

**HYPO NOE Landesbank
für Lower Austria and Vienna AG**

**Green bond allocation
and impact report**

Update



31 March 2023



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1. FOREWORD

Financing investments in sustainability and operating sustainably have been central to our strategy for a decade now. Financing for housing – and affordable housing in particular – health, care, education and culture projects is a key pillar of our business model. It allows HYPO NOE to take on responsibility for the well-being of future generations and contribute to the achievement of the UN's Sustainable Development Goals (SDGs). Around two-thirds of HYPO NOE's lending can be assigned to the SDGs.

Sustainability is firmly embedded in the Group's strategy, and HYPO NOE also takes action that enables it to act as a pioneering, flagship company and serve as a model to others. HYPO NOE has been a klimaaktiv Pakt 2030 partner since 2021. Companies that sign up to this initiative of the Austrian Federal Ministry for Climate Action undertake to reduce their environmental footprint by 50% by 2030¹ and are also subject to an annual external assessment to monitor goal attainment.

The Group's extensive action in relation to sustainability in recent years is also reflected in its excellent environment, social and governance (ESG) ratings. HYPO NOE was awarded Prime status by ISS ESG in 2016, and its rating was upgraded to C+ in 2020. The Group was given a 'medium risk' rating by Sustainalytics.

Transparency and clarity were paramount when it came to defining our Green Bond Framework. The framework was designed in accordance with the International Capital Market Association's (ICMA) Green Bond Principles, meaning that the allocation of funds is precisely defined. ISS ESG provided the second party opinion (SPO). An auditor carries out the external audit of allocation and impact reporting.

HYPO NOE's sustainability officers assess whether the selected projects meet the criteria defined in the Green Bond Framework on the basis of the energy performance certificates in the core banking system. The final decision on the allocation of loans to the green bond asset pool is taken by the Green Bond Committee, which is headed by Treasury & ALM. The committee is made up of representatives of front-office and back-office departments and the sustainability officers.

The Group's first green bond – a EUR 500m senior preferred benchmark bond – was issued in June 2020. It was also the first green bond in Austria to be certified in accordance with the UZ 49 standard for sustainable financial products. Two more benchmark bond issues have since followed, in 2022 and 2023. They have shown that a large proportion of investors are specifically focused on green and sustainable investments.

HYPO NOE's three green bond asset pools currently comprise financing for subsidised homebuilding loans, housing development (some of it subsidised) and social infrastructure in the health, education

¹Basis: 2005

and culture sectors. All of the buildings in the asset pools are located in Austria. As at 31 March 2023, the value of HYPO NOE's green asset pools totalled EUR 1.54bn.

HYPO NOE will use the proceeds to finance and refinance green buildings, all of which rank among the top 15% in Austria in terms of carbon efficiency, in line with the Green Bond Framework.

According to the energy performance certificates of the buildings in the green bond asset pools, construction of a total of 1,346,621.44m² of space has been financed. **All three green bond asset pools include buildings that are more energy-efficient than the national benchmark², accounting for emissions savings of 62,296 tonnes of CO₂, of which approximately 31,723 tonnes** are attributable to buildings financed by HYPO NOE and the exposure as at the time of calculation of the impact. The national benchmarks and emission factors for the Austrian energy mix are updated annually in the course of calculating the impact.

For the first time, the three green asset pools were assessed on the basis of criteria relating to their substantial contribution to climate change mitigation in accordance with the EU taxonomy. The assessment showed that 94.1% of the allocated financing meets the first criterion for a substantial contribution to climate change mitigation as set out in the EU Taxonomy Regulation. 0.6% of the allocated assets are currently classified as "aligned" (i.e. compliant with the EU Taxonomy Regulation).

The strong demand, primarily from investors focused purely on sustainability, as well as lively dialogue and strong interest in HYPO NOE's investor relations activities confirmed that the Group's decision to become an active and regular issuer of green bonds (with the most recent issue coming at the start of 2023) was the correct one.

Thomas Fendrich
Division Head, Treasury & ALM
7 June 2023

Claudia Mikes
Head of Rating/ESG
7 June 2023

²The benchmark corresponds to the average national heating energy demand (source: Odyssee)

2. SUSTAINABILITY AS A BUSINESS MODEL

Financing infrastructure and real estate projects has been HYPO NOE's core business since day one. Public infrastructure, housing development and real estate financing accounted for 67% of total assets as at 31 December 2022. As the bank for the state of Lower Austria, HYPO NOE makes a significant contribution to the provision of affordable housing and the expansion of social infrastructure in the region. Throughout its 130-plus-year history, the Group has pursued an environmentally friendly, socially responsible business model with an eye on future generations.

2.1. ETHICS GUIDELINES AND BUSINESS PRINCIPLES

HYPO NOE has implemented clear ethics guidelines and business principles for its operations. In this way the bank ensures that it only enters into business relationships that are compatible with its philosophy and its focus on sustainability. The ethics guidelines and business principles comprise inclusion and exclusion criteria, which are the basis for initiating new business throughout the Group. The guidelines guarantee that financing is not extended to projects which breach the exclusion criteria, and that in case of doubt due to the potentially controversial nature of lending – either from a social or environmental perspective – the bank will not provide funding. A detailed overview can be found in the sustainability section of the HYPO NOE website.

2.2 CONTRIBUTING TO ACHIEVEMENT OF THE UN SUSTAINABLE DEVELOPMENT GOALS (SDGs)

By virtue of its business model, which has an inherent focus on public sector and real estate finance, HYPO NOE plays a significant part in the achievement of the UN SDGs. In the course of the lending process, the bank evaluates potential sustainability-related factors and the ways in which financing will promote attainment of the goals. About two-thirds of the loan portfolio is related to SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), SDG 11 (Sustainable Cities and Communities), SDG 13 (Climate Action) and SDG 17 (Partnerships for the Goals).

2.3. GREEN PRODUCTS FOR RETAIL AND CORPORATE CUSTOMERS

Besides issuing green bonds, the bank has also developed an accompanying range of sustainable, green products for retail customers. This began with the launch of green current and savings accounts, and in the meantime the range has been expanded to include the green housing loan as well as services such as the renovation project calculator. Since 2022, HYPO NOE customers have also been able to take advantage of green investment loans for financing that complies with the HYPO NOE Green Bond Framework and the Taxonomy Regulation.

2.4. CORPORATE SUSTAINABILITY MANAGEMENT

HYPO NOE launched its sustainability programme back in 2013, and it was rolled out to the entire Group the following year. Since then, the Group has reported annually on its activities and the steps taken in connection with sustainability (in the shape of a non-financial statement and the ESG supplement to the annual report, both of which are externally audited).

In 2021, HYPO NOE Landesbank became a partner of the klimaaktiv Pakt 2030 climate protection initiative – one of 11 flagship businesses in Austria. By signing up to the pact, these major companies have made a commitment to achieve the ambitious goal of reducing their greenhouse gas emissions by at least 50% (compared with 2005) by 2030. After joining klimaaktiv Pakt – an initiative of the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology – the signatories must complete a structured, annual process aimed at optimising their corporate climate-protection plans. Goal attainment is externally reviewed each year in order to maximise the credibility and transparency of the process, both inside and outside the Group.

3. HYPO NOE SUSTAINABILITY RATINGS

At present, HYPO NOE Landesbank has received sustainability ratings from ISS ESG, Sustainalytics, Moody's ESG Solutions and imug.



C+ (Prime)



24,4 (Medium Risk)

MOODY'S | ESG Solutions

43 (Limited)



BB (Positive)

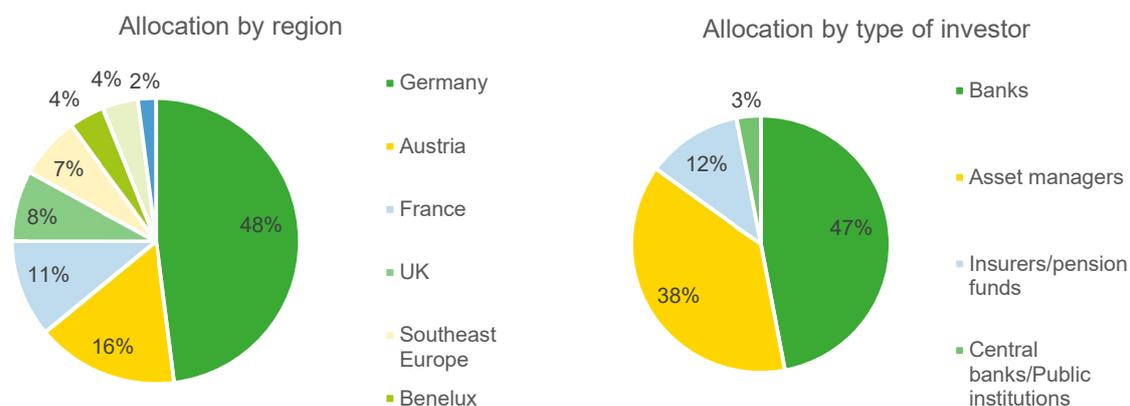


Sustainability seal

4. HYPO NOE GREEN BOND ISSUES

4.1. 2020 HYPO NOE GREEN BOND: FACTSHEET

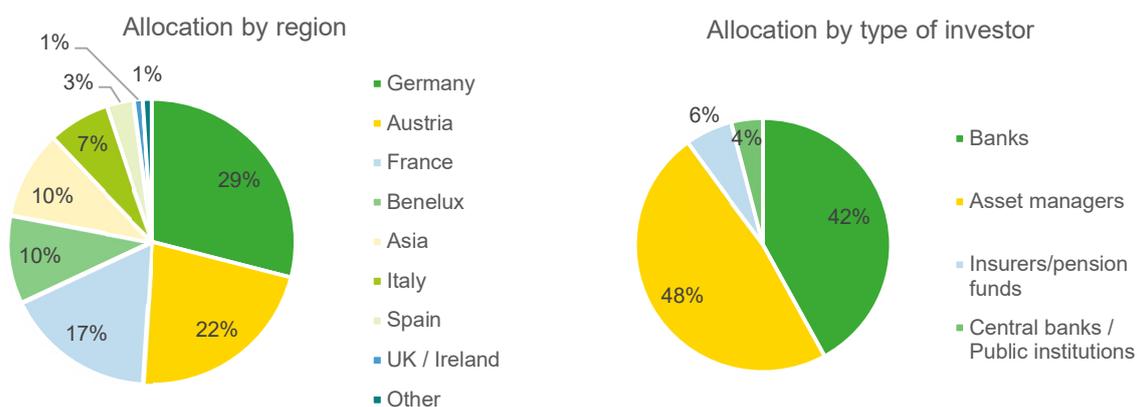
HYPO NOE issued its first green bond, focused on green buildings, in June 2020.



Issuer	HYPO NOE
Rating	A (S&P)
Type	Green senior preferred
Amount	EUR 500m
Coupon	0.375% p.a., ICMA Actual/Actual
Trade date	18 June 2020
Value date	25 June 2020
Maturity	25 June 2024
Reoffer price	99.684%
Reoffer spread	MS +80bps
Denomination	EUR 100,000 +100,000
Exchange	Vienna
Joint lead managers	BayernLB, CACIB, DekaBank, DZ Bank, RBI
ISIN	XS2193956716

4.2. 2022 HYPO NOE GREEN BOND: FACTSHEET

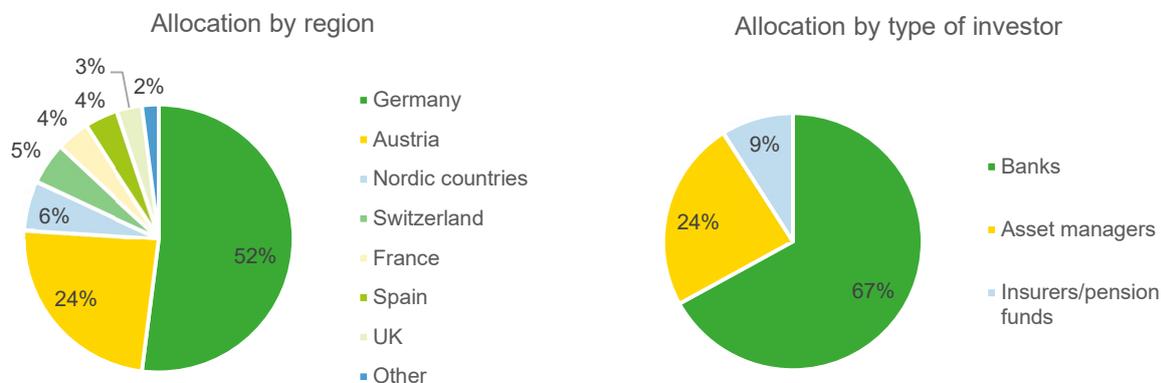
Also focused on green buildings, HYPO NOE's second green bond was issued in April 2022.



Issuer	HYPO NOE
Rating	A (S&P)
Type	Green senior preferred
Amount	EUR 500m
Coupon	1.375% p.a., ICMA Actual/Actual
Trade date	7 April 2022
Value date	14 April 2022
Maturity	14 April 2025
Reoffer price	99.688%
Reoffer spread	MS +50bps
Denomination	EUR 100,000 +100,000
Exchange	Vienna
Joint lead managers	BayernLB, BNP Paribas, DekaBank, Erste Group Bank AG, UniCredit
ISIN	AT0000A2XG57

4.3. 2023 HYPO NOE GREEN BOND: FACTSHEET

HYPO NOE's third green bond was placed in January 2023; again, it focused on green buildings.



Issuer	HYPO NOE
Rating	A (S&P)
Type	Green senior preferred
Amount	EUR 500m
Coupon	4.000% p.a., ICMA Actual/Actual
Trade date	23 January 2023
Value date	1 February 2023
Maturity	1 February 2027
Reoffer price	99.547%
Reoffer spread	MS +115bps
Denomination	EUR 100,000 +100,000
Exchange	Vienna
Joint lead managers	BayernLB, BNP Paribas, Danske Bank, DekaBank, DZ BANK AG, Erste Group Bank AG
ISIN	AT0000A32HA3

5. USE OF PROCEEDS FROM THE ISSUE

The [HYPO NOE Green Bond Framework](#) specifies eight categories of green bond-compliant loans. When selecting the relevant category, HYPO NOE bases its decision on the EU Green Bond Standard, the EU taxonomy for sustainable activities, and best-practice programmes in place at the time the framework was prepared:

1. Green buildings
2. Renewable energy
3. Environmentally sustainable management of living natural resources and land use
4. Energy efficiency
5. Clean transport
6. Water and wastewater management
7. Climate change adaptation
8. Pollution prevention

The buildings allocated green bond funding (green buildings):

- have a heating energy demand of at least category B or above (i.e. energy performance certificate [EPC] class A+, A and B),
- meet the minimum standards defined in the building regulations in Austria (Austrian Institute of Construction Engineering [OIB] Guideline 6 2011/2015/2019), and/or
- were built in accordance with the applicable construction standards in the 2011/2019 Lower Austrian housing subsidy guidelines, and
- are among the top 15%³ of the most carbon-efficient buildings in Austria, as they were built in or after 2016 in accordance with strict building regulations on energy efficiency.

All of the buildings financed through the green bond asset pool are located in Austria and meet the green building criteria outlined above.

6. PROJECT EVALUATION AND SELECTION PROCESS

The sustainability officers assessed the green buildings in the green bond asset pool in terms of their green bond compliance based on the buildings' energy performance certificates. The final decision on allocation is made by unanimous resolution of the Green Bond Committee. The membership of the committee is shown in the Green Bond Framework on the HYPO NOE website.

³[klimaaktiv.at](https://www.klimaaktiv.at), [EU-Taxonomiekonformität im Gebäudesektor](#), page 47ff (German only)

7. ALLOCATION AND IMPACT REPORT

7.1. ALLOCATION REPORT

The green bond asset pools for all three benchmark bonds issued to date by HYPO NOE are made up exclusively of assets from the first category in the Green Bond Framework, i.e. green buildings. The financed buildings can be broken down according to the value of the asset pools to which they are allocated, the building category, the residual maturity, the buildings' energy efficiency, as well as the building code and the year of construction. The reporting date for all information provided in this chapter is 31 March 2023.

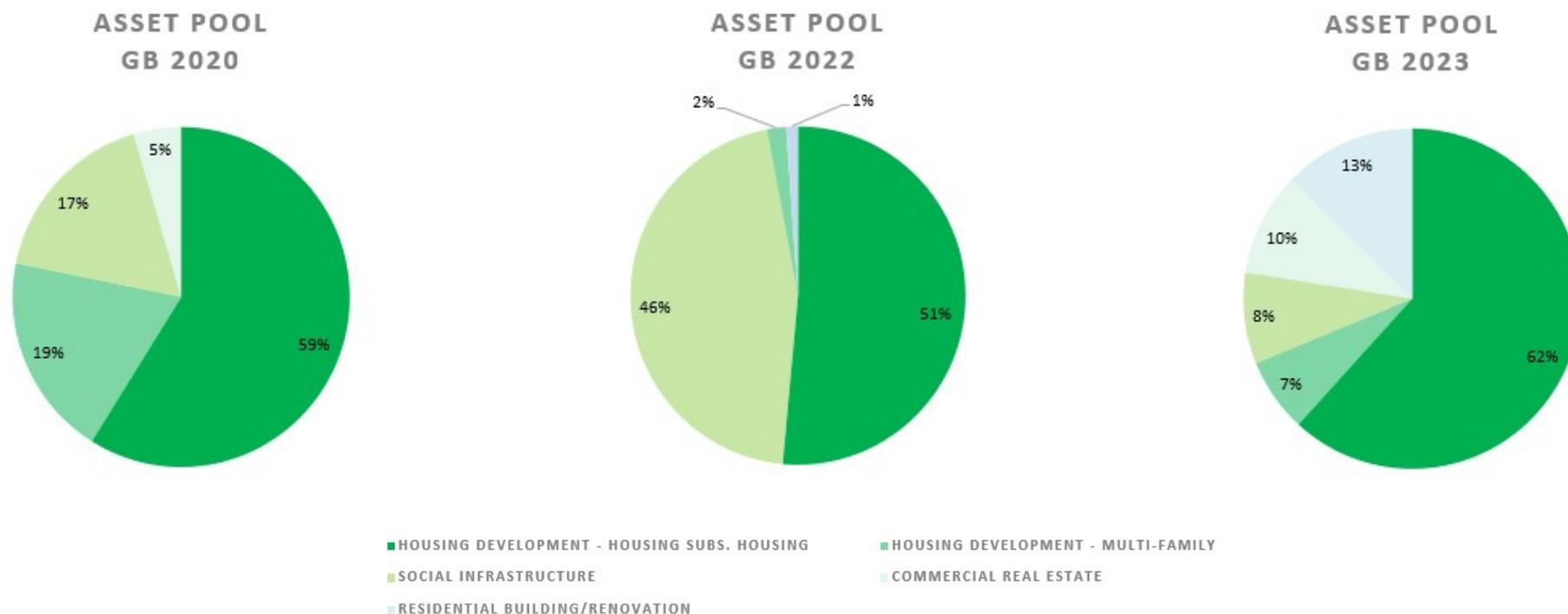
As at the reporting date HYPO NOE had issued three EUR 500m benchmark green bonds. Each green bond was assigned its own green bond asset pool. The total value of all three issues is EUR 1.5bn, while the value of the allocated assets totals EUR 1.54bn, which ensures surplus coverage of the issues.

Issue	2020 green bond (GB 2020)	2022 green bond (GB 2022)	2023 green bond (GB 2023)
ISIN	XS2193956716	AT0000A2XG57	AT0000A32HA3
Amount	EUR 500m	EUR 500m	EUR 500m
Allocated assets	EUR 507.9m	EUR 515.9m	EUR 515.3m

7.1.1. GREEN BOND ASSET POOL BY BUILDING CATEGORY

As the bank for the state of Lower Austria, financing affordable, subsidised housing is just as important a priority for HYPO NOE as lending for social infrastructure as well as health, education, and culture facilities. Austria has strict requirements for housing and public-sector construction projects. The energy-efficiency regulations make a distinction between residential and service buildings, with stricter standards placed on the former. The Lower Austrian housing subsidy regulations also include even stricter environmental and social requirements.

Subsidised housing development accounts for between 51% and 62% – in other words, the majority – of the buildings in the green bond asset pools. Financing for social infrastructure buildings also makes up a significant proportion (between 8% and 46%) of the asset pools. There was a stronger focus on energy-efficient commercial buildings among those allocated to the 2023 asset pool (10%), and on public and private housing.



7.1.2. GREEN BOND ASSET POOL BY RESIDUAL MATURITY

At 31 March 2023, the three green bond asset pools had an average residual maturity of more than 25 years, which is significantly longer than the residual maturities of the green bond issues (GB 2020: 15 months; GB 2022: 25 months; GB 2023: 46 months). In the event of scheduled or unscheduled repayments, the financing concerned is replaced in order to ensure sufficient coverage of the asset pool at all times.

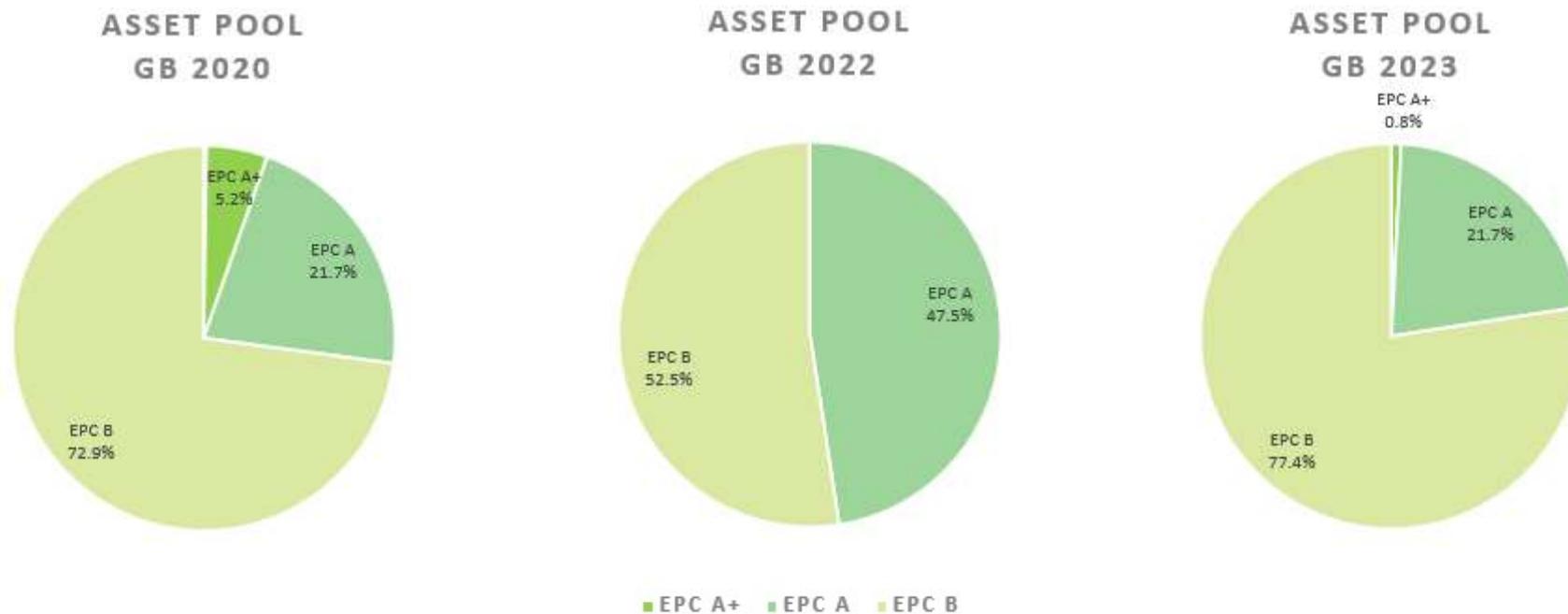


7.1.3. GREEN BOND ASSET POOL BY ENERGY EFFICIENCY

7.1.3.1. GREEN BOND ASSET POOL BY ENERGY EFFICIENCY CLASS

Only buildings in energy-efficiency class B or above are included in the asset pool. This is designed to ensure the greatest possible positive impact.

All of the buildings in the green bond asset pool have a valid EPC, from which detailed data were taken for the relevant calculations. The Green Bond Framework stipulates that all energy performance certificates must be stored in the core banking system. The sustainability officers are responsible for carrying out energy efficiency assessments based on the EPCs.



7.1.3.2. GREEN BOND ASSET POOL FROM THE PERSPECTIVE OF THE EU TAXONOMY REGULATION

For the first time, the three green asset pools were assessed on the basis of criteria that determine whether they make a substantial contribution to climate change mitigation in accordance with the EU taxonomy. Until now, only financing for economic activities 7.1. (construction of new buildings) and 7.7 (acquisition and ownership of buildings) has been allocated to the asset pools. As a result, the following criteria were used for the assessment:

		GB 2020	GB 2022	GB 2023	
Green bond asset pool (HYPO NOE), total value as at 31 Mar. 2023		507,882,270.1	515,902,897.4	515,263,643.7	1,539,048,811.3
Economic activity	Criterion for substantial contribution (1st step in assessing compliance with technical screening criteria)				
7.1.	Buildings with non-renewable PED =<36.9 kWh/m ² /a (10% below NZEB); built after 31 Dec. 2020 ⁴	-	11,162,403.0	37,754,899.6	48,917,302.5
7.7.	Buildings with class A EPC or better (built before 31 Dec. 2020) ⁴	68,508,062.0	83,938,409.5	146,123,330.3	298,569,801.8
	Alternative step: Building is among top 15% of Austrian building stock in terms of carbon efficiency ⁵ (built before 31 Dec. 2020)	501,295,716.9	451,998,516.0	446,156,814.3	1,399,451,047.2
	Substantial contribution to climate change mitigation in accordance with EU taxonomy (1st step in assessing compliance with technical screening criteria fulfilled ^{4,5})	501,295,716.9	463,160,919.0	483,911,713.8	1,448,368,349.7
	Substantial contribution to climate change mitigation in accordance with EU taxonomy (1st step in assessing compliance with technical screening criteria fulfilled ^{4,5}), % of green bond asset pool	98.7%	89.8%	93.9%	94.1%
	"Aligned" in accordance with EU taxonomy, % of green bond asset pool	0%	0%	1.6%	0.6%

94.1% of the allocated financing for all three green bond asset pools meets the requirements in the first step of assessing compliance with the technical screening criteria regarding a substantial contribution to climate change mitigation as set out in the EU Taxonomy Regulation^{4,5}. 0.6% of the allocated assets are currently classified as "aligned" (i.e. compliant with the EU Taxonomy Regulation).

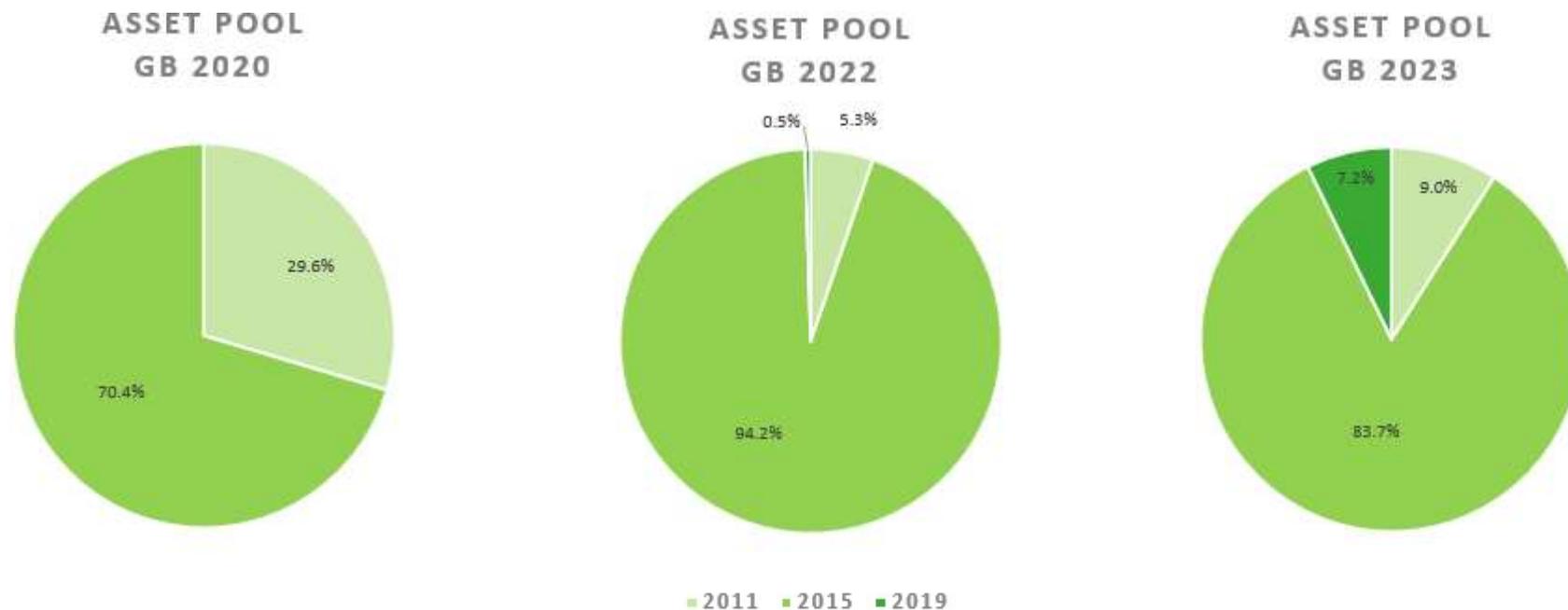
⁴Minimum requirements for buildings according to the EU taxonomy – substantial contribution to climate change mitigation: [klimaaktiv.at, EU-Taxonomiekonformität im Gebäudesektor](https://www.klimaaktiv.at/en/eu-taxonomy-compliance-in-the-building-sector), table 1, page 15 (German only)

⁵<https://ec.europa.eu/finance/docs/law/221219-draft-commission-notice-eu-taxonomy-climate.pdf> (questions 150-152) and [klimaaktiv.at, EU-Taxonomiekonformität im Gebäudesektor](https://www.klimaaktiv.at/en/eu-taxonomy-compliance-in-the-building-sector), chapter 3.3.2. (German only)

7.1.4. GREEN BOND ASSET POOL BY APPLICABLE BUILDING REGULATIONS REGARDING ENERGY EFFICIENCY

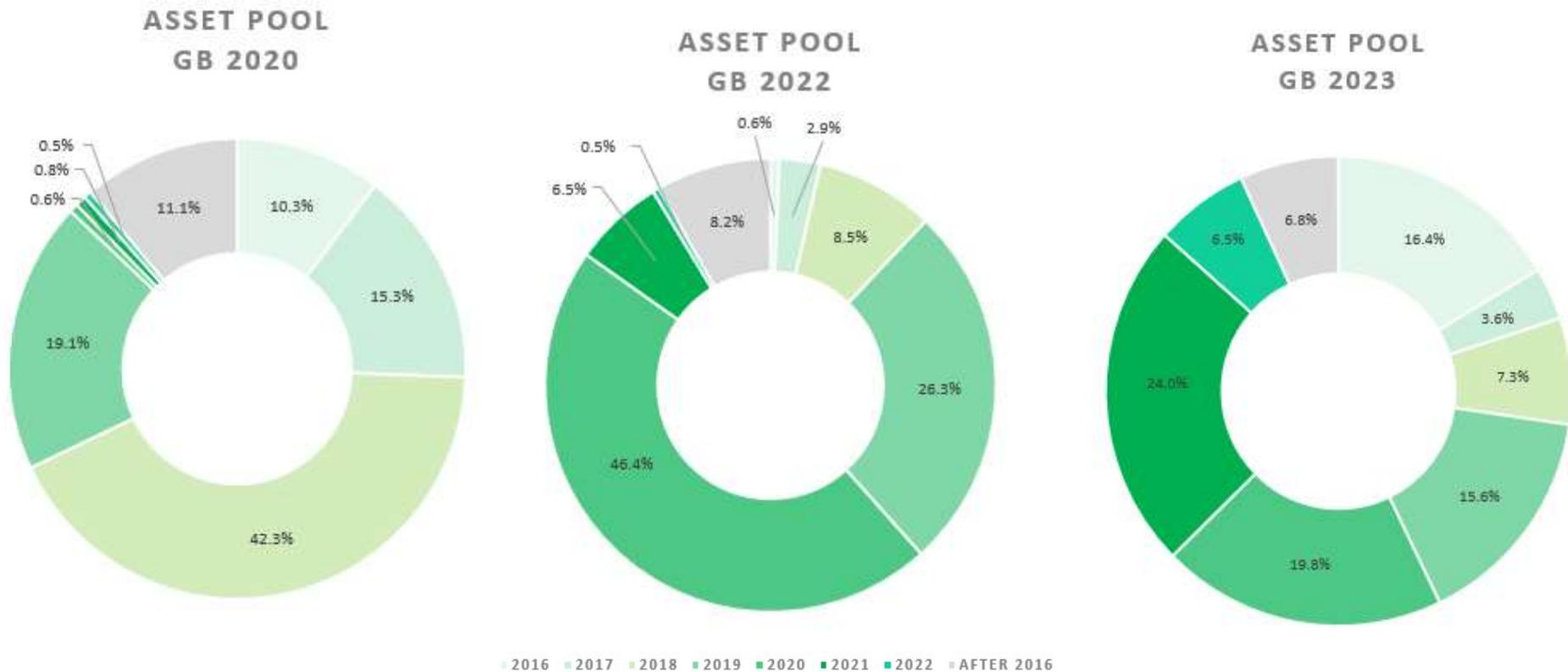
When defining the requirements, a particular emphasis was placed on ensuring that the ages of buildings and the underlying regulatory requirements (OIB guidelines) were also taken into account. The green bond asset pool only includes buildings built in accordance with OIB Guideline 6 2011, OIB Guideline 6 2015 or OIB Guideline 6 2019. In terms of weighted volume, the majority of the buildings conform to the newer OIB Guideline 6 2015.

7.2% of the allocated financing in the 2023 green bond asset pool relates to buildings with energy performance certificates issued in accordance with OIB Guideline 6 2019. It goes without saying that the proportion of financing for buildings with EPCs issued in accordance with OIB Guideline 6 2011 in the 2023 green bond asset pool (9%) is considerably lower than that in the 2020 green bond asset pool (29.6%).



7.1.5. GREEN BOND ASSET POOL BY YEAR OF CONSTRUCTION

The green bond asset pools only contain buildings that were built or completed after 2016. The information sources used to determine the year of construction include the year stated on the EPC, the internal property valuation documents and the notice of completion. Particularly with large-scale construction projects, the construction phase often extends beyond the year of construction shown on the EPC.



7.2. IMPACT REPORT

The following section describes the methodology and shows the impacts calculated for HYPO NOE's three green bond issues, including CO₂ emissions benchmarking as at 31 March 2023.

7.2.1. MEASUREMENT METHODS

7.2.1.1. COMPARISON OF HEATING ENERGY DEMAND WITH NATIONAL BENCHMARK

The CO₂ benchmark for all three asset pools is calculated on the basis of the heating energy demand, which is compared with the average national demand in Austria. The resulting difference between the figures for financed buildings and the national benchmarks is then multiplied by the building's floor area. This calculation shows the degree to which the financed asset (in this case, the building) is more energy efficient than the national benchmark. Corresponding CO₂ equivalents are used to convert the figures into tonnes of CO₂. This forms the basis for calculating the CO₂ impact of the buildings financed from the respective green bond asset pool (exposure as at the reporting date).

Baseline scenario: comparison of heating energy demand of allocated buildings with national benchmark

As data from the EU's Policies to Enforce the Transition to Nearly Zero Energy Buildings in the EU-27 (ENTRANZE) project were used as the baseline benchmark for the Vienna region⁶, this benchmark was adjusted in the course of last year's update with the help of the Odyssee database for the national level. The update showed that the benchmark only decreased slightly between 2016 and 2019.

In this year's update, the national benchmark for heating energy demand for residential buildings (159 kWh/m²) and, for the first time, that for non-residential buildings (345 kWh/m²) have both been applied.

The Republic of Austria's plan for increasing the number of residential and non-residential buildings that meet the Nearly Zero Emission Buildings (NZEB) standard by 2020 was first published in 2014 and reviewed in 2018. The construction guidelines in effect when the Green Bond Framework was drawn up (OIB Guideline 6 2015)⁷ provided for stricter requirements to be implemented at two-year intervals, in order to hit the 2020 targets and achieve conformity with EPC class B. Meanwhile, OIB Guideline 6 2019⁸ has introduced even stricter requirements regarding energy efficiency (effective from January 2021). As a result of this tightening of the guideline, the energy efficiency of new and renovated buildings has improved over the past ten years.⁹

⁶https://www.entranze.eu/files/downloads/D2_3/Heating_and_cooling_energy_demand_and_loads_for_building_types_in_different_countries_of_the_EU.pdf

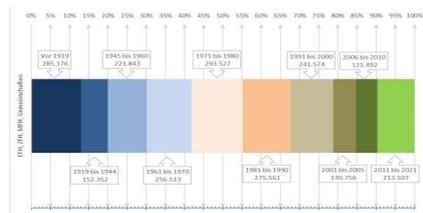
⁷[OIB Guideline 6 2015 | OIB](#) (German only)

⁸[OIB Guideline 6 2019 | OIB](#) (German only)

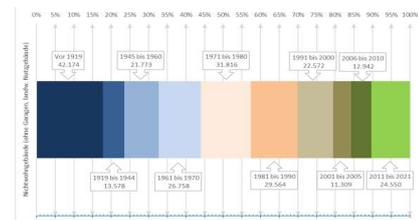
⁹[Implementation of the EPBD in Austria - Status in 2020 \(epbd-ca.eu\)](#)

HYPO NOE's green bond asset pools only include buildings built or completed from 2016 onwards. Consequently, all of the allocated buildings were subject to strict building requirements regarding energy efficiency, which have become even stricter over time. As only 10% of the total residential building stock and 10% of the non-residential building stock was built between 2011 and 2021 (see charts below) and these were subject to the stricter building regulations, the financed buildings in the asset pools are among the top 15%¹⁰ of Austria's building stock in terms of energy efficiency.

Residential housing stock by age category and in percentage of total



Non-residential housing stock by age category and in percentage of total



Source: Pulswerk GmbH; ÖSTAT Cube

Calculation method – comparison based on heating energy demand

The comparative method uses a **three-stage process**:

I. Comparison of each building's energy demand with the national benchmark includes the following elements:

- [a] Determination of the energy efficiency of each building based on the heating energy demand, $HED_{Ref, LC}$ in $kWh/m^2 \cdot year$
- [b] Selection of the baseline energy-efficiency reference value at the national level (household heating consumption or non-residential heating consumption benchmark in $kWh/m^2 \cdot year$ at the national level [Odyssee])
- [c] Calculation of difference in energy consumption (b-a)

II. Calculation of CO₂ values and financing volume based on the specific CO₂ emission factors by:

- [d] Determining the CO₂ emission factor based on the national energy mix, $kg\ CO_2/kWh$ ¹¹
- [e] Calculating the total differences in CO₂ emissions (c*d) (calculated on the basis of the building's gross floor area according to the energy performance certificate), t CO₂ per year
- [f] Current exposures from loans in the green bond asset portfolio, EUR
- [g] Total construction costs, EUR¹²
- [h] HYPO NOE share of financing (in the event that the building was not fully financed by HYPO NOE or repayments have already been made), EUR (f/g)

III. Calculation of difference in CO₂ emissions and CO₂ emissions intensity:

- [i] Calculation of the share of the difference in CO₂ emissions attributable to HYPO NOE share of financing (e*h), t CO₂/year
- [j] Calculation of CO₂ emissions intensity per EUR m of financing ($i/f \cdot 1,000,000$), t CO₂ per EUR m

¹⁰ [klimaaktiv.at](https://www.klimaaktiv.at), EU-Taxonomiekonformität im Gebäudesektor, page 47ff (German only)

¹¹ Applying national energy mix and emission equivalents

¹² If the total construction costs as per the letter of undertaking (provided by the state of Lower Austria) are not available for the calculation, in exceptional cases the construction company's breakdown of the construction costs or the total investment stated in HYPO NOE's internal application for approval are used. Previously, in individual cases the gross area of the financed building was multiplied by the price per m² in the respective year of construction, as published in Statistics Austria's housing price statistics. This approach will now no longer be used from this update onwards. This may result in deviations when comparing different years.

7.2.1.2. COMPARISON OF CO₂ EMISSIONS PER M² WITH THE NATIONAL CO₂ BENCHMARK BY BUILDING CATEGORY (PARTNERSHIP FOR CARBON ACCOUNTING FINANCIALS [PCAF])

In the course of fine-tuning the methodology, the CO₂ emissions per m² of the building concerned were also compared with the national CO₂ benchmark for the relevant building category (PCAF). In view of the fact that certain buildings in the 2020 and 2022 green bond asset pools have EPCs issued in accordance with OIB Guideline 6 2011 – these EPCs do not provide any detailed information on the building's CO₂ performance – this calculation has so far only been carried out for GB 2023. This supplements the previous measurement methodology (see section 7.2.1.1.).

Baseline scenario: comparison of CO₂ emissions per m² of the allocated building with the national CO₂ benchmark by building category (PCAF)

This comparison was carried out as part of the impact report for the first time. The specific building emission intensities at the national level, as published on the PCAF platform¹³, are applied and compared with the CO₂ emissions intensity of the allocated building. PCAF provides national figures for both residential and non-residential buildings. National benchmarks for building sub-categories (e.g. large residential buildings) are also available. This has the advantage of making the comparative measurement more informative, as the type of allocated building can be compared with the national benchmark for the corresponding building sub-category.

Comparison of CO₂ emissions for the allocated building with the national CO₂ benchmark by building category (PCAF)

The comparative method is based on a **two-stage process**:

- I. **Comparison of the CO₂ emissions per m² of the allocated building with the national benchmark includes the following elements:**
 - [a] Determining the CO₂ emissions per m² per year for the allocated building: (kg CO₂ per m²)/1000
 - [b] Selecting the CO₂ emissions reference value (baseline) at national level (emissions intensity factor in t CO₂ per m²)
 - [c] Calculating the difference in CO₂ emissions (b-a) multiplied by the gross floor area of the building according to the EPC, t CO₂
 - [d] Current exposures from loans in the green bond asset pool, EUR
 - [e] Total construction costs, EUR¹⁴
 - [f] HYPO NOE share of financing (in the event that the building was not fully financed by HYPO NOE or repayments have already been made), EUR (d/e)

¹³[Financing towards net-zero buildings \(carbonaccountingfinancials.com\)](https://carbonaccountingfinancials.com)

¹⁴If the total construction costs as per the letter of undertaking (provided by the state of Lower Austria) are not available for the calculation, in exceptional cases the construction company's breakdown of the construction costs or the total investment stated in HYPO NOE's internal application for approval are used. Previously, in individual cases the gross area of the financed building was multiplied by the price per m² in the respective year of construction, as published in Statistics Austria's housing price statistics. This approach will no longer be used from this update onwards. This may result in deviations when comparing different years.

II. Calculation of difference in CO₂ emissions and CO₂ emissions intensity:

- [g] Calculation of the difference in CO₂ emissions attributable to HYPO NOE share of financing (c*f), kg CO₂/year
- [j] Calculation of CO₂ emissions intensity per EUR m of financing (g/d*1,000,000)

7.2.2. RESULTS: IMPACT ACHIEVED

Measurement of the impacts showed that the buildings allocated to the green bond asset pool were clearly more energy-efficient and generated lower carbon dioxide emissions than the national building benchmark.

7.2.2.1. RESULTS IN TONNES OF CO₂

Measurement of the difference in CO₂ emissions using the ENTRANZE/Odyssey benchmarks shows that the buildings in the three green bond asset pools are more efficient and cause fewer CO₂ emissions than the national building benchmark, generating emissions savings of 19,536t for GB 2020, 14,640t for GB 2022 and 28,120t for GB 2023. Of these amounts, 9,754t (GB 2020), 9,083t (GB 2022) and 12,886t (GB 2023) were attributable to the proportion of total construction costs financed by HYPO NOE.

		GB 2020	GB 2022	GB 2023
Measurement of difference in CO ₂ emissions (ENTRANZE/Odyssey)	Total difference	19,536t	14,640t	28,120t
	HYPO NOE share of financing	9,754t	9,083t	12,886t
Measurement of difference in CO ₂ emissions (PCAF)	Total difference			15,598t
	HYPO NOE share of financing			7,856t

In total, the dedicated energy-efficient buildings financed by HYPO NOE and allocated to its three green bond asset pools generated 62,296t less CO₂ than the national average for Austria's building stock, based on a comparison using the Entrance/Odyssey comparison methodology. Of this amount, 31,723t were attributable to the proportion of financing provided by HYPO NOE as at 31 March 2023.

The impact under the PCAF methodology was only calculated for the first time for GB 2023 due to a lack of consistent data related to GB 2020 and GB 2022. The results show that construction of the buildings in the GB 2023 asset pool led to emissions savings of 15,598t of CO₂ compared with the respective national building benchmark (savings attributable to HYPO NOE's share of financing: 7,856t).

The difference of 12,522t in the results produced by the ENTRANZE/Odyssey and the PCAF approaches is mainly due to the more specific and more precise building-category benchmarks available under the PCAF methodology.

The average CO₂ emissions intensity was 19.2t (GB 2020), 17.61t (GB 2022) and 25.01t (GB 2023) for every EUR 1m of financing provided. HYPO NOE's green bond asset pools have financed the construction of a total of 1,346,621.44m² of energy-efficient usable space.

7.2.2.2. RESULTS IN MEGAWATT HOURS (MWh)¹⁵

Measurement of the difference in MWh consumed based on the ENTRANZE/Odyssee benchmarks shows that 81,793 MWh less electricity than the national building benchmark was used in the buildings financed from the GB 2020 proceeds; construction of the buildings financed through GB 2022 and GB 2023 consumed 61,296 MWh and 117,734 MWh less than the national building benchmark, respectively. The proportion of total construction costs covered by HYPO NOE financing accounted for 40,841 MWh (GB 2020), 38,028 MWh (GB 2022) and 53,953 MWh (GB 2023) of these savings.

		GB 2020	GB 2022	GB 2023
Measurement of difference in MWh (ENTRANZE/Odyssey)	Total difference	81,793 MWh	61,296 MWh	117,734 MWh
	HYPO NOE share of financing	40,841 MWh	38,028 MWh	53,953 MWh

¹⁵The differences in CO₂ emissions presented in section 7.2.2.1 (ENTRANZE/Odyssee) are converted into kg and multiplied by energy mix conversion factor (kg CO₂/kWh); <https://secure.umweltbundesamt.at/co2mon/co2mon.html> (German only)

8. EXTERNAL REVIEWS

8.1. SECOND PARTY OPINION (ISS ESG)

ISS ESG prepared the second party opinion (SPO) for the HYPO NOE Green Bond Framework and confirmed that the framework conforms to the ICMA Green Bond Principles (2018 edition). The SPO is available in the [investor relations section of the HYPO NOE website](#).

8.2. AUSTRIAN ECOLABEL FOR SUSTAINABLE FINANCIAL PRODUCTS (UZ 49)

The Austrian Ecolabel is awarded to products and services that represent the more environmentally compatible options within a range of comparable products. The competent body for the Ecolabel is the Federal Ministry for Climate Action, Environment, Energy, Mobility, Innovation and Technology. Working on behalf of the ministry, the Austrian Consumer Association (VKI) is responsible for the development and administration of the Ecolabel Guidelines, which constitute the basis for the award of the label.

A product's compliance with the requirements of the Guideline must be confirmed by a qualified control body. During the Ecolabel certification process, HYPO NOE confirmed that only those loans which do not contravene the UZ 49 exclusion criteria would be allocated to the green bond asset pool. HYPO NOE commissioned denkstatt GmbH to carry out the assessment, in order to ensure that all the requirements of UZ 49 were met. Certification by denkstatt GmbH, a European consultancy specialising in the optimisation of environmental and social impacts, confirms that HYPO NOE fulfils the specifications of the Austrian Ecolabel.

The award of the Ecolabel is conditional on meeting the following exclusion criteria¹⁶:

- **Nuclear energy:** construction and operation of nuclear power plants, production and supply of key components necessary for generating nuclear power, uranium production and power generation
- **Arms:** producing and trading in conventional and/or controversial weapons
- **Fossil fuels:** producing coal, natural gas and crude oil, refining coal and crude oil, coal-fired and oil-fired energy generation
- **Genetic engineering:** cultivating and marketing genetically modified organisms and products (green genetic engineering) and germline gene therapy, human cloning procedures and human embryo research (red genetic engineering)
- **Violations of human and employment rights:** financing for companies that commit systematic, serious and sustained violations of these rights (especially in connection with high-risk industries, activities and regions)

¹⁶https://www.umweltzeichen.at/file/Guideline/UZ%2049/Long/UZ49_R5a_Sustainable%20Financial%20Products_2020_EN.pdf

- **International Labour Organisation (ILO):** financing for companies whose policies do not include a commitment to comply with the ILO minimum standards on child labour, forced labour, freedom of association and discrimination, or which have demonstrably and systematically breached those standards

Preparation of an SPO and specifying the relevance of financing to the UN SDGs are also obligatory. Financing for the projects concerned must make a clear positive contribution to sustainable development and/or to the achievement of the EU's six environmental objectives.

8.3. AUDITOR'S REVIEW

An external auditor carried out a limited-assurance audit of chapter 7 Allocation and impact report. The audit certificate granted by the auditors for this report can be found on our website.

9. DISCLAIMER

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