basis. It is part of the transaction approval process of NN Bank to ensure that all activities comply with internal environmental and social standards.

¹ <https://www.icmagroup.org/assets/documents/Regulatory/Green-Bonds/Handbook-Harmonized-Framework-for-Impact-Reporting-December-2020-151220.pdf>

Impact assessment Green Loan Portfolio NN Bank

Project: Impact assessment Eligible Green Loan Portfolio NN Bank

Subject: Avoided CO₂-emission calculation

Date: June 2021

Status: Final



As requested by Nationale-Nederlanden Bank (“NN Bank”), CFP Green Buildings compared the CO₂-emission of a specific, energy-efficient group of residential real estate (in this document indicated as Eligible Green Loan Portfolio¹) to that of a comparable group of residential real estate with an average energy-efficiency (indicated as Reference²). The objective of this analysis is to report the positive impact of the green residential real estate of the NN Bank. In this document, the results are shown.

Preface

Nationale-Nederlanden Bank N.V. (“NN Bank”) is a 100 per cent subsidiary of NN Group and is a Dutch retail bank, offering various banking products and services to private individuals. Core products are mortgages and consumer loans, savings and investments.

NN Group N.V. (“NN Group” or “the Group”) is a financial services company, operating in 20 countries with a strong presence in Europe and Japan. NN Group has approximately 18 million customers, is listed on Euronext Amsterdam and employs more than 15,000 people.

Climate change represents an urgent and potentially irreversible threat to livelihoods and the well-being of society. To mitigate the worst effects, we must transition to a low-carbon economy, limiting the global temperature to 1.5°C as part of the 2015 Paris Agreement. The latest science shows that emissions will need to reach net-zero around 2050 to meet this goal and prevent the worst impacts of climate change. As a financial institution, NN Group recognises that we have an important role to play in promoting the low-carbon transition especially through our investments. This recognition of responsibility is also reflected in our support of various pledges and commitments. Most recently, NN Group’s commitment to strive for a net-zero greenhouse gas emissions portfolio by 2050. This is a key initiative under the strategic commitment Society: we contribute to the well-being of people and the planet. The Group’s climate change strategy broadly consists of decarbonising the portfolio in line with trajectories consistent with the Paris goals and increasing allocations to green investments.

To underline our ambition, NN Group endorses various commitments, such as the Commitment of the financial sector to the Dutch Climate Agreement (Klimaatakkoord). As NN Bank, we contribute to this through several initiatives to make the Dutch housing market more sustainable, we also realise that further development and efforts are required. In this respect our commitment to the Climate Agreement basically means four deliverables:

- We have insight into our carbon footprint and publish it. Insight into both the CO₂ emissions of our own operations and the emissions of our proprietary investments, including the mortgage portfolio
- We set concrete goals and draw up an action plan to contribute to the Dutch Climate Agreement

¹ The Eligible Green Loan Portfolio consists of 12.870 objects and covers 13,5% of all residential properties for which Nationale-Nederlanden Bank N.V. provides mortgages. The Eligible Green Loan Portfolio represents 18,7% of the total outstanding amount of the Nationale-Nederlanden Bank N.V. mortgage portfolio.

² The reference group is an anonymised portfolio from several clients from CFP Green Buildings, which contains about 140.000 comparable buildings.

- We offer and develop services and financial solutions for our customers, to facilitate in making homes sustainable
- We evaluate our progress periodically and at least annually

As a mortgage provider, we want to contribute to the reduction of greenhouse gas emission in houses we finance. NN Bank offers financing options to make homes more sustainable and to source green mortgages for ourselves, and also for third parties. We will also encourage our customers to reduce emissions by making their homes more sustainable.

Energy label comparison

Figure 1 shows the distribution of the energy labels of NN Bank Green Loan Portfolio and the registered energy labels in the Netherlands for residential buildings. In the NN Bank Green Loan Portfolio, all of the objects have a registered energy label A. As per end of 2020 there are 1.217.535 registered energy labels with an A rating in the Netherlands.³ This is 15,5% of all buildings in the Netherlands (7.815.000 buildings as per end of 2020⁴). The NN Bank Green Loan Portfolio also takes the year of construction into account as criterion for the selection of the portfolio. This because the Dutch Building Regulation sets out energy efficiency requirements for different building types. As an example, the Dutch Building Code 2000 requires an EPC score of at least 1,0. Over time the Dutch Building Regulation becomes more stringent in terms of energy-efficiency and sustainability requirements for new buildings. The year of construction that is used as selection criterion is 2005. 12,5% of the total Dutch housing stock are residential buildings with an energy label A and built after 2005. Because NN Bank has chosen to use both criteria (building year and EPC A), buildings in the Eligible Loan Portfolio belong to the top 12,5% most energy-efficient buildings of the Dutch real estate market.

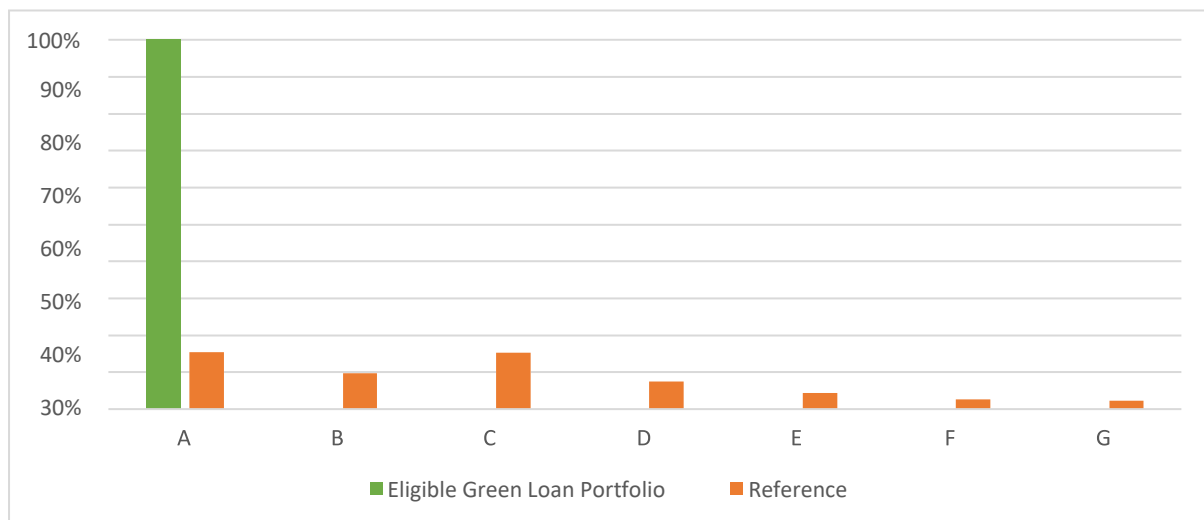


Figure 1: Distribution of energy labels Eligible Green Loan Portfolio and residential buildings in the Netherlands

Methodology

The CO₂-emission of 12.870 objects, as selected by the NN Bank, is determined by using the calculated energy consumption of these objects. The energy usage is based on algorithms and benchmarks from the expert system of CFP Green Buildings. This is the largest building database in the Netherlands with actual data on energy consumption and building characteristics. In this study, the calculated energy consumption of the reference was determined based on data from from Centraal Bureau Statistiek⁵ (CBS) and CFP.

³ Source for EPC labels: <http://www.ep-online.nl/>

⁴ Source: Kadaster. The Dutch Land Registry and Mapping Agency.

⁵ The Dutch national statistical office. <https://www.cbs.nl/en-gb>

The electricity consumption and natural gas consumption on household level can be converted to CO₂ emissions by using standard conversion factors. Within the Netherlands, the dutch government created a widely accepted and uniform list with grid emission factors: www.co2emissiefactoren.nl. The Partnership for Carbon Accounting Financials, or PCAF, has chosen to use grid emission factors related tot the direct emissions, expressed under column TTW value on www.co2emissiefactoren.nl.⁶ Whenever the origin of the consumed electricity is unknown, the emission factor for electricity from an undefined energy source should be used. The factor for electricity is updated regularly to reflect changes in the Dutch electricity mix. This leads to the following emission factors:

CO₂-emission - natural gas

The CO₂-emission of Dutch natural gas is 1,785 kg/m³.⁷

CO₂-emission - electricity

The CO₂-emission of Dutch electricity is 0,405 kg/kWh.⁸

Energy consumption

Table 1 shows the calculated energy consumption of the Eligible Green Loan Portfolio. The calculated energy consumption is 49 million kWh electricity each year and 18 million m³ natural gas each year. To calculate the total energy consumption in kWh, the natural gas consumption in m³ needs to be converted to kWh. One m³ natural gass is equal to 9,769 kWh. So to convert the natural gas consumption to kWh, the consumption per m² must be multiplied by 9,679 giving a consumption of 90 kWh per m². The total calculated energy consumption is 115 kWh per m².

	Electricity consumption (kWh)	Natural gas consumption (m³)
<i>Consumption</i>	48.650.250	17.544.205
<i>Consumption per m²</i>	25	90

Table 1: Calculated energy consumption Eligible Green Loan Portfolio

CO₂-emission

Table 2 shows the CO₂-emissions of the Eligible Green Loan Portfolio and the Reference Group, based on the calculated energy consumption. The total CO₂-emission of the Eligible Green Loan Portfolio is 51.020 ton CO₂ per year. The Reference CO₂-emission is 65.219 ton CO₂ per year.

	CO₂-emission Eligible Green Loan Portfolio (ton CO₂)	CO₂-emission Reference (ton CO₂)	GHG emissions Avoided (ton CO₂)
<i>Residential building</i>	51.020	65.219	14.200

Table 2: CO₂-emission Eligible Green Loan Portfolio compared to Reference

⁶ 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.

⁷ Source: <https://www.co2emissiefactoren.nl> with TTW emission for natural gas in kg/CO₂ per m³

⁸ Source: <https://www.co2emissiefactoren.nl> with TTW emission for electricity (unknown) in kg/CO₂ per kWh

Conclusion

The following conclusions are drawn from this study:

- Based on the calculated energy consumption, the Eligible Green Loan Portfolio has a CO₂- emission that is 14.200 tons per year lower than the reference, which is a difference of 22%.
- Total energy consumption is calculated at 115 kWh/m².
- Based on the official and calculated energy labels and year of construction, buildings in the Eligible Green Loan Portfolio belongs to the top 12,5% most energy-efficient buildings of the Dutch real estate market.