ING Global Green Funding Impact Report 2024

ING Global Green Funding Impact Report
Financial Year 2024

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Content

Impact Report 2024

ING Global Green Funding Framework

In alignment with ING's sustainability strategy, we have established the ING Global Green Funding Framework (the "Framework"), under which ING Group and any of its subsidiaries can issue financial instruments (such as Senior Bonds, Subordinated Bonds, Covered Bonds, Commercial Papers, Medium-term Notes and Deposits) to finance and refinance sustainable assets and projects which contribute to the UN Sustainable Development Goals and the sustainability strategy of ING.

ING established its sustainable debt strategy via the publication of its first Green Bond Framework in 2015, and updated the Framework in 2018 and 2022. In 2024, the Green Bond Framework has been updated to the ING Global Green Funding Framework, aimed at (re)financing green assets, namely green buildings and renewable energy projects. The new Framework expanded green liabilities instruments in scope (e.g. green commercial paper), defined the internal categorisation on the Use of Proceeds criteria and updated the Framework and ESG governance.

Since the first publication of the Framework, ING has continued to take important steps to enhance its sustainable debt strategy and sees it as an important tool to support the strong growth of our own sustainable finance portfolio.

The Framework aligns with the latest International Capital Market Association's (ICMA) Green Bond Principles (GBP) and has been externally assessed by ISS Corporate Solutions. In the ISS Second Party Opinion (SPO), the alignment with the Green Bond Principles, the EU Taxonomy and other additional regulations/standards has been assessed.

ING Global Green Funding Impact Report

ING publishes its impact report of the Eligible Green Loan portfolio annually.

For Renewable Energy, these impact metrices are reported:

- Total Installation Capacity (in MWe);
- Estimated annual energy generation (in MWh);
- Estimated annual avoided emissions (in tons of CO2 equivalent/year).

For Green Buildings, these impact metrices are reported:

- Estimated annual energy consumption in kWh/m²;
- Estimated annual reduced and/or avoided emissions in tons of CO2 equivalent.

The impact calculations have been assessed by external consultants. For Green Buildings in the Netherlands, CFP calculated CO2 emissions and energy consumption of 83,187 residential buildings and 22,006 commercial buildings. For German Residential buildings, Drees & Sommer has calculated the relevant metrices for 80,860 buildings. Lastly, CarbonTrust conducted the analysis for the 399 Renewable Energy Projects. All the impact analysis conducted by the consultants are consolidated in this report.

Our Global Green Funding Impact Report reflects the impact reporting requirements per ING's Global Green Funding Framework 2024, which has been assessed by ISS Corporate Solutions. In the Second Party Opinion (SPO), alignment with the Green Bond Principles (GBP) has been confirmed as well as additional reviews.

Eligible Green Loan Portfolio 2024

Since the publication of the Green Bond Framework in 2015 and the first allocation report in 2016, our Eligible Green Loan Portfolio grew from €1.3 bln to €53.7 bln.

For the Renewables Portfolio, we have again appointed impact consultant CarbonTrust. The impact report of this portfolio includes total annual avoided emissions, as a comparison to ING's avoided emissions.

For Green Buildings, we have included the comparison of avoided emissions with 2023 for both the residential and commercial portfolio in the Netherlands. The Eligible Green Loan Portfolio of Green Lion, Residential Mortgage-Backed Security's (RMBS) issued by Green Lion 2023-1 and Green Lion 2024-1 (SPV's), has also been included in this impact report, under a separate table.

2024 Key Figures

Impact of allocated proceeds is

6,272,374 tCO2e/year

total avoided emissions, of which

307,692 tCO2e

by the green buildings portfolio

5,964,682 tCO2e

by the renewable energy portfolio

The renewable energy portfolio has produced

13,813,555 MWh[1]

of clean energy per year

The impact per €1 mln invested is

123.53 tCO2e/year[2]

avoided emissions

1. Estimation based on operational projects only
2. Estimation for Unsecured Green Funding Instruments (operational projects only)

ING Group Global Green Funding Impact Report 2024

Portfolio Approach

31 December 2024

Eligible project category (1)	Number of loans/ addresses	Eligible portfolio (€ mln) (2)	Share of total ING DiBa Green Covered Bond Financing* (3)	Share of total Green Funding Instrument Financing (4)	Eligibility for Green Bonds (5)	Building area m² (6)	Total Capacity (MWe)	Attributed Capacity (MWe)	GHG emissions avoided in tons of CO_2/year (7)
Green Residential Buildings									
ING Bank NV	83,187	22,713	0.00%	45.05%	100%	12,379,107	n/a	n/a	128,008
ING DiBa	80,860	18,983	24.83%	31.21%	100%	10,930,070	n/a	n/a	113,522
Of which DiBa Covered Bond Programme*	28,752	4,714	100%	2.90%	100%	3,720,408	n/a	n/a	44,570
Green Commercial Buildings									
ING Bank NV	22,006	5,318	0.00%	10.55%	100%	4,445,328	n/a	n/a	66,162
Renewable Energy**	399	6,652	0.00%	13.19%	100%	n/a	29,651	5,709	5,964,682
Total	**186,452**	**53,665**	**24.83%**	**100%**	**100%**	**27,754,505**	**29,651**	**5,709**	**6,272,374**

Impact per € mln calculations		
ING DiBa Green Covered Bonds	p/€ mln impact tons of CO_2/year	**9.45**
ING Unsecured Green Funding Instruments (including only operational Renewable Energy projects)	p/€ mln impact tons of CO_2/year	**123.53**
ING Unsecured Green Funding Instruments (including operational and under construction Renewable Energy Projects)	p/€ mln impact tons of CO_2/year	**243.58**

Portfolio based green funding report in accordance with the ICMA Harmonised Framework for Impact Reporting (version June 2023)

(1)	Eligible category
(2)	Signed amount represents the amount legally committed by the issuer for the portfolio or portfolio components eligible for Green Funding instruments financing
(3)	This is the share of the total ING DiBa portfolio cost that is financed by the issuer for Green Covered Bonds*
(4)	This is the share of the total portfolio cost that is financed by the issuer for Green Funding Instruments
(5)	This is the share of the total portfolio costs that is Green Bond Eligible
(6)	This is the building area in m²
(7)	Impact indicators - Estimated energy generation (in MWh/year) - Total installed capacity (in Mwe) - Estimated total emissions avoided in tons of CO_2 - Estimated annual reduced emissions in tons of CO_2

* ING-DiBa AG Green Covered Bonds are allocated towards Green Residential Buildings situated within the entity ING-DiBa AG. ING-DiBa AG Green Covered Bonds will be allocated to assets within the Covered Bond Cover Pool. Girokonto Future is allocated to green assets in line with all other unsecured funding instruments, which is in line with the Girokonto Future asset eligibility criteria (Girokonto Future Einlagenverwendung Nachhaltigkeitskriterien – ING). Green Unsecured Funding Instruments are allocated to all Use of Proceeds categories respectively (minus any Green Residential Buildings already allocated to ING-DiBa AG Green Covered Bonds). In addition, for Green Unsecured Funding Instruments, ING may allocate towards Eligible Green Loans situated within its subsidiaries as per the guidance laid out in the ICMA Guidance Handbook November 2024 regarding pledged assets (The-Principles-Guidance-Handbook-November-2024-041124.pdf).
**For Renewable Energy, only operational projects are included in the impact numbers reported in the table. Impact metrices related to under construction projects are: 6,052,512 tCO2e/year for GHG emissions avoided. Resulting in the total GHG emissions avoided (operational + under construction) of 12,017,194 tCO2e/year.

ING Group Global Green Funding Impact Report 2024

Additional Information – Green Lion Residential Mortgage-Backed Security (RMBS)

Eligible project category	Number of loans/ addresses	Eligible portfolio (€ mln)	Building area m^2	GHG emissions avoided in tons of CO_2/year
Green Residential Buildings				
Green Lion 2023-1*	2,762	894	377,372	4,140
Green Lion 2024-1*	3,293	1,053	445,813	4,771

*Green Lion 2023-1 and 2024-1 are Residential Mortgage-Backed Security's issued by respectively Green Lion 2023-1 B.V. and Green Lion 2024-1 B.V. (SPV's). The Secured Green Collateral Bond utilises the **"bond by bond approach".** On the Closing Date, the net proceeds of the issuance of the Secured Green Collateral Bond by the Issuer will be exclusively applied to refinance, by way of purchase by the Issuer from the Seller – ING Bank N.V. (as originator), Mortgage Receivables forming part of the Initial Portfolio that meet, among other things, the Green Eligibility Criteria as at the initial Cut-Off Date 31 August 2023 for Green Lion 2023-1 and 31 May 2024 for Green Lion 2024-1. The allocation of the proceeds of the Secured Green Collateral Bond are shown in this report. For more information, the SPO of Green Lion 2023-1 and Green Lion 2024-1, and the monthly reporting can be found here.

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Impact assessment ING Green Residential Buildings Portfolio the Netherlands

Project: Impact Assessment ING Green Residential Buildings Portfolio

Subject: Reduced CO_2-emission calculation

Date: May 2025

CFP Green Buildings has been asked by ING to compare the greenhouse gas emissions[1] of a specific, energy-efficient group of residential real estate (in this document indicated as ING green residential building portfolio) to that of a comparable group of real estate, these include amongst others homes, apartments, and recreational houses, with an average energy efficiency (indicated as "Reference" or "Reference Group"[2]). The CO_2 emissions have been calculated for the year 2024. The objective of this analysis is to show the estimated carbon emissions of the green assets and compare with the Reference Group. This document outlines the results of this analysis.

The Eligible Green Building Portfolio

A total of 83,187 assets have been selected as eligible for ING's Green Residential Buildings Portfolio. Assets In ING's Green Residential Building Portfolio either have a registered energy label A, belong to the top 15% of the national or regional building stock expressed as operational Primary Energy Demand (PED), 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)[3].

The Dutch Building Regulation sets out energy efficiency requirements for different building types. Over time, the Dutch Building Regulation becomes more stringent regarding energy efficiency and sustainability requirements for new buildings. The year a new building code was introduced is therefore used as a selection criterion for the top 15% of ING's Green Residential Building Portfolio. For the Netherlands this is 2006. Hence, the selected year of construction to determine the top 15% is 2006.

For buildings built after 31 December 2020 in the portfolio, they are 10% more energy efficient than the NZEB requirements as they comply to the following values.

- Ground based houses: Lower than or equal to 27 kWh/m²/year.
- Flats and apartments: Lower than or equal to 45 kWh/m²/year.

Methodology

Within this study the CO_2-emissions of 83,187 residential objects, as selected by ING, were determined using the calculated energy consumption of these objects[4].

The energy usage is based on the algorithms and benchmarks from the expert system of CFP Green Buildings. CFP's Expert system is a database consisting of actual energy data of

[1] Greenhouse gas emissions are calculated in CO_2-equivalent, which will be referred to as CO_2 throughout this document.
[2] The Reference Group represents the average CO_2-emissions of residential buildings in the Netherlands, taking the floor area of the eligible assets into account.
[3] New mortgages subject to MS assessments are not aligned with the EU Taxonomy and therefore not included in this report
[4] The data fields building type, energy label and building year origin from the ING database used for ING Groep's 2024 Green Asset Ratio Assessment. Other data fields for calculations are retrieved from sources Kadaster and EP-online.

buildings. A section of this anonymized 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 Statistics Netherlands (CBS), is used to improve and check the benchmarking model. These algorithms and benchmarks are the same as those used in the online tool www.ingrefduurzaam.nl. CFP green buildings continuously improves its calculation methods and algorithms when new data or insights become available. In this study, the calculated energy consumption of the Reference Group was determined based on data from CBS, RVO, Kadaster and CFP[5]. The Netherlands' average CO_2 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 numbers used for the calculations in this report are given in the table below[6].

CO_2 emissions of the Reference Group per m^2		
Residential	34.6	kg CO_2e per year

Table 1: Emission of the Reference Group

The CO_2-emissions in this report were calculated with the Dutch market standard conversion factors, derived from the Green Deal CO_2-Emissionfactors. The applied factors are illustrated in table 2[7].

Applied GHG emission factors[8]		
Natural gas	2.134	kg CO_2e /m^3
Electricity	0.328	kg CO_2e /kWh

Table 2: Dutch CO_2-emission factors

Table 3 shows the distribution of the assets in the ING Green Residential Buildings Portfolio among the three different criteria:

1. Buildings with an Energy Label A≥ (built before 2006).
2. The top 15% of the national or regional stock, expressed as primary energy demand.
3. Buildings built since 2021 that have a PED that is 10% lower than the NZEB requirements.

Criteria	Objects
Buildings built before 2006 with registered A labels	29,450
Building built between 2006-2020 (top 15%)	52,001
Buildings built since 2021 with PED of NZEB -10%	1,736

Table 3: Assets in the Green Residential Buildings Portfolio

Energy consumption

Table 4 shows the calculated energy consumption of the entire ING Green Residential Buildings Portfolio. The calculated annual energy consumption for electricity is 550 million kWh and 87 million m^3 for natural gas.

Electricity (kWh)	Natural gas(m^3)
550,074,787	87,402,769

Table 4: Energy consumption ING Green Residential Portfolio

[5] The Reference Group has the same floor area as the eligible objects. The CO_2-emissions are calculated by CFP algorithms taking into account the energy usage of all residential buildings in the Netherlands.
[6] The emission factors of table 2 are used.
[7] Source: https://www.co2emissiefactoren.nl using WTW emissions for natural gas in kg/CO_2 per m^3 for 2024.
[8] Source: https://www.co2emissiefactoren.nl using WTW emissions for electricity (unknown) in kg/CO_2 in kWh for 2024.

CO_2-emission – Estimated Positive Impact

Table 5 shows the CO_2-emissions of the ING Green Residential Buildings Portfolio and the Reference Group based on calculated energy consumption. The total CO_2-emission of the ING Green Residential Buildings Portfolio is 300,309 tonnes CO_2 per year. The Reference CO_2-emission is 428,317 tonnes of CO_2 per year, resulting in a reduction of 128,008 tonnes of CO_2 per year.

Emission ING Green portfolio (tonnes CO_2)	Emission Reference (tonnes CO_2)	Emission reduction (tonnes CO_2)
300,309	428,317	128,008

Table 5: Total CO_2-emission ING Green Residential Buildings Portfolio compared to Reference Group

Table 6 gives a summarized overview of the reduced CO_2-emissions in relation to the Reference Group for the three different criteria building groups mentioned above.

Approximately 35% (in square meters) of the portfolio consists of A label buildings built before 2006. The CO_2-emissions of the ING Green Residential Portfolio for A label buildings built before 2006 is 125,762 tonnes of CO_2 per year. The Reference CO_2-emission is 151,664 CO_2 per year.

Approximately 63% of the portfolio consists of buildings with a registered A label or are within the top 15% of the national building stock expressed as operational Primary Energy Demand (PED) built between 2006 and 2020. The CO_2-emissions of these buildings is 171,734 tonnes of CO_2 per year while the Reference CO_2-emission for this group is 268,850 tonnes of CO_2 per year.

Approximately 2% of the portfolio consists of buildings that are eligible due to meeting the requirements for a PED lower than 10% threshold set for a Nearly Zero Energy Building (NZEB). The total CO_2-emissions of the ING Green Residential Portfolio for these new buildings 2,813 tonnes of CO_2 per year. The Reference CO_2-emission is 7,803 tonnes of CO_2 per year. The reduction in CO_2-emissions for the three building groups can be found in table 6 below.

	#	m^2	GHG Emission ING Green Residential Portfolio (tonnes CO_2)	GHG Emission Reference (tonnes CO_2)	GHG Emission reduction (tonnes CO_2)
Buildings A label <2006	29,450	4,383,358	125,762	151,664	25,902
Buildings Top 15%	52,001	7,770,223	171,734	268,850	97,115
NZEB - 10% >2021	1,736	225,526	2,813	7,803	4,990
Total	83,187	12,379,107	300,309	428,317	128,008

Table 6: Summarized overview of the reduced CO_2-emissions compared to the Reference Group

Annual development of climate impact

CFP Green Buildings also gave insights into the energy consumption of the Eligible Green Building Portfolio as of year-end 2023 and compared the CO_2-emissions of the Eligible Green Building Portfolio of 2024. Figure 1 shows the energy consumption of the Eligible Green Building Portfolio in 2023 and 2024. In order to compare the outcomes of both reports, the numbers are converted to consumption / CO_2-emissions per m^2.

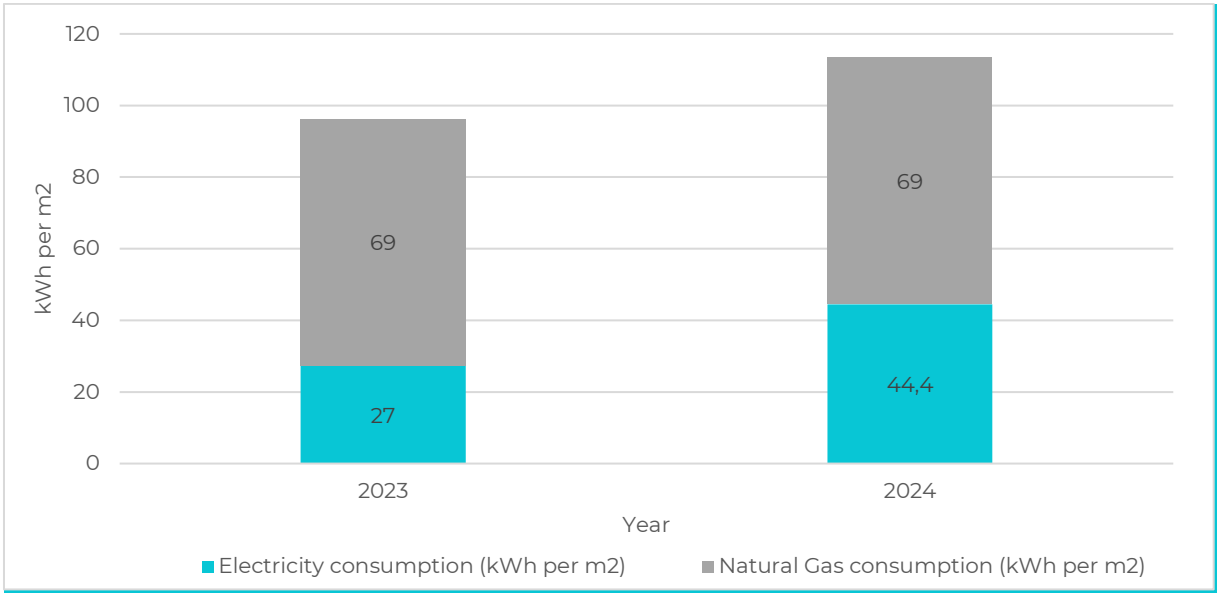

Figure 1: Calculated energy consumption comparison per m^2 per year of the Eligible Green Building Portfolio

The (estimated) electricity consumption has not visibly improved, which can be explained by several factors. As the Green Buildings Tool was updated in May 2024 to better estimate electricity use from heat pumps, particularly in newer or highly efficient buildings, it leads to higher calculated electricity consumption. In the Eligible Green Building Portfolio the number of buildings within each category has changed. This has rusulted in a higher average electricity usage for the portfolio. An increase in more energy efficient buildings had lead to a higher electricity usage, as the number of buildings built since 2021 with PED of NZEB-10% have increased substantially compared to 2023 leading to an increased use of heat pumps in the portfolio resulting in higher electricity demand. Additionally, portfolio changes—with some buildings added or removed—have also influenced overall energy consumption due to different usage patterns across building types.

Between 2023 and 2024, the ING Eligible Green Building Portfolio underwent a substantial shift in both size and composition. These changes were driven by ongoing portfolio optimization, acquisitions of newly developed properties, and the removal of certain assets no longer meeting eligibility criteria. As a result, both the energy performance label (EPC) distribution and estimated energy consumption patterns evolved notably.

Figure 2 gives insights on the CO_2-Emissions per m^2 of the Eligible Green Building Portfolio in 2023 and 2024. The total energy consumption is converted to CO_2-emission by using standard conversion factors. The CO_2-emission is calculated over the entire portfolio, divided by the total amount of square meters. This graph shows that the GHG emissions per m^2 of the Eligible Green Building Portfolio have increased slightly over last year, from 24.0 kg CO_2/m^2 to 24.3 kg CO_2/m^2. The reduced emissions per m^2 have decreased from 10.8 kg CO_2/m^2 to 10.3 kg CO_2 /m^2. When looking specifically at gas usage, a slight decrease can be observed across the portfolio. This aligns with the increased adoption of heat pump systems in newly added, energy-efficient buildings. As these systems replace traditional gas-based heating, the overall reliance on gas has diminished, supporting the portfolio's transition toward lower-carbon technologies.

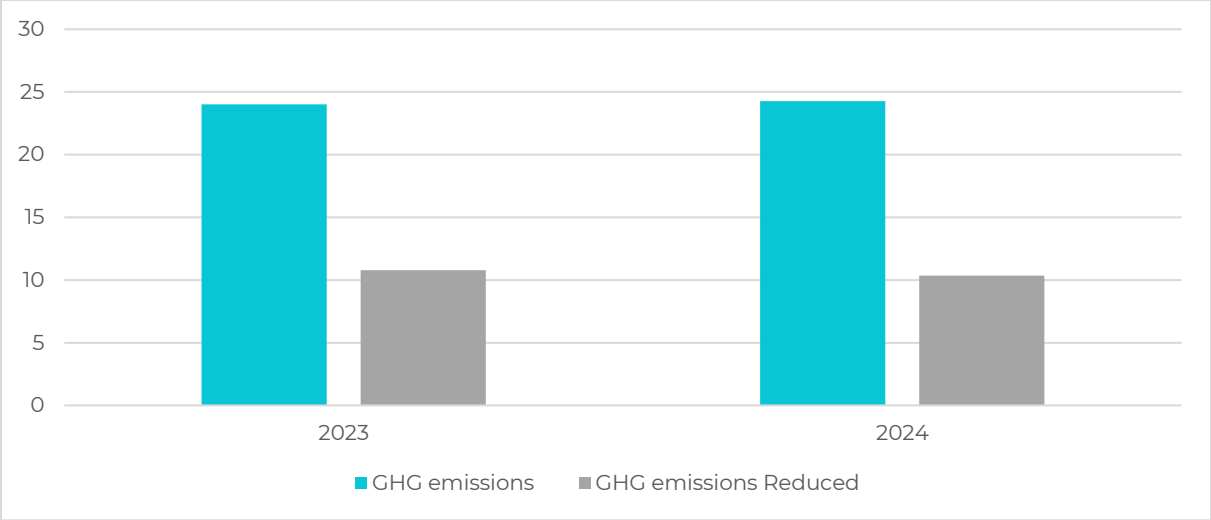

Figure 2: GHG emissions of the Eligible Green Building Portfolio and GHG emissions reduced relative to the Reference Group.

Conclusion

The following conclusions are drawn from this study:

- Based on the calculated real energy consumption, the ING Green Residential Portfolio has a CO_2-emission that is 128,008 tonnes per year lower than the reference, which is a difference of 29.9%.
- All buildings in the ING Green Residential Buildings Portfolio deliver a Substantial Contribution to Climate Change Mitigation following the EU Taxonomy definition, either by having an EPC class A≥ rating, belonging to the top 15% of the national building stock expressed as operational PED for buildings built before 2021, or by meeting the requirements for a PED lower than 10% threshold set for a Nearly Zero Energy Building (NZEB) for buildings built after 2021.

Appendix Green Lion 2023-1 and Green Lion 2024-1

The residential buildings from the Green Lion 2023-1 and 2024-1 mortgage receivables portfolio are not included in the ING Green Residential Buildings impact assessment. The table below gives an overview of the CO_2 emissions of the Green Lion portfolio in relation to the Reference Group. The portfolio consists of 6,055 assets, and below the aggregated 2023-1 and 2024-1 portfolios are shown.

Approximately 57% (in square meters) of the total portfolio consists of A label buildings built before 2021 The CO_2-emissions of the Green Lion portfolio for A label buildings built before 2021 is 13,448 tonnes of CO_2 per year. The Reference CO_2-emission is 16,022 CO_2 per year.

The CO_2-emissions of the Green Lion portfolio for A label buildings built before 2021 is 3,875 tonnes of CO_2 per year. The Reference CO_2-emission is 6,196 CO_2 per year.

Approximately 21% of the Green Lion portfolio consists of buildings that are eligible due to meeting the requirements for a PED lower than 10% threshold set for a Nearly Zero Energy Building (NZEB). The total CO_2-emissions of the ING Green Residential Portfolio for these new buildings 2,248 tonnes of CO_2 per year. The Reference CO_2-emission is 6,263 tonnes of CO_2 per year.

The reduction in CO_2-emissions for the Green Lion 2023-1 and Green Lion 2024-1 can be found in table 8.

	#	m^2	GHG Emission Green Lion Portfolio (tonnes CO_2)	GHG Emission Reference (tonnes CO_2)	GHG Emission reduction (tonnes CO_2)
Buildings A label (<2021)	4,759	642,160	17,323	22,219	4,896
NZEB - 10% >2021	1,296	181,025	2,248	6,263	4,015
Total	6,055	823,185	19,571	28,482	8,911

Table 8: Summarized overview of the reduced CO_2-emissions of Green Lion 2023-1 and Green Lion 2024-1 combined and compared to the Reference Group

The reduction in CO_2-emissions of the Green Lion 2024-1 portfolio can be found in table 9.

	#	m²	GHG Emission Green Lion Portfolio (tonnes CO_2)	GHG Emission Reference (tonnes CO_2)	GHG Emission reduction (tonnes CO_2)
Buildings A label (<2021)	2,586	346,988	9,426	12,006	2,580
NZEB - 10% >2021	707	98,825	1,228	3,419	2,191
Total	3,293	445,813	10,654	15,425	4,771

Table 9: Summarized overview of the reduced CO_2-emissions for Green Lion 2024-1 compared to the Reference Group

The reduction in CO_2-emissions of the Green Lion 2023-1 portfolio can be found in table 10.

	#	m²	GHG Emission Green Lion Portfolio (tonnes CO_2)	GHG Emission Reference (tonnes CO_2)	GHG Emission reduction (tonnes CO_2)
Buildings A label (<2021)	2,173	295,172	7,896	10,213	2,317
NZEB - 10% >2021	589	82,200	1,021	2,844	1,823
Total	2,762	377,372	8,917	13,057	4,140

Table 10: Summarized overview of the reduced CO_2-emissions for Green Lion 2023-1 compared to the Reference Group

Appendix: Data Integrity and validation in CFP Green Buildings Services

Third-Party Verified Reliability of Sources and Algorithms

At CFP Green Buildings, we ensure our tools and data are reliable and accurate by working with independent third-party experts to review and verify the accuracy of the Green Buildings Tool[1]. Zanders, respected in real estate and energy efficiency, confirm that our algorithms are robust, and our data sources are trustworthy. This gives confidence to stakeholders like auditors, investors, and regulators.

We perform third-party validations in each country where the tool is used. Zanders assess our data and methods, providing recommendations to further improve accuracy. This ensures the tool stays up to date with local market conditions and industry best practices.

The Green Buildings Tool is designed to provide accurate, location-specific insights by tailoring its calculations to the building type and location. This approach ensures relevant and reliable results for every property.

The key data used in the tool is sourced from respected organizations and government publications and backed by detailed country-specific research. By combining expert validations, tailored calculations, and reliable data, we deliver a tool that meets the highest standards of accuracy and reliability.

Commitment to Data Confidentiality

We believe the importance of confidentiality cannot be taken lightly. Full care is taken to handle all information provided by our clients in conformity with relevant data protection regulations, including GDPR. Our systems are designed to maintain rigid security protocols that ensure sensitive information remains secure throughout processing.

Complementing our internal strict policies on security and confidentiality are internationally recognized certifications showing our commitment to data security and confidentiality, including:

- **ISO 27001:2022 Certification**: In line with this standard, we have implemented an Information Security Management System, ISMS, that strives to guarantee comprehensive protection of information for our clients.
- **SOC 2 Report**: Our SOC 2 attestation is proof that we meet all the rigid criteria regarding security, availability, processing integrity and confidentiality.

We also follow the following practices:

- **Limited Access:** Data access is restricted to authorized personnel. We also apply the Need-To-Know principle in that individuals will only be given access to data they absolutely need to know for their jobs. We periodically review the rights of access to data in order to keep it compliant and further minimize any possible risk.
- **Encryption Standards**: Data transferred and stored is protected with advanced methods of encryption.
- **Four-Eyes Principle**: All major acts involving sensitive data by key persons are always approved and reviewed by at least two team members for better accountability and accuracy.

Maintaining these high standards gives our clients confidence in knowing that their data is secure and handled with integrity.

About CFP Green Buildings

CFP Green Buildings is the industry leader in sustainability for the real estate industry. Sustainability is at the core of everything we do, guiding our mission to create a more sustainable built environment. This commitment is underscored by our certifications, including **B Corp** and **EcoVadis**, which reflect our adherence to the highest standards of social and environmental performance, transparency, and accountability.

We empower our clients to make informed decisions that will positively impact the environment and their bottom line through innovative tools, data-driven insights, and expert guidance. As an extension of their team, we continuously improve our processes and outcomes to protect a greener future for all.

Impact assessment ING Green Commercial Buildings Portfolio the Netherlands

Project: Impact Assessment ING Green Commercial Buildings Portfolio

Subject: Reduced CO_2-emission calculation

Date: May 2025

As requested by ING, CFP Green Buildings has been asked to compare the greenhouse gas emissions[1] of a specific, energy-efficient group of Commercial Real Estate (in this document indicated as ING Green Commercial Buildings Portfolio[2]) to that of a comparable group of real estate with an average energy efficiency (indicated as "Reference" or "Reference Group"[3]). The CO_2 emissions have been calculated for the year 2024. The objective of this analysis is to show the estimated carbon emissions of the green assets and compare with the Reference Group. This document outlines the results of this analysis.

The Eligible Green Building Portfolio

A total of 22,006 assets have been selected as eligible for ING's Green Commercial Building Portfolio.

ING's Green Buildings Portfolio either have a registered energy label A, or meet the requirements for a PED lower than 10% threshold set for a Nearly Zero Energy Building (NZEB).

For Commercial Buildings, approximately 12% of the national Dutch Commercial Buildings stock have a registered EPC label A≥. This means that commercial buildings with a registered EPC A≥ automatically belong to the top 15% of the national or regional building stock expressed as operational Primary Energy Demand.

Therefore, commercial buildings with a registered EPC rating A≥ are selected for the ING Green Commercial Buildings portfolio for buildings built before 31 December 2020.

For buildings built after 31 December 2020 in the portfolio, they are required to have a registered EPC rating A≥ and are required to be 10% more energy efficient than the NZEB requirements as they comply to the following values.

- Office (Kantoor): Lower than or equal to 36 kWh/m²/year.
- Retail (Winkel): Lower than or equal to 54 kWh/m²/year.
- Residential (Wonen): Lower than or equal to 45 kWh/m²/year.

[1] Greenhouse gas emissions are calculated in CO_2-equivalent, which will be referred to as CO_2 throughout this document.
[2] When referring to the Eligible Asset Portfolio in this document, we refer to buildings that are owned by professional real estate investors, including residential objects that are all intended to be rented out (commercially).
[3] The Reference Group represents the average CO_2-emissions of residential buildings in the Netherlands, taking the floor area of the eligible assets into account.

Methodology

Within this study, the CO_2-emissions of 22,006 objects, as selected by ING, were determined using the calculated energy consumption of these objects.

The energy usage is based on the 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 anonymized 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 Statistics Netherlands (CBS), is used to improve and check the benchmarking model. These algorithms and benchmarks are the same as those used in the online tool www.ingrefduurzaam.nl. CFP green buildings continuously improves its calculation methods and algorithms when new data or insights become available. In this study, the calculated energy consumption of the Reference Group was determined based on data from CBS, RVO, Kadaster and CFP[4]. The Netherlands' average CO_2 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 numbers used for the calculations in this report are given in the table below[5].

CO_2 emissions of the Reference Group per m^2		
Residential	34.6	kg CO_2e per year
Retail	80.3	kg CO_2e per year
Industrial	25.8	kg CO_2e per year
Office	45.7	kg CO_2e per year
Other[6]	55.3	kg CO_2e per year

Table 1: Emission of the Reference Group

The CO_2-emissions in this report were calculated with the Dutch market standard conversion factors, derived from the Green Deal CO_2-Emissionfactors. The applied factors are illustrated in table 2[7].

Applied GHG emission factors[8]		
Natural gas	2.134	kg CO_2e /m^3
Electricity	0.328	kg CO_2e /kWh

Table 2: Dutch CO_2-emission factors

Group Composition

The group composition of the 22,006 objects is shown in table 3. Retail buildings have the largest footprint with 38% of total square meters. Residential buildings account for 30% of the portfolio. About 41% of the portfolio are new buildings[9], 59% is refurbished to obtain an energy label A.

	#	m^2	Refurbished	New
Industry	431	257,844	349	82
Office	950	901,222	756	194
Retail	3,286	1,691,740	2,715	571
Residential	16,708	1,351,011	8,615	8,093
Other[7]	631	243,511	477	154
Total	22,006	4,445,328	12,912	9,094

Table 3: Group composition ING Green Buildings[10]

Energy consumption

Table 4 shows the calculated real energy consumption of the ING Green Commercial Buildings Portfolio. The calculated annual energy consumption for electricity is around 469.2 million kWh each year and approximately 29.0 million m^3 for natural gas each year.

Electricity (kWh)	Natural gas(m^3)
469,189,798	29,035,923

Table 4: Energy consumption ING Green Commercial Building Portfolio

[4] The Reference Group has the same floor area as the eligible objects. The CO_2-emissions are calculated by CFP algorithms taking into account the energy usage of all residential buildings in the Netherlands.
[5] The emission factors of table 2 are used.
[6] Other refers to all other building types such as education, hotels, health care, sport and unknown.

[7] Source: https://www.co2emissiefactoren.nl using WTW emissions for natural gas in kg/CO_2 per m^3 for 2024.
[8] Source: https://www.co2emissiefactoren.nl using WTW emissions for electricity (unknown) in kg/CO_2 in kWh for 2024.
[9] A building is categorised as new when the construction year of the building is 2006 or later.
[10] Building types have been retrieved from Kadaster.

CO_2-emission – Estimated positive impact

Table 5 shows the total CO_2-emissions of the ING Green Commercial Buildings Portfolio and the Reference group based on the calculated energy consumption. The total CO_2-emission of the ING Green Commercial Buildings portfolio is 180,381 tonnes of CO_2 per year. The Reference CO_2-emission is 246,543 tonnes of CO_2 per year. This is a reduced amount of 66,162 tonnes of CO_2 per year.

GHG Emission ING Green Commercial Portfolio (tonnes CO_2)	GHG Emission Reference (tonnes CO_2)	GHG Emission reduction (tonnes CO_2)
180,381	246,543	66,162

Table 5: CO_2-emission ING Green Commercial Building Portfolio compared to the Reference Group

Table 6 shows an overview of the calculated CO_2-emissions reduction for the refurbished buildings and new buildings, compared to the Reference Group.

Approximately 59% (in square meters) of the portfolio consists of refurbished buildings. The CO_2-emissions of the ING Green Commercial Buildings Portfolio for refurbished buildings are 133,974 tonnes of CO_2 per year. The Reference CO_2-emission is 174,889 tonnes of CO_2 per year. For refurbished buildings, this is a reduced amount of 40,915 tonnes of CO_2 per year.

Approximately 41% of the portfolio consists of non-refurbished buildings or new buildings. The total CO_2-emission of the ING Green Commercial Buildings Portfolio for new buildings is 46,407 tonnes CO_2 per year. The Reference CO_2-emission is 71,654 tonnes of CO_2 per year. For new buildings, this is a reduced amount of 25,247 tonnes of CO_2 per year.

	#	m^2	GHG Emission ING Green Commercial Buildings Portfolio (tonnes CO_2)	GHG Emission Reference (tonnes CO_2)	GHG Emission reduction (tonnes CO_2)
Refurbished buildings	12,912	3,012,069	133,974	174,889	40,915
New Buildings	9,094	1,433,259	46,407	71,654	25,247
Total	22,006	4,445,328	180,381	246,543	66,162

Table 6: CO_2-emission ING Green Commercial Building Portfolio compared to the Reference Group

Annual Development of Climate Impact

CFP Green Buildings also gave insights into the energy consumption of the Eligible Green Commercial Building Portfolio as of year-end 2023 and compared the CO_2-emissions of the Eligible Green Commercial Buillding Portfolio of 2024. Figure 1 shows the energy consumption of the Eligible Green Commercial Building Portfolio in 2023 and 2024. In order to compare the outcomes of both reports, the numbers are converted to consumption / CO_2-emissions per m^2.

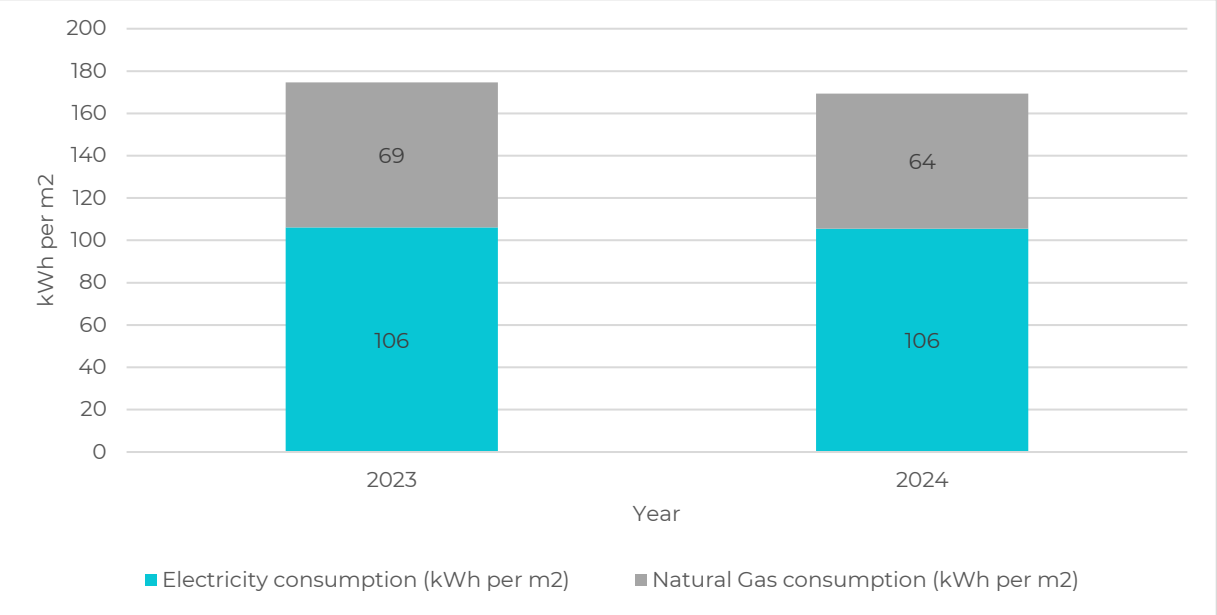

Figure 1: Calculated energy consumption comparison per m^2 per year of the Eligible Green Commercial Building Portfolio

The (estimated) electricity consumption has stayed the same. The estimated gas consumption has decreased slighty, as the portfolio has become more sustainable over time.

Figure 2 gives insights on the CO_2-Emissions per m^2 of the Eligible Green Commercial Building Portfolio in 2023 and 2024. The total energy consumption is converted to CO_2-emission by using standard conversion factors. The CO_2-emission is calculated over the entire portfolio, divided by the total amount of square meters. This graph shows that the GHG emissions per m^2 of the Eligible Green Commercial Building Portfolio have decreased over last year, from 49.8 kg CO_2/m^2 to 40.6 kg CO_2/m^2. The reduced emissions per m^2 have increased from 6.4 kg CO_2/m^2 to 14.9 kg CO_2 $/m^2$.

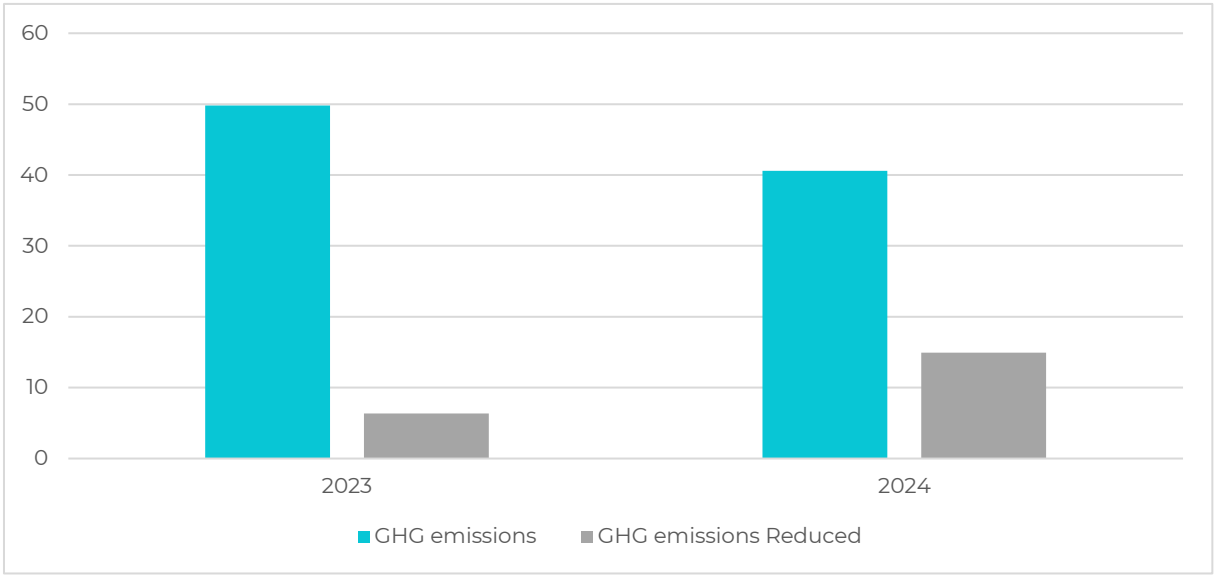

Figure 2: GHG emissions of the Eligible Green Commercial Building Portfolio and GHG emissions reduced relative to the Reference Group.

Conclusion

The following conclusions are drawn from this study:

- Based on the calculated real energy consumption, the ING Green Commercial Buildings Portfolio has a CO_2-emission that is 66,162 tonnes per year lower than the Reference Group, which is a difference of 26.8%.
- All buildings in the ING Green Commercial Buildings portfolio have a registered EPC class A≥ rating for buildings built before 2021, and meet the respective requirements per building type for a PED lower than 10% threshold set for a Nearly Zero Energy Building (NZEB) for buildings built after 2021.

Appendix: Data Integrity and validation in CFP Green Buildings Services

Third-Party Verified Reliability of Sources and Algorithms

At CFP Green Buildings, we ensure our tools and data are reliable and accurate by working with independent third-party experts to review and verify the accuracy of the Green Buildings Tool[1]. Zanders, respected in real estate and energy efficiency, confirm that our algorithms are robust, and our data sources are trustworthy. This gives confidence to stakeholders like auditors, investors, and regulators.

We perform third-party validations in each country where the tool is used. Zanders assess our data and methods, providing recommendations to further improve accuracy. This ensures the tool stays up to date with local market conditions and industry best practices.

The Green Buildings Tool is designed to provide accurate, location-specific insights by tailoring its calculations to the building type and location. This approach ensures relevant and reliable results for every property.

The key data used in the tool is sourced from respected organizations and government publications and backed by detailed country-specific research. By combining expert validations, tailored calculations, and reliable data, we deliver a tool that meets the highest standards of accuracy and reliability.

Commitment to Data Confidentiality

We believe the importance of confidentiality cannot be taken lightly. Full care is taken to handle all information provided by our clients in conformity with relevant data protection regulations, including GDPR. Our systems are designed to maintain rigid security protocols that ensure sensitive information remains secure throughout processing.

Complementing our internal strict policies on security and confidentiality are internationally recognized certifications showing our commitment to data security and confidentiality, including:

- **ISO 27001:2022 Certification**: In line with this standard, we have implemented an Information Security Management System, ISMS, that strives to guarantee comprehensive protection of information for our clients.
- **SOC 2 Report**: Our SOC 2 attestation is proof that we meet all the rigid criteria regarding security, availability, processing integrity and confidentiality.

We also follow the following practices:

- **Limited Access:** Data access is restricted to authorized personnel. We also apply the Need-To-Know principle in that individuals will only be given access to data they absolutely need to know for their jobs. We periodically review the rights of access to data in order to keep it compliant and further minimize any possible risk.
- **Encryption Standards**: Data transferred and stored is protected with advanced methods of encryption.
- **Four-Eyes Principle**: All major acts involving sensitive data by key persons are always approved and reviewed by at least two team members for better accountability and accuracy.

Maintaining these high standards gives our clients confidence in knowing that their data is secure and handled with integrity.

About CFP Green Buildings

CFP Green Buildings is the industry leader in sustainability for the real estate industry. Sustainability is at the core of everything we do, guiding our mission to create a more sustainable built environment. This commitment is underscored by our certifications, including **B Corp** and **EcoVadis**, which reflect our adherence to the highest standards of social and environmental performance, transparency, and accountability.

We empower our clients to make informed decisions that will positively impact the environment and their bottom line through innovative tools, data-driven insights, and expert guidance. As an extension of their team, we continuously improve our processes and outcomes to protect a greener future for all.

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SUSTAINABLE FINANCE

IMPACT REPORTING– RESIDENTIAL BUILDINGS – GERMANY

TOTAL PORTFOLIO

16.04.2025
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GREEN BOND IMPACT REPORT ING-DIBA AG

German residential real estate portfolio – Harmonized Framework

Low Carbon Buildings	Date of Issuance	Type	Signed Amount[a]	Share of Total Portfolio Financing[b]	Eligibility for green bonds[c]	Average portfolio lifetime[d]	Annual final energy savings[e]	Annual CO2 emissions avoidance[f]
Unit	*[dd.mm.yyyy]*	*[-]*	*[EUR]*	*[%]*	*[%]*	*[years]*	*[MWh/year]*	*[tCO2/year]*
ING-DiBa AG Green Bond	*31.12.2024*	*Low Carbon Building*	*18.982.595.645*	*100,0*	*100*	*6,6*	*531.314*	*113.522*
Einfamilienhaus	31.12.2024	Low Carbon Building	17.774.945	0,1	100	5,3	449	86
Einfamilienhaus (freistehend)			10.983.235.210	57,9	100	6,6	325.438	68.423
Zweifamilienhaus			618.678.505	3,3	100	6,7	22.907	4.743
Reihenhaus			1.527.715.478	8,0	100	7,0	44.417	9.883
Eigentumswohnung			3.543.398.383	18,7	100	6,2	72.968	16.488
Doppelhaushälfte			2.171.606.585	11,4	100	6,8	60.114	12.897
Mehrfamilienhaus bis 3 Whg.			71.007.197	0,4	100	6,5	3.732	756
Mehrfamilienhaus ab 4 Whg.			49.179.341	0,3	100	6,8	1.289	247

[a] Legally committed signed amount by the issuer for the porfolio or portfolio components eligible for green bond financing.

[b] Portion of the total portfolio cost that is financed by the issuer.

[c] Portion of the total portfolio cost that is eligible for Green Bond.

[d] average remaining term of Green Bond loan within the total portfolio.

[e] Final energy savings calculated using the difference between the top 15% and the national building stock benchmarks

[f] Greenhouse gas emissions avoidance determined by multiplying the final energy savings with the carbon emissions intensity

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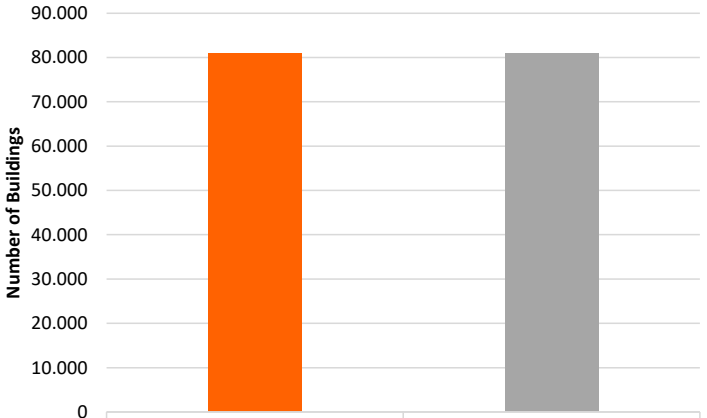
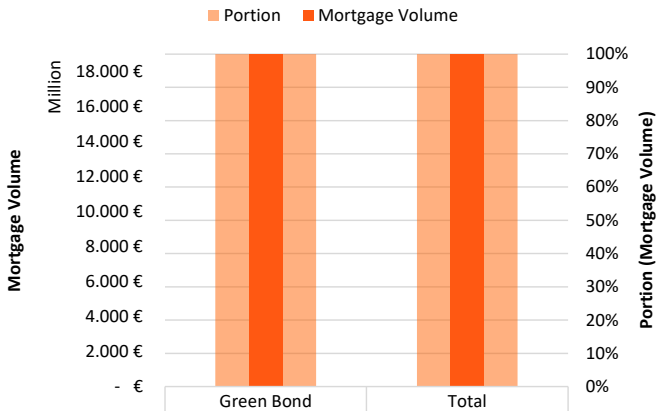
GREEN BOND IMPACT REPORT ING-DIBA AG

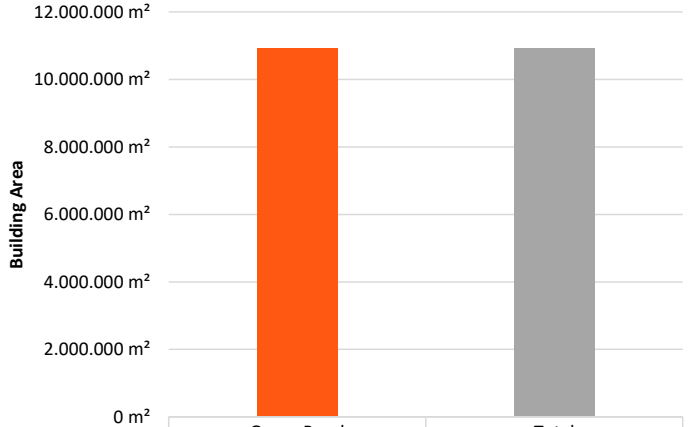
German residential real estate portfolio – Impact Reporting



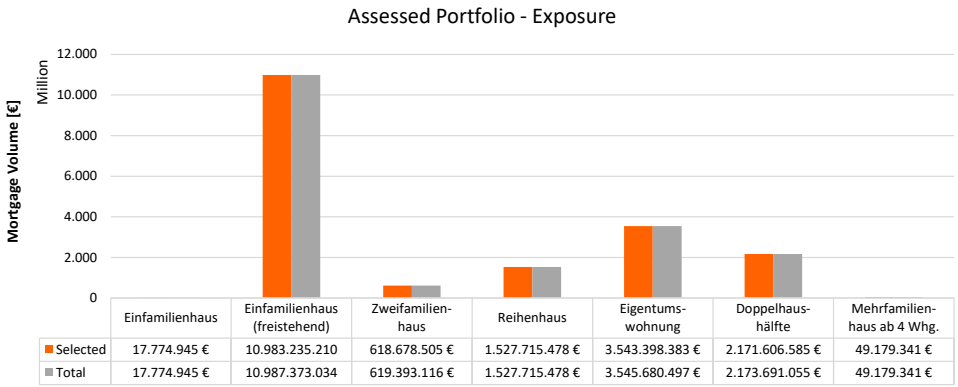
	Green Bond	Total
Amount	80.860	80.884



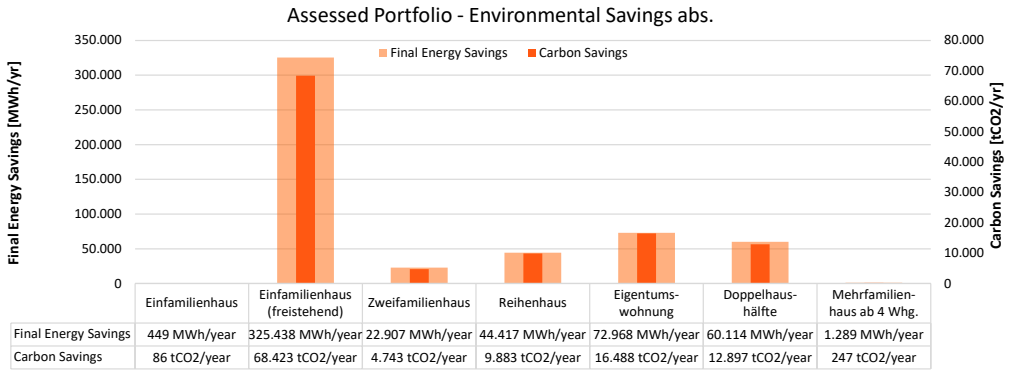
	Green Bond	Total
Portion	99,95%	100,00%
Mortgage Volume	18.982.595.645 €	18.991.814.665 €



	Green Bond	Total
Building Area	10.930.070 m²	10.933.712 m²



	Einfamilienhaus	Einfamilienhaus (freistehend)	Zweifamilien-haus	Reihenhaus	Eigentums-wohnung	Doppelhaus-hälfte	Mehrfamilien-haus ab 4 Whg.
Selected	17.774.945 €	10.983.235.210	618.678.505 €	1.527.715.478 €	3.543.398.383 €	2.171.606.585 €	49.179.341 €
Total	17.774.945 €	10.987.373.034	619.393.116 €	1.527.715.478 €	3.545.680.497 €	2.173.691.055 €	49.179.341 €



	Einfamilienhaus	Einfamilienhaus (freistehend)	Zweifamilienhaus	Reihenhaus	Eigentums-wohnung	Doppelhaus-hälfte	Mehrfamilien-haus ab 4 Whg.
Final Energy Savings	449 MWh/year	325.438 MWh/year	22.907 MWh/year	44.417 MWh/year	72.968 MWh/year	60.114 MWh/year	1.289 MWh/year
Carbon Savings	86 tCO2/year	68.423 tCO2/year	4.743 tCO2/year	9.883 tCO2/year	16.488 tCO2/year	12.897 tCO2/year	247 tCO2/year

Green Bond Portfolio:

Buildings: 80.860

Exposure:
18.982.595.645 € (100%)

Energy savings:
531.314 MWh/year

Carbon emissions savings:
113.522 tCO_2/year

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GREEN BOND IMPACT REPORT ING-DIBA AG

German residential real estate portfolio – Harmonized Framework

Low Carbon Buildings	Date of Issuance	Type	Signed Amount[a]	Share of Total Portfolio Financing[b]	Eligibility for green bonds[c]	Average portfolio lifetime[d]	Annual final energy savings[e]	Annual CO2 emissions avoidance[f]
Unit	*[dd.mm.yyyy]*	*[-]*	*[EUR]*	*[%]*	*[%]*	*[years]*	*[MWh/year]*	*[tCO2/year]*
ING-DiBa AG Green Bond	*31.12.2024*	*Low Carbon Building*	*4.713.971.510*	*100,0*	*100*	*7,0*	*199.128*	*44.570*
Einfamilienhaus (freistehend)	31.12.2024	Low Carbon Building	2.572.258.257	54,6	100	7,1	121.832	27.083
Zweifamilienhaus			86.045.253	1,8	100	7,3	5.093	1.123
Reihenhaus			380.204.126	8,1	100	7,4	17.591	4.012
Eigentumswohnung			1.102.271.926	23,4	100	6,5	30.127	6.887
Doppelhaushälfte			573.191.948	12,2	100	7,4	24.484	5.464

[a] Legally committed signed amount by the issuer for the porfolio or portfolio components eligible for green bond financing.

[b] Portion of the total portfolio cost that is financed by the issuer.

[c] Portion of the total portfolio cost that is eligible for Green Bond.

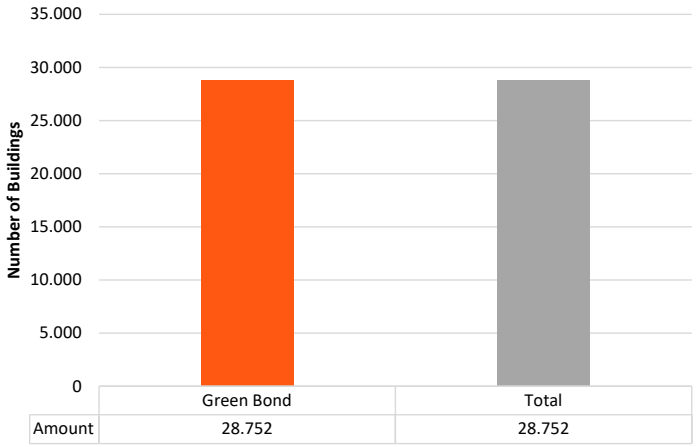
[d] average remaining term of Green Bond loan within the total portfolio.

[e] Final energy savings calculated using the difference between the top 15% and the national building stock benchmarks

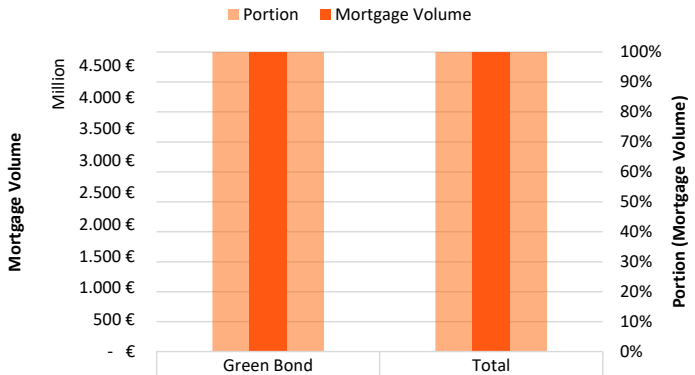
[f] Greenhouse gas emissions avoidance determined by multiplying the final energy savings with the carbon emissions intensity

GREEN BOND IMPACT REPORT ING-DIBA AG

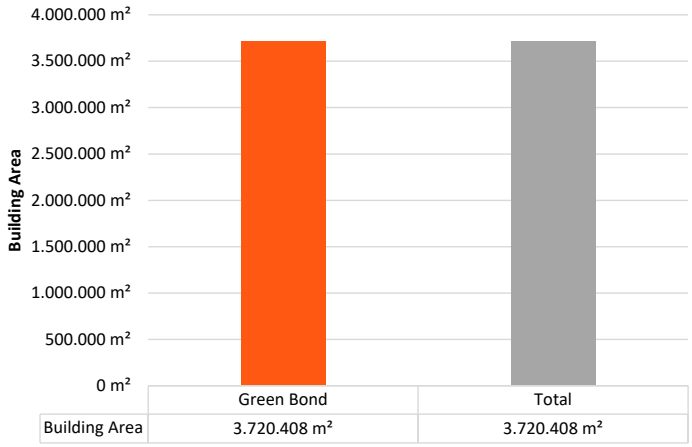
German residential real estate portfolio – Impact Reporting



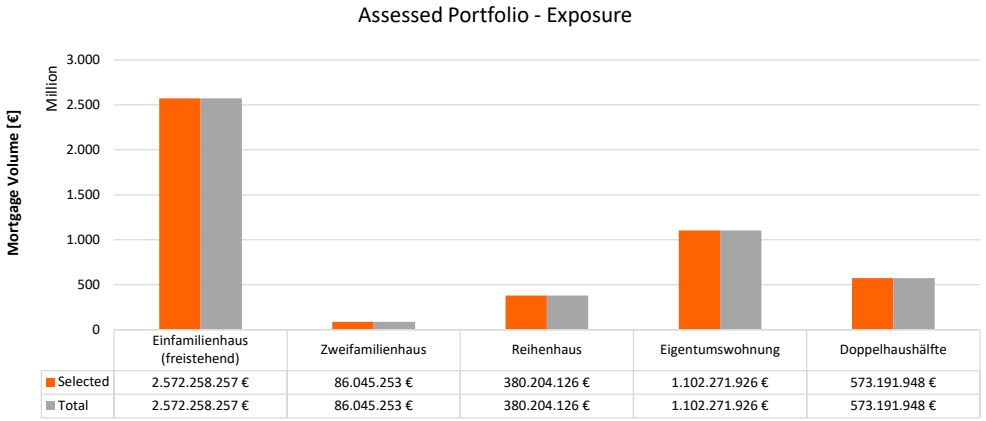
	Green Bond	Total
Amount	28.752	28.752



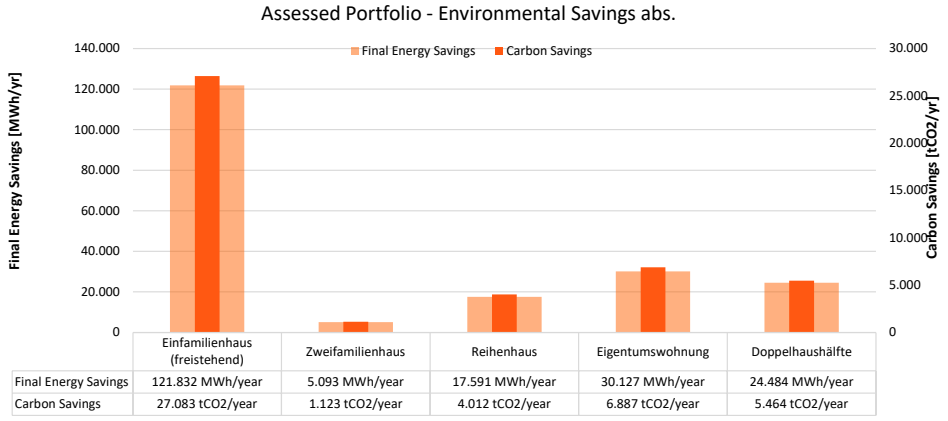
	Green Bond	Total
Portion	100%	100%
Mortgage Volume	4.713.971.510 €	4.713.971.510 €



	Green Bond	Total
Building Area	3.720.408 m²	3.720.408 m²



	Einfamilienhaus (freistehend)	Zweifamilienhaus	Reihenhaus	Eigentumswohnung	Doppelhaushälfte
Selected	2.572.258.257 €	86.045.253 €	380.204.126 €	1.102.271.926 €	573.191.948 €
Total	2.572.258.257 €	86.045.253 €	380.204.126 €	1.102.271.926 €	573.191.948 €



	Einfamilienhaus (freistehend)	Zweifamilienhaus	Reihenhaus	Eigentumswohnung	Doppelhaushälfte
Final Energy Savings	121.832 MWh/year	5.093 MWh/year	17.591 MWh/year	30.127 MWh/year	24.484 MWh/year
Carbon Savings	27.083 tCO2/year	1.123 tCO2/year	4.012 tCO2/year	6.887 tCO2/year	5.464 tCO2/year

Green Bond Portfolio:

Buildings: 28.752

Exposure:
4.713.971.510 € (100%)

Energy savings:
199.128 MWh/year

Carbon emissions savings:
44.570 tCO_2/year

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REPORT

ING 2024 Impact Assessment

For eligible Global Green Funding projects for ING up to December 31, 2024

May 2025

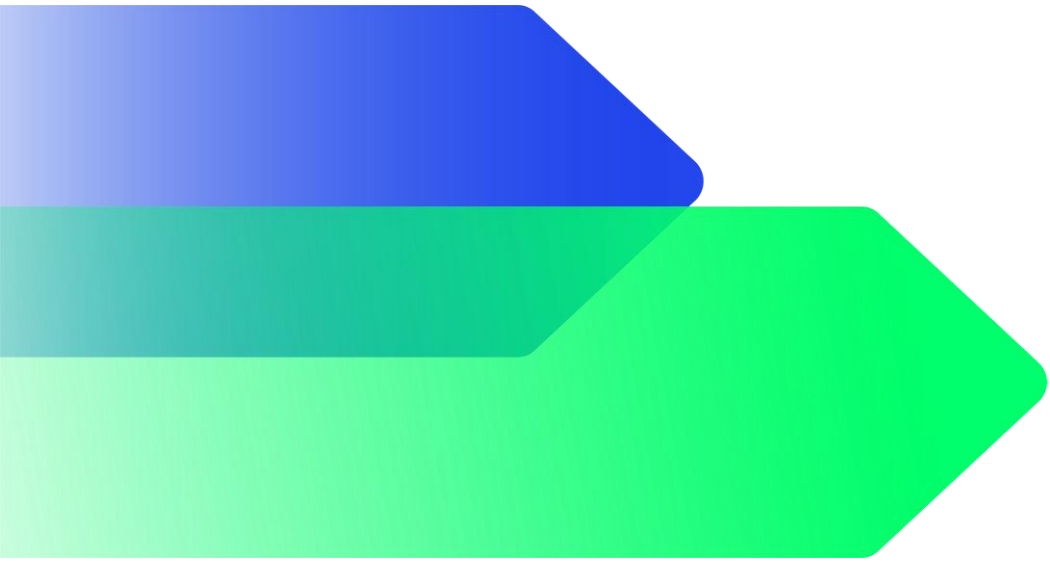


Table of Contents

Introduction

ING has a long-standing commitment to sustainability and has developed a clear set of objectives and targets to achieve its ambitions. This includes reaching net-zero by 2050 and decarbonising its global portfolio.

To support the growth in its Sustainable Finance portfolio, and meet its green funding requirements, ING has designed a Global Green Funding Framework (the "**Framework**") aligned to the ICMA Green Bond Principles ("**GBP**"). The first version of the Framework was published in 2015, with subsequent updates published in 2018 and 2022.

As part of its Framework, and aligned with the requirements of the GBP, ING has committed to regular and transparent reporting on the climate impacts related to the allocation of net proceeds to an Eligible Green Loan Portfolio (the "portfolio").

The portfolio covers the following eligible categories aligned to the GBP:

Eligible Green Loan Categories

Renewable Energy **Green Buildings**

In accordance with the ING Global Green Funding Framework, this document provides:

1. A description of the Eligible Green Projects;
2. The breakdown of the Eligible Green Projects by nature of what is being financed;
3. Metrics regarding Eligible Green Projects' environmental impacts.

This report presents the results of the impact assessment for ING's 2024 Global Green Funding Issuances. For clarity, the Carbon Trust has been engaged to support the development of the impact assessment methodology and calculations for Eligible Green Loans under the Renewable Energy category, only.

Description of Eligible Green Projects

ING, at its discretion, but in accordance with the ICMA Green Bond Principles[1], intends to allocate the proceeds from Green Finance Instruments to an Eligible Green Loan Portfolio, selected in accordance

[1] ICMA Green Bond Principles – June 2021 (June 2022 Appendix 1)

with the Eligibility Criteria and evaluation and selection process presented above. ING will strive, over time, to achieve a level of allocation for the Eligible Green Loan Portfolio that matches or exceeds the balance of net proceeds from its outstanding Green Finance Instruments.

Renewable Energy

Renewable Energy assets located globally[2]:

Loans to finance or refinance equipment, development, manufacturing, construction, operation, distribution and maintenance of renewable energy generation. Eligible renewable energy sources include:

a. **Solar Energy**: Photovoltaics (PV)

b. **Wind Energy**: Onshore and offshore wind energy generation facilities and other emerging technologies.

ING's eligible Green Project Portfolio is composed of financial assets (eligible loans), selected in accordance with the Eligibility Criteria set out in the Framework.

Contribution to EU environmental objectives

Eligible Projects substantially contribute to the achievement of the **EU Environmental Objective n. 1: Climate Change Mitigation**[3]

- Generating, transmitting, storing, distributing or using renewable energy in line with Renewable Energy Directive (EU) 2018/2001, including through using innovative technology with a potential for significant future savings or through necessary reinforcement or extension of the grid (1a);

The definition of the Eligibility Criteria takes into account the EU Taxonomy Regulation and the EU Taxonomy Climate Delegated Act on a best effort basis, where there are feasible practical applications for the use of proceeds category in question, and where there are feasible practical applications in the geographies where ING's assets are located (in terms of local regulation).

Contribution to the UN Sustainable Development Goals (UN SDGs):

Green Funding instruments issued under this Global Green Funding framework directly advance the following SDGs:

- SDG 7: Affordable and Clean Energy (Target 7.1, 7.2, 7.3)
- SDG 13: Climate Action (Target 13.1)

---

[2] United States, Italy, Spain, Australia, India, Ireland, Japan, Turkey, Poland, Netherlands, Germany, United Kingdom, France, Portugal, Taiwan, Finland, Norway, Mexico, Belgium, Cambodia, Malaysia, Vietnam, Thailand, Singapore and Indonesia

[3] Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 Jun 2020. On the establishment of a framework to facilitation sustainable investment – 'Taxonomy Regulation', see here.

Market practice in green bond impact assessments, typically presents the total avoided emissions from a given asset allocated to the bond. Please note, in the case of renewables because of the nature of the financing it is normal practice to attribute impact according to the proportion of the total financing provided to the project. For further information on the methodology followed, please refer to the ING Global Green Funding Impact Assessment Methodology.

The Eligible Green Project Portfolio is assessed regarding the following environmental impacts:

- **Renewable Energy:**
  - Total installed capacity (in MWe)
  - Estimated annual energy generation (in MWh)
  - Estimated annual avoided emissions (in tons of CO_2e/year)

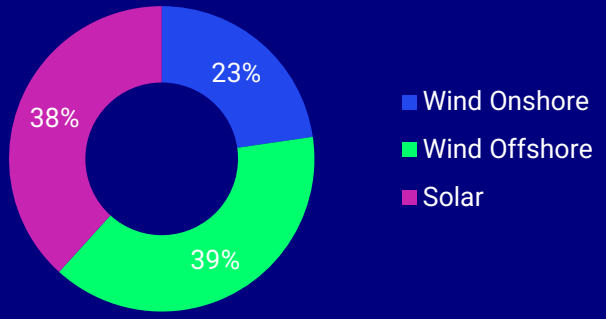
ING's Global Green Funding Impact Highlights

Of the **6.652 billion EUR** outstanding loan balance, **231 of the 411**[4] projects are currently **operational** and the remaining **180** are still **under construction**.

265 solar PV projects have received EUR 3,868 million of financing. 150 of these projects were operational resulting in 2,282,786.2 tCO_2e of attributed avoided emissions.

146 wind (onshore and offshore) projects have received EUR 2,784 million of financing. 81 of these projects were operational, resulting in 3,681,895.5 tCO_2e of attributed avoided emissions.

ING avoided emissions Operational Projects (tCO2e)



Total outstanding loan balance (EUR) 6.652 billion	**Operational avoided emissions per EUR invested in ($kgCO_2e$/EUR)** 1.650
Number of Eligible Transactions 399[4]	**Operational Attributed Avoided Emissions (tCO_2e)** 5.96 million
Under Construction Expected Attributed Avoided Emissions (tCO_2e) 6.05 million	**Total Attributed Avoided Emissions (tCO_2e)** 12.02 million

[4] There were 399 total transactions, some of which involved multiple renewable energy projects. When accounting for each project individually, the total number of project-level transactions amounts to 411.

Sector Breakdown of Eligible Green Asset Register

The following section will present the results of the impact assessment on a category-by-category basis, covering all projects included in the 6.652 billion EUR outstanding loan amount. All results are provided as the attributed value (unless specified otherwise), along with a qualitative description of the impact. All results presented below include the actual and/or expected scope 1 and 2 emissions for both operational and under-construction projects.

In line with the Framework, the Sector Breakdown will focus on the environmental impact of the projects.

Renewable Energy

In 2024, global renewable energy capacity is projected to grow significantly. The International Energy Agency (IEA) expects that, given current policies and market conditions, the world will add over 5,500 gigawatts (GW) of new renewable capacity by 2030[5] - which would translate into annual renewable capacity additions reaching nearly 940 GW by 2030.

However, to meet net-zero emissions targets by 2050, the IEA emphasizes that global renewable capacity must accelerate even further, reaching approximately 11,000 GW by 2030.[6]

Figure 1 shows the avoided emissions relative to avoided emissions per Euro ($kgCO_2e$/EUR) for the top 10 countries by outstanding.

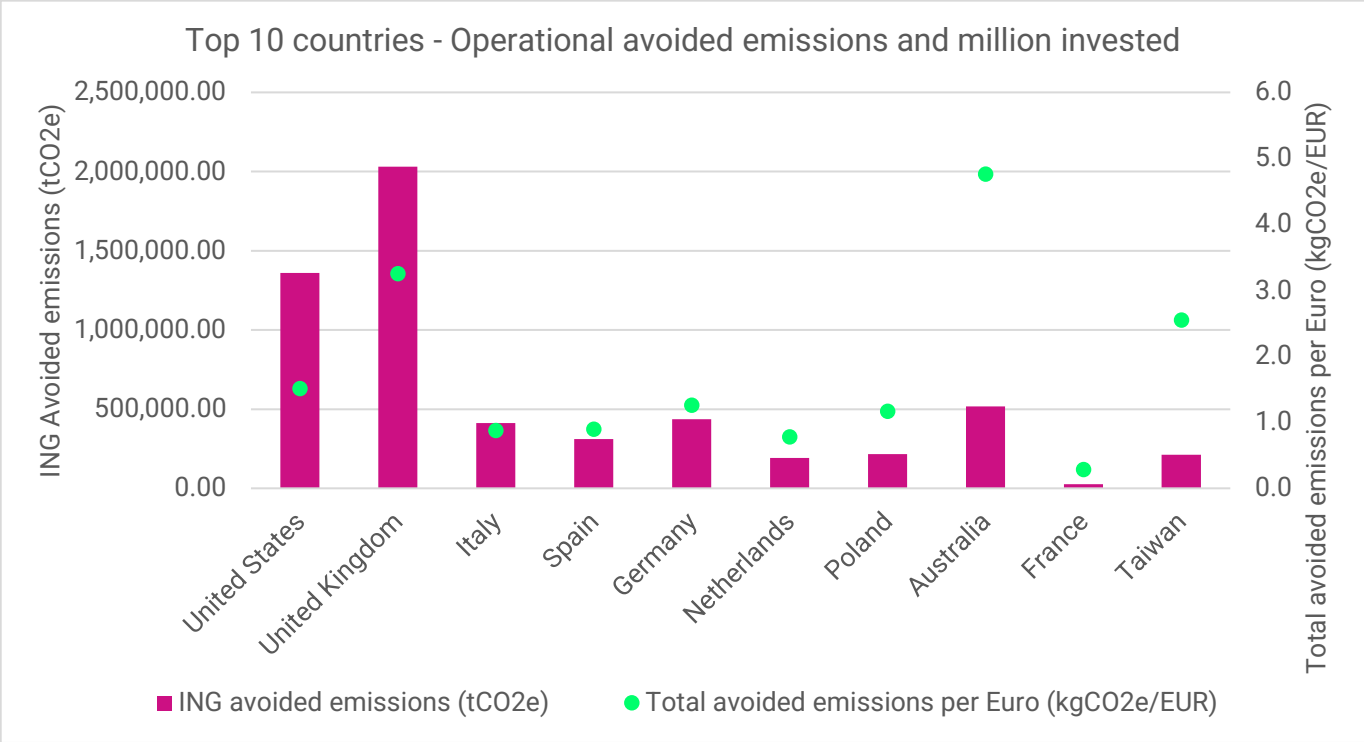


Figure 1 Top 10 countries - Operational avoided emissions and million invested.

[5] Renewables 2024 – Analysis and Forecast - IEA

[6] Renewables 2024 – Analysis and Forecast - IEA

Solar PV Impact

New solar capacity added between now and 2030 will account for 80% of the growth in renewable power globally by the end of this decade.[7] ING has contributed to this global figure by raising finance for 265 solar PV projects located in nineteen countries, with a combined attributed capacity of 8,827 MWe.

Just above 56.6% of these projects are operational, with the total renewable energy attributed production of these operational solar PV projects being 4,875,541 MWh. ING has also provided financing to 115 Solar PV projects which are expected to become operational. This will increase the attributed renewable energy generation by 8,008,638.8 MWh.

Number of Projects:	265
Relevant Project Locations:	Japan, Spain, USA, Poland, Netherlands, Italy, UK, France, Germany, India, Singapore, Australia, Mexico, Cambodia, Indonesia, Malaysia, Portugal, Thailand, Vietnam
Total Capacity of Renewable Energy Projects (MWe):	33,265
Attributed Annual Renewable Energy Generation (MWh):	12,884,180
Attributed Annual Avoided Emissions (tCO_2e):	6,124,204

Wind (Onshore & Offshore) Impact

Whilst 2023 marked a record with 117 GW of wind capacity added globally, in 2024 wind installations reached approximately 130 GW. However, to achieve the COP28 target of 2.75 TW of wind capacity, average annual installations will need to increase to around 320 GW.[8]

ING has financed a 103 onshore and 43 offshore wind projects globally for a total of 146 projects in seventeen countries, of which two countries are in the top five markets for new wind installations – Germany and the United States.[9] Operational projects are generating 8,938,013.7 MWh (attributable to ING) whilst projects currently under construction are expected to generate an additional attributed 4,002,050 MWh.

Number of Projects:	146
Relevant Project Locations:	Australia, Belgium, Finland, France, Germany, India, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Spain, Taiwan, Turkey, UK, USA
Total Capacity of Renewable Energy Projects (MWe):	19,475
Attributed Annual Renewable Energy Generation (MWh):	12,940,064
Attributed Annual Avoided Emissions (tCO_2e):	5,892,990

[7] Renewables 2024 – Analysis and Forecast - IEA

[8] GWEC – Global Wind Report 2024

[9] GWEC – Global Wind Report 2024

Appendix 1: Detailed Results

1.1. Summary of the Impact of ING's Eligible Pipeline Portfolio – Total Amount of Operational and Under Construction Projects

Project type	No. of projects (#)	Total outstanding investment (M EUR)	Total Capacity (Mwe)	Attributed Capacity (MWe)	Total Production (MWh)	ING attributed production of all projects (MWh)	Total Annual Avoided Emissions (tCO2e)	ING avoided emissions (tCO_2e)	Total avoided emissions per Euro ($kgCO_2e$/EUR)	Total avoided emissions per production ($kgCO_2e$/MWh)
Renewable Energy										
Wind Onshore	103	1,280	7,294	1,905	19,275,733	4,918,635	21,103,611	2,466,172	1.9	501.4
Wind Offshore	43	1,503	12,181	1,686	57,559,102	8,021,429	59,857,977	3,426,818	2.3	427.2
Solar	265	3,868	33,265	8,827	47,253,811	12,884,180	67,084,684	6,124,204	1.6	475.3
Total	**411**	**6,652**	**52,740**	**12,418**	**124,088,645**	**25,824,244**	**148,046,272**	**12,017,194**	**1.8**	**465.3**

1.2. Summary of the Impact of ING's Eligible Pipeline Portfolio – Total Amount of Operational Projects

Project type	No. of projects (#)	Total outstanding investment (M EUR)	Total Capacity (Mwe)	Attributed Capacity (MWe)	Total Production (MWh)	ING attributed production of all projects (MWh)	Total Annual Avoided Emissions (tCO2e)	ING avoided emissions (tCO_2e)	Total avoided emissions per Euro ($kgCO_2e$/EUR)	Total avoided emissions per production ($kgCO_2e$/MWh)
Renewable Energy										
Wind Onshore	62	767	4,299	1,095	11,530,392	2,934,191	6,627,937	1,353,962	1.8	461.4
Wind Offshore	19	766	6,506	1,357	31,150,759	6,003,823	29,041,503	2,327,933	3.0	387.7
Solar	150	2,083	18,846	3,257	25,009,673	4,875,541	19,194,425	2,282,786	1.1	468.2
Total	**231**	**3,616**	**29,651**	**5,709**	**67,690,824**	**13,813,555**	**54,863,865**	**5,964,682**	**1.6**	**431.8**

1.3. Summary of the Estimated Impact of ING's Eligible Pipeline Portfolio – Total Amount of Under Construction Projects

Project type	No. of projects (#)	Total outstanding investment (M EUR)	Total Capacity (Mwe)	Attributed Capacity (MWe)	Total Production (MWh)	ING attributed production of all projects (MWh)	Total Annual Avoided Emissions (tCO2e)	ING avoided emissions (tCO_2e)	Total avoided emissions per Euro ($kgCO_2e$/EUR)	Total avoided emissions per production ($kgCO_2e$/MWh)
Renewable Energy										
Wind Onshore	41	513	2,995	809	7,745,341	1,984,444	14,475,674	1,112,210	2.2	560.5
Wind Offshore	24	738	5,675	329	26,408,342	2,017,606	30,816,474	1,098,884	1.5	544.6
Solar	115	1,785	14,419	5,570	22,244,138	8,008,639	47,890,259	3,841,418	2.2	479.7
Total	**180**	**3,037**	**23,088**	**6,709**	**56,397,821**	**12,010,689**	**93,182,406**	**6,052,512**	**2.0**	**503.9**

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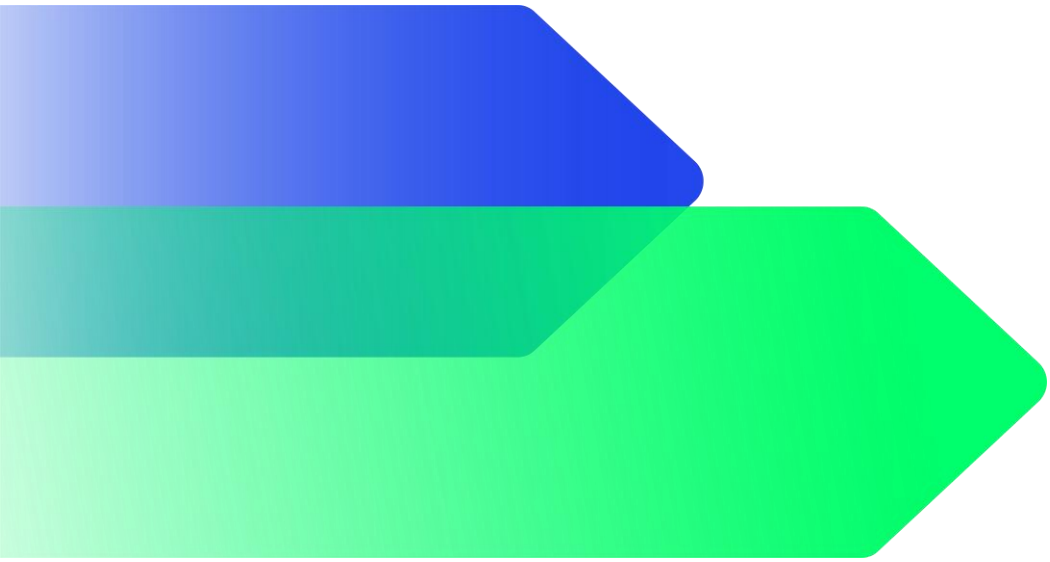
REPORT

ING Global Green Funding Impact Assessment Methodology

For eligible renewable energy assets under the ING Global Green Funding Framework.

May 2025



The Carbon Trust's mission is to accelerate the move to a decarbonised future.

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Contents

Abbreviations

GBP	Green Bond Principles
GLP	Green Loan Principles
PCAF	Partnership for Carbon Accounting Financials
IFI	International Financial Institutions Working Group on Greenhouse Gas Accounting
PV	Photovoltaic
CSP	Concentrated Solar Power
SDG	Sustainable Development Goals
OM	Operating Margins

Introduction

Who we are

The Carbon Trust's mission is to accelerate the move to a decarbonised future. We are an expert guide to turn your climate ambition into impact. We have been climate pioneers for over 20 years, partnering with leading businesses, governments, and financial institutions to drive positive climate action. To date, our 400+ experts globally have helped set over 200 science-based targets and guided 3,000+ organisations and cities across five continents on their route to Net Zero.

ING Global Green Funding Overview

ING is a leading European universal bank with global activities. ING employs more than 60,000 people serving more than 40 million customers, corporate clients and financial institutions in over 100 countries. At ING, their purpose is empowering people to stay a step ahead in life and in business, they by i) putting sustainability at the heart of what they do and ii) providing a superior value for customers.

ING has a role in society to define new ways of doing business that align with economic changes, growth and social impact. Climate change is one of the world's biggest challenges, threatening societies as we know them today. ING is determined to be a banking leader in building a sustainable future for customers, society and the environment. The Bank wants to lead by example by striving for net zero in their own operations. Finally, they also want to play a part in the low-carbon transformation that's necessary to achieve a sustainable future, aiming to steer financing towards meeting global climate goals and working with clients to achieve their own sustainability goals.

In alignment with ING's sustainability strategy, ING has established a Global Green Funding Framework[1] (the '**Framework**') under which ING Group and any of its subsidiaries can issue financial instruments (such as senior bonds, subordinated bonds, covered bonds, commercial papers, medium-term notes and deposits) to finance and refinance assets and projects which contribute to the UN Sustainable Development Goals and the sustainability strategy of ING. The Framework conforms to the sustainable finance principles listed below:

- ICMA Green Bond Principles ("**GBP**") of June 2021[2]

ING engaged ISS Corporate Solutions to review the ING Global Green Funding Framework and provide a second-party opinion on the Framework's environmental credentials and its alignment with the Green Bond Principles 2021[3].

The GBP are a set of voluntary guidelines that recommend transparency and disclosure and promote integrity in the development of the sustainable finance market by clarifying the approach for issuing

[1] ING Global Green Funding Framework 2024, previously the ING Green Bond Framework 2022

[2] ICMA Green Bond Principles, (June 2021)

[3] Second-Party Opinion ISS Corporate Solutions

sustainable instruments. The Framework therefore has four key components for each sustainable issuance, which ING asserts that it will adopt:

1. Use of Proceeds,
2. Process for Project Evaluation and Selection,
3. Management of Proceeds, and,
4. Reporting.

ING will strive, to achieve a level of allocation for the Eligible Green Loan Portfolio that matches or exceeds the balance of net proceeds from its outstanding Green Finance Instruments. Eligible Loans will be added to or removed from ING's Eligible Green Loan Portfolio to the extent required. Unallocated net proceeds from Green Finance Instruments will be held in ING's treasury liquidity portfolio, in cash or other short term and liquid instruments, at ING's own discretion.

The Eligible Green Loan Categories include:

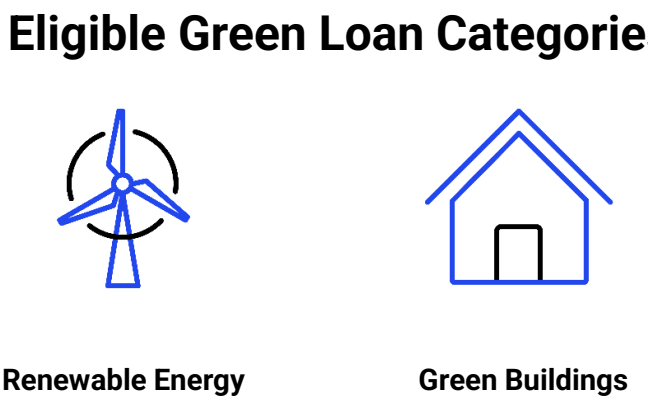

Figure 1: Eligible Green Project Categories

For clarity, the Carbon Trust has been engaged to support the development of the impact assessment methodology and calculations for **Eligible Green Loans under the Renewable Energy category, only**. This methodology report therefore covers only the Renewable Energy asset category of ING's green portfolio.

Reporting Principles

Reporting of the environmental impacts of green bonds is evolving and is still a relatively new concept. However, the Carbon Trust is committed to reporting on the method used to calculate the avoided GHG emissions based on:

- PCAF's The Global GHG Accounting and Reporting Standard for the Financial Industry (November 2020), Chapter 5.3 Project Finance[4],
- Climate Bonds Standard V3.0[5]
- WBCSD Guidance on Avoided Emissions[6]
- IFI GHG Accounting for Grid Connected Renewable Energy Projects (July 2019),
- Green Loan Principles (Feb 2021),
- Green Bond Principles, Voluntary Process Guidelines for Issuing Green Bonds (2021), and,
- ICMA Harmonised Framework for Impact Reporting (2023)[7].

ING follows the key recommendations outlined in the Principles, with external reviewers present across their reporting process. The reporting is based on the Eligible Green Loan Portfolio and numbers will be aggregated for all Green Finance Instruments outstanding.

Scope of Calculations and Reporting

Where feasible, ING intends to report on the environmental impact of the Eligible Green Loans financed by Green Finance Instruments. For each Green Eligible Category, the impact report may provide:

- A description of relevant green projects;
- The breakdown of green projects by nature of what is being financed (financial assets); and
- Impact metrics regarding projects' environmental impact as outlined in ING's Framework.

ING will publish allocation and impact reports annually, covering the previous 12-month period at least until full allocation. ING will show the allocation and impact of the Green Finance Instruments proceeds to the Eligible Green Loan Portfolio for each Eligible Project Category and on an aggregated basis for all of ING's Green Finance Instruments outstanding.

Avoided Emissions

Avoided emissions form a core component of the impact assessment. It provides an insight into the wider positive impact in the form of GHG emissions avoided or reduced as a result of the product and/or services in comparison to a base reference scenario. Existing as a subsection of avoided emissions, this assessment will also consider the enablement from a solution (product/service) and whether that allows for the same or similar function to be performed with significantly less GHG emissions. By providing these solutions, companies enable avoided emissions in the wider system, outside of their value chain. Avoided emissions, along with the entire impact assessment will be calculated on a year-by-year basis.

[4] The Global GHG Accounting and Reporting Standard for the Financial Industry (Dec 2022)

[5] Climate Bonds Standard V3.0 | Climate Bonds Initiative

[6] WBCSD Guidance on Avoided Emissions (Mar 2023)

[7] Handbook Harmonised framework for impact reporting (June 2023)

At the core of the avoided emissions assessment, is the reference scenario. This portion of the assessment looks to understand the context of the investment and what is directly being replaced/reduced as a result of the investment. The reference scenario must be a credible alternative to reflect the reality of the region. Where avoided emissions are calculated, the reference scenario will be described in each of the relevant methodology sections. This is summarised in the graph and equation below:

$$\textbf{\textit{Avoided emissions}} = \sum \textit{Reference Scenario Emissions} - \textit{Solution Emissions}$$

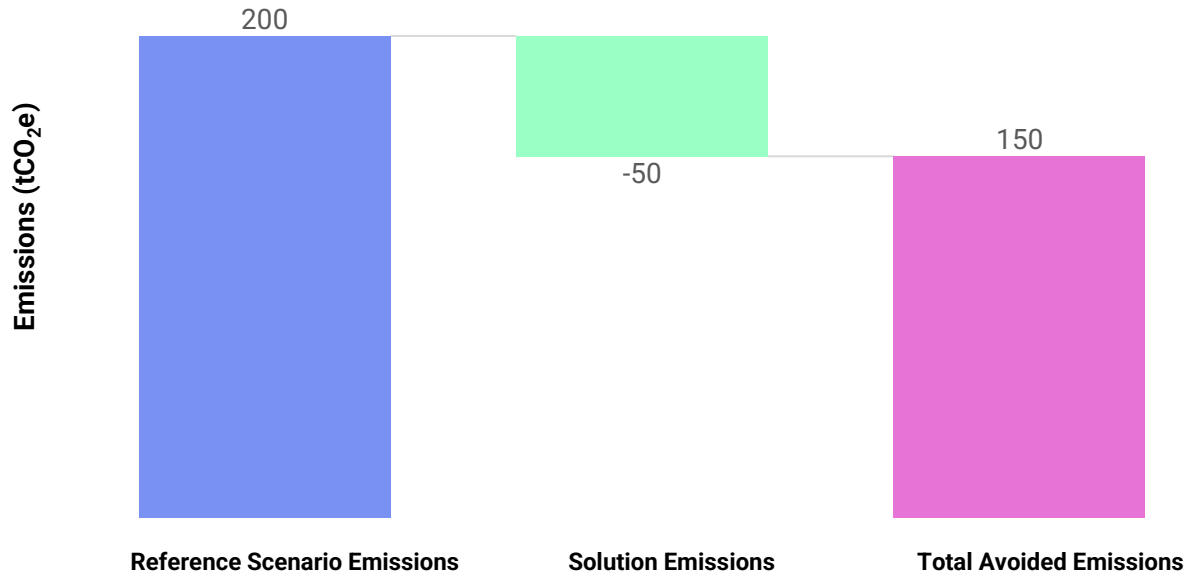

Figure 2 - Avoided emissions calculation example

ING Avoided Emissions and Attribution

When carrying out the impact assessment, an attribution factor was applied to all assets in line with PCAF's methodology. This factor helps understand the share of ING's exposure and contribution to the impact of the project.

$$\textbf{\textit{Project Avoided Emissions}} = \textit{Attribution Factor} \times \textit{Project Emissions}$$

In the process of considering investments for allocation under the Green Finance Framework, ING will discount the portion of the Eligible Green Projects that have been disbursed by one or several other issuers.

To be consistent with the assessment from previous years, the attribution factor was calculated based on deal size. Following the equation below:

$$\textbf{\textit{Attribution Factor}} = \frac{2024\ \textit{ING Outstanding Investment Amount}}{\textit{Total Deal Size}}$$

Methodology

The following section breaks down the methodologies used to calculate the impact of each eligible category included within the assessment. The assessment looks to calculate the impact of ING's investments between the timeframe of January 2024 to December 2024, unless otherwise specified as noted above.

In line with the ICMA Harmonised Framework for Impact Reporting[8], the impact assessment will consist of both a qualitative and quantitative assessment. Where possible, a qualitative assessment will accompany the quantitative calculations detailed below. Many of the projects included within ING's Register are currently under construction; to that end, some client information is not yet available to calculate the respective impact metrics. In these cases, a qualitative assessment was carried out around the expected regional benefits of the technologies that are being invested in.

Renewable Energy

As disclosed within the Framework, ING has committed to investing in renewable energy assets in the production, transmission, and storage of energy from the following renewable sources:

- **Wind power** (including onshore and offshore projects)
- **Solar power**

This category is designed to be aligned to the Sustainable Development Goal ("**SDG**") 7, Affordable and Clean Energy, with a particular focus on achieving the goals of "By 2030, increase substantially the share of renewable energy in the global energy mix" and Sustainable Development Goal ("**SDG**") 13, Climate Action. In addition, it aims to align to the EU Environmental Objective for Climate Change Mitigation.

The resulting metrics that will be included in the assessment where applicable are:

- Capacity of renewable energy plant(s) in (MWe)
- Annual renewable energy generation in MWh/GWh (electricity) and GJ/TJ (other energy)
- Avoided emissions (tCO_2e)

Solar PV and Wind Energy Impact Methodology

Renewable energy generation is a low GHG emissions energy source and has an environmental benefit in replacing energy generated from fossil fuel-based power generation. Energy generated from renewable sources reduces the demand for fossil fuel sources and therefore reduces emissions of greenhouse gases into the atmosphere. In an electricity grid, renewable generation will displace fossil fuel sources and reduce the emissions intensity of the electricity grid.

[8] Handbook Harmonised framework for impact reporting (June 2023)

For the renewable energy assets, the methodology as detailed below considers solar PV and wind power. The actual (or estimated) energy generation was multiplied by a consolidated country-specific electricity emissions factor for the relevant country grid electricity mix. In line with PCAF recommendations, the Operating Margin ("**OM**") was used as the emission factor. The OM represents the marginal generating capacity in the existing dispatch hierarchy that will most likely be displaced by the project. The full dataset for the OM emissions factors is published by IFI AHG-001[9]. This approach was undertaken instead of using the IFI combined margin as the OM provided the best outlook on which operations would most be affected, and ultimately which technologies were most likely to have been reduced over a year. The emissions associated with RE are calculated based on the actual energy generation/export from the facility, multiplied by the emission factor for energy generation.

The equation for estimating the avoided emissions from RE can be seen below (where "i" is each individual project):

$$\boldsymbol{Avoided\ emissions\ (tCO_2)} = \left(\sum_{i=1}^{n} Generation\ (MWh)_i \times Renewable\ Energy\ Emission\ Factor\ (kgCO_2e/MWh)\right) - \left(\sum_{i=1}^{n} Generation\ (MWh)_i \times Country\ Grid\ Operating\ Margin\ Carbon\ Intensity\ (kgCO_2e/MWh)\right)$$

All qualifying assets began operation in years dating prior to the base year (2024) and therefore were operating and generating energy during the reporting period. Assets that are not yet operational are reported on separately within the assessment to highlight future potential impacts. For each asset, ING's portfolio companies provided the energy generation in the given year through actual generation figures on an annual basis. Where actual data was unavailable, ING shared P50 estimates, which are considered reasonable estimates in statistical modelling of energy generation and are commonly used in the evaluation of renewable energy assets. Where P50 estimates were not available, average load factors were used to estimate generation based on technology and the capacity of the projects.

[9] Renewable Energy GHG accounting approach

Appendix

Appendix: Grid Electricity

Table 1: Grid Emissions Factor

Country	Emissions Factor Type	Value	Unit	Source
Australia	Operating Margin	808.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Belgium	Operating Margin	252.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Cambodia	Operating Margin	1046.00	kgCO2/MWh	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Finland	Operating Margin	267.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
France	Operating Margin	158.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Germany	Operating Margin	650.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
India	Operating Margin	951.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Indonesia	Operating Margin	783.00	kgCO2/MWh	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Ireland	Operating Margin	380.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Italy	Operating Margin	414.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Japan	Operating Margin	471.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Luxembourg	Operating Margin	220.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Malaysia	Operating Margin	551.00	kgCO2/MWh	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Mexico	Operating Margin	531.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0

Netherlands	Operating Margin	326.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Norway	Operating Margin	47.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Poland	Operating Margin	828.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Portugal	Operating Margin	389.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Singapore	Operating Margin	379.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Spain	Operating Margin	402.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Taiwan	Operating Margin	484.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Thailand	Operating Margin	450.00	kgCO2/MWh	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Turkey	Operating Margin	376.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
United Kingdom	Operating Margin	380.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
United States	Operating Margin	416.0	$kgCO_2e/MWh$	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0
Vietnam	Operating Margin	560.44	kgCO2/MWh	Harmonized_IFI_Default_Grid_Factors_2021_v3.2_0

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