

Deutsche Pfandbriefbank AG (pbb) External Review of Green Bond Impact Report 2023

February 15, 2024

This report was produced by Shades of Green using Shades of Green Methodology.
On December 1, 2022, S&P Global acquired Shades of Green from CICERO.

Shades of Green has reviewed pbb's Green Bond Impact Report 2023 ("Report"). We review against pbb's Green Bond Framework criteria (dated March 2020, the "2020 Framework", under which all outstanding green bonds have been issued), and impact metrics for relevance and transparency.

We consider that the allocations considered in the Report align with the Framework and that the Report utilizes a relevant and sufficiently transparent impact metric. Moreover, we consider the Report aligns with the core principles and recommendations contained in ICMA's Handbook – Harmonized Framework for Impact Reporting (June 2023).¹

Project allocation

In respect of allocation, Shades of Green considers the Report aligned with the 2020 Framework; for a more detailed review, please see Appendix 1.

pbb reports on its green bond asset pool as at November 30, 2023. This totals approximately EUR 4.75 billion in green loans, and its value exceeds the EUR 3.13 billion outstanding green bonds at this date. All outstanding green bonds are issued under the 2020 Framework, notwithstanding that pbb introduced an updated framework in May 2023 (the "2023 Framework"). According to the Report, all green loans in the green bond asset pool relate to properties that satisfy the 2020 Framework's energy performance criteria, and the Report sets out the energy performance of each such property to substantiate this. According to pbb, any green loans included in the green bond asset pool since May 2023 furthermore satisfy the 2023 Framework's eligibility criteria.

The 2020 Framework was assigned overall Light Green in our Second Party Opinion.² The 2020 Framework included only one project category, green buildings, where proceeds would finance or re-finance loans extended in respect of such buildings. This project category also received a Light Green shading, and all proceeds have necessarily been allocated to this category (see Figure 1).

¹ [ICMA Handbook](#)

² [pbb - SPO \(2020\)](#)

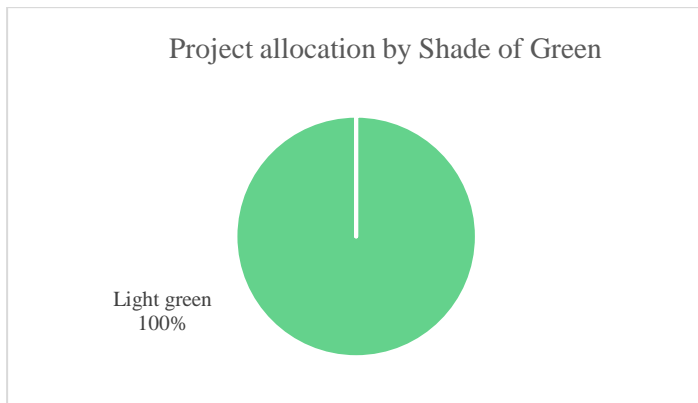


Figure 1: Allocation of bonds by SPO Shade of Green. Shading is based on evaluation at time of issuance and does not reflect ex-post project verification.

Impact metrics

Impacts are reported on the green bond portfolio as at November 30, 2023, and pbb sets out estimated impact for a one year period.

The Report sets out estimated annual reduced/avoided GHG emissions in tons CO₂e - this is an example indicator given in the 2020 Framework and commonly used for green buildings. This is reported on a portfolio level, though pbb calculates impacts on a line-by-line basis. pbb has furthermore pro-rated the impacts: firstly by every EUR 1 million of issued green bonds, and secondly by every EUR 1 million financed.

pbb uses the same impact reporting methodology as in its previous Report, which is welcome. More specifically, it utilizes emission information contained in buildings' EPC (where available), PCAF data for benchmarking energy consumption,³ and the emissions factors from a tool it has developed with KPMG used in its underwriting process. If emissions data is missing from the EPC, emissions are calculated assuming what is typical for the given property type. Investors should note that, according to pbb, external benchmarks utilized have tightened, resulting in lower reduced/avoided emissions compared to its previous Report (both absolutely and when pro-rated).

In respect of impacts, we consider that the Report is sufficiently transparent. There is always uncertainty around emissions data and especially avoided emissions, and we welcome that pbb includes information on its methodology. More specific information on emission factors – or even publication of its line by line calculations - could improve the reporting. For a more detailed review, please see Appendix 1.

Terms

S&P Global Ratings Shades of Green provides a review of pbb's annual reporting based on documentation provided by pbb and information gathered during teleconferences and e-mail correspondence with pbb. pbb is solely responsible for providing accurate information. All financial aspects of the sustainable finance reporting - including the financial performance of the bonds and the value of any investments in the bonds - are outside of our scope, as are general governance issues such as corruption and misuse of funds. Shades of Green does not validate nor certify the existence of investments and does not validate nor certify the climate effects of investments. Our objective has been to provide an assessment of the extent to which the bond has met the allocation and reporting criteria established in the Frameworks. The review is intended to inform pbb, investors and other interested stakeholders in pbb's green bonds and has been made based on the information provided to us. Shades of Green

³ [PCAF](#)

cannot be held liable if estimates, findings, opinions or conclusions are incorrect. Our review does not follow verification or assurance standards and we can therefore not provide assurance that the information presented does not contain material discrepancies.

Appendix 1 - Detailed Review

Category	Description	Review against framework criteria	Impact Metrics	Relevance of metrics	Transparency considerations
Green Buildings	Investments in buildings which achieve certain environmental certifications (BREEAM Very Good or above, LEED Gold or above, etc) or achieve a certain energy performance, as set out in the 2020 Framework.	<p>No discrepancies identified</p> <ul style="list-style-type: none"> According to information in the Report, at a minimum, all green loans in the green bond asset pool relate to properties that satisfy the 2020 Framework’s energy performance criteria. Nonetheless, as well as information on energy performance (final energy consumption expressed in kWh/m²), the Report also includes information on the properties’ EPC or level of environmental certification. According to pbb, any green loans included in the green bond asset pool since May 2023 furthermore satisfy the 2023 Framework’s eligibility criteria. Moreover, all green loans must pass pbb’s scoring model, which, on top of energy criteria, also factors in environmental certifications and other sustainability factors (e.g. soil surfacing, closeness to public 	<ul style="list-style-type: none"> Estimated ex-ante annual reduced/avoided GHG emissions in tons CO₂e. 	<ul style="list-style-type: none"> Metric provides a good indication of the environmental impact of the investment. The metric is commonly used in green bond reporting and is in line with core indicators in the ICMA Handbook. 	<ul style="list-style-type: none"> ✓ pbb uses the same impact reporting methodology as in its previous Report, which is welcome. Investors should note that, according to pbb, external benchmarks utilized have tightened, resulting in lower reduced/avoided emissions compared to its previous Report (both absolutely and when pro-rated). While pbb is transparent on this, and its use of up-to-date benchmarks is welcome, this nonetheless reduces year-on-year comparability. ✓ The ambition of each building depends on its performance compared to the regulatory requirements in the jurisdiction. pbb’s use of

transport, heating type, use of 'green' electricity, use of recycled materials in construction.)

- The green bond asset pool consists of 108 properties. This includes a residential portfolio, consisting of 82 properties. According to pbb, these properties are not listed individually because they consist of a large number of comparatively small size, though each individual building satisfies the 2020 Framework criteria.
- The green bond portfolio does not include any buildings with oil heating and the Report includes information on heating sources.

country specific benchmarks helps with this to some extent, though note that PCAF benchmarks represent the emissions of standard properties in a specific market.

- ✓ pbb is transparent on its overarching methodology, though it does not set out line by line calculations or emission factors. This could improve transparency.

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